REMEDIAL INVESTIGATION REPORT

Site 1, Fire Training Area
Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det)
Cutler, Maine

FINAL

Revision: 0

Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
9324 Virginia Avenue
Norfolk, VA 23511-3095

August 2017

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Contract Number N62470-11-D-8013
CTO WE31

August 2017

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TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

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ACRONYMS AND ABBREVIATIONS

µg/L	microgram per liter
ABP	asphalt batch plant
AOC	area of concern
BERA	baseline ecological risk assessment
bgs	below ground surface
cis-DCE	cis-1,2-dichloroethene
COC	chemical of concern
COPC	chemical of potential concern
CSM	conceptual site model
CTE	central tendency exposure
Cutler	Cutler, Maine
CY	cubic yard
DDA	drum disposal area
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DL	detection limit
DRO	diesel range organics
ELCR	excess lifetime cancer risk
EPC	exposure point concentration
EPH	extractable petroleum hydrocarbons
ERA	ecological risk assessment
FS	Feasibility Study
ft	foot or feet
ft/ft	foot per foot
FTA	Fire Training Area
gpm	gallon per minute
GRO	gasoline range organics

HAL	Health Advisory Level
HF	high frequency
HHRA	human health risk assessment
HI	hazard index
HQ	hazard quotient
IR	Installation Restoration
LCS	laboratory control spike
LOAEL	lowest-observed-adverse-effect level
LOD	limit of detection
LOQ	limit of quantitation
MCL	maximum contaminant level
MDL	method detection limit
MEDEP	Maine Department of Environmental Protection
mg/kg	milligram per kilogram
msl	mean sea level
Navy	Naval Facilities Engineering Command
NCTAMS	Naval Computer and Telecommunications Area Master Station
NCTAMS LANT Det	Naval Computer and Telecommunications Area Master Station Atlantic Detachment
ng/kg	nanogram per kilogram
NRWQC	National Recommended Water Quality Criteria
NTCRA	non-time critical removal action
PAH	polycyclic aromatic hydrocarbon
PAL	project action level
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PFAS	per- and polyfluoroalkyl substance
PFC	perfluorinated compound
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid (perfluorooctane sulfonate)
PID	photoionization detector
ppm	part per million

PSA	preliminary site assessment
PSL	project screening level
QC	quality control
QL	quantitation limit
RAG	Remedial Action Guideline
RAO	remedial action objective
RI	Remedial Investigation
RME	reasonable maximum exposure
RPD	relative percent difference
RSE	removal site evaluation
RSL	regional screening level
SEV	screening ecological value
SI	Site Inspection
SRA	Screening Risk Assessment
SVOC	semivolatile organic compound
SYA	Salvage Yard Area
TAL	target analyte list
TCDD	tetrachlorodibenzo-p-dioxin
TCE	trichloroethene
TCLP	toxicity characteristic leaching procedure
TEQ	toxicity equivalent
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TRV	toxicity reference value
TSCA	Toxic Substances Control Act
U.S.	United States
UCL	upper confidence limit
UFP-QAPP	Uniform Federal Policy for Quality Assurance Project Plans
UNITEC	Universe Technologies, Inc.
USEPA	United States Environmental Protection Agency

VISL	Vapor Intrusion Screening Level
VLF	Very Low Frequency
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbons

EXECUTIVE SUMMARY

Resolution Consultants (Resolution) has prepared this Remedial Investigation (RI) report on behalf of the Naval Facilities Engineering Command (Navy) under the Comprehensive Long-Term Environmental Action Navy contract number N62470-11-D-8013. This RI was conducted in accordance with the state agreement known as the Administrative Order by Consent of 2002 between the Navy and the Maine Department of Environmental Protection (MEDEP), the lead environmental regulatory agency for the Naval Computer and Telecommunications Area Master Station Atlantic Detachment in Cutler, Maine (Cutler). The state agreement allows the Navy to follow the Comprehensive Environmental Response, Compensation, and Liability Act requirements through the Navy Environmental Restoration Program. This RI report summarizes the activities associated with the investigation of contamination and several removal actions performed at the site. The primary objectives of this RI report are to determine the nature and extent of chemicals of concern (COCs), assess potential threats to human health and the environment, and provide a basis for determining whether or what types of response actions are required.

Site 1, Fire Training Area (FTA), occupies 10.27 acres (**Figure ES-1**). The FTA was located within an abandoned gravel pit that was historically used for fire-training exercises. According to a 1988 preliminary assessment report, fire-training activities utilized two 4,200-gallon tanks, approximately 8 feet (ft) in diameter and 8 ft high in size, which had been cut in half. Waste fuel oil was burned in these tanks. The tanks were partially filled with water before the waste fuel oil was added and ignited. Some of the fuel oil is believed to have been released to the environment due to overfilling or overflow resulting from precipitation (NEESA 1988). The Drum Disposal Area (DDA), previously known as Site 5, was combined with the FTA in early 2012 due to their close proximity and similar contaminants.

Several previous investigations and removal actions have been performed at Site 1 between 1991 and 2016 by other contractors to address environmental contamination. As part of assessing the contaminant nature and extent, analytical results were compared to project screening levels (PSLs). For the FTA, PSLs are based on United States Environmental Protection Agency (USEPA) Regional Screening Levels, USEPA Maximum Contaminant Levels, and USEPA and MEDEP surface water criteria. While MEDEP also provides Remedial Action Guidelines (RAGs), the RAGs are not applicable to the FTA because the site-specific risk assessments were used to determine the need for remedial action and develop clean-up goals. Furthermore, the selected PSLs were overall more conservative than MEDEP RAGs. Therefore, the selected human health PSLs were used to conservatively evaluate the nature and extent of contamination at the FTA. Analytical data were then evaluated in a human health risk assessment (HHRA) and an ecological risk assessment (ERA). Those compounds that pose potential unacceptable risks were categorized as chemicals of concern (COCs). Other factors are also considered in identifying or eliminating COCs and include conservativeness of the risk assessment processes or other information known about the COCs.

Soil

Total polychlorinated biphenyls (PCBs) (primarily PCB Aroclor-1260), polycyclic aromatic hydrocarbons (PAHs), and two metals (arsenic and manganese) were identified above PSLs and potentially posing a risk in soil. **Table ES-1** summarizes the maximum concentrations detected for these chemicals.

Table ES-1:
Maximum Concentrations of Selected Chemicals Identified Above PSLs in Soil

Chemical	Location (depth)	Concentration (mg/kg)
PCB Aroclor-1260	PCBAREA1-013	610
Benzo(a)pyrene	FTA-SB-216 (0 - 2 ft)	4.3
Arsenic	FTA-SB-214 (2 - 6 ft)	25.1
Manganese	FTA-SB-201 (0 - 2 ft)	8,600

PCB Aroclor-1260 had the highest frequency of detection of the PCB Aroclors. PCB Aroclor-1260 was detected in 103 of 107 surface soil samples and 64 of 114 subsurface soil samples. Benzo(a)pyrene was detected above PSLs in 10 of 37 surface soil samples and only one subsurface soil sample. Arsenic and manganese were detected in all 37 of the surface soil samples and all 54 subsurface soil samples.

From 1999 to 2013, approximately 40,326 tons of soil have been removed from the FTA during the historical removal actions at the site to remove petroleum and PCB-contaminated soil. In the nature and extent evaluation, and in calculating risks, any RI sample collected from soil that was excavated was excluded from the data set.

Groundwater

Arsenic, manganese, trichloroethene and vinyl chloride were identified above PSLs and potentially posing a risk in groundwater. **Table ES-2** summarizes the maximum concentrations detected for these chemicals.

Table ES-2:
Maximum Concentrations of Selected Chemicals Identified Above PSLs in Groundwater

Chemical	Location	Concentration (µg/L)
Arsenic	MW-5	16
Manganese	MW-9	3,850
Trichloroethene	MW-206	10
Vinyl Chloride	MW-9	0.84

Based on September 2015 water level data from 26 site monitoring wells, the depth to groundwater ranges from less than 0.5 ft to approximately 13 ft below ground surface, with shallow groundwater flowing generally to the north. Hydrographs of groundwater elevation data reveal no discernible trends in seasonal groundwater flow patterns. Hydraulic gradient values calculated for the site ranged 0.0310 foot per foot (ft/ft) in June 2015 to 0.0217 ft/ft in September 2015. From 1999 to 2013, approximately 1.8 million gallons of water were pumped and treated by dewatering systems during soil removal actions.

Groundwater samples collected from site monitoring wells indicated maximum concentrations of perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) were detected above the PSLs in the northern portion of the site in MW-11 (0.25 µg/L of PFOS) and MW-14 (0.45 µg/L of PFOA).

Arsenic was detected above the PSL at a maximum concentration of 16 µg/L in MW-5. The results of speciated chromium sampling collected from MW-208 (in a well at the upgradient part of the site) indicated a concentration of 9.97 µg/L total chromium and 4.8 µg/L hexavalent chromium, above the PSL for hexavalent chromium of 0.035 µg/L. The maximum concentration of manganese was detected in the northern portion of the site in MW-9 at 3,850 µg/L.

Semivolatile organic compounds infrequently detected above PSLs include 1,1-biphenyl and hexachlorocyclopentadiene. Volatile organic compounds (VOCs) including cis-1,2-dichloroethene, trichloroethene, and vinyl chloride are relegated to a small plume of low to trace VOC levels, situated between well MW-206, located in the vicinity of the fire-training area, and downgradient wells MW-11, MW-9, MW12, and MW-10. Groundwater samples obtained from MW-206 exhibited the following VOC results in September 2015: trichloroethene (10 µg/L); vinyl chloride (0.056 µg/L); and cis-1,2-dichloroethene (22 µg/L). Well MW-206 has exhibited consistent concentrations of these three chemicals since 2012. Groundwater samples obtained from downgradient monitoring wells have shown low levels of VOCs, including a maximum vinyl chloride concentration of 0.84 µg/L at MW-9.

Surface Water

PCB Aroclor-1254, PAHs, and three metals (arsenic, manganese, and thallium) were identified above PSLs in surface water. **Table ES-3** summarizes the maximum concentrations detected for these chemicals.

Table ES-3:
Maximum Concentrations of Selected Chemicals Identified Above PSLs in Surface Water

Chemical	Location	Concentration (µg/L)
PCB Aroclor-1254	FTA-SW-06	0.38
Indeno(1,2,3-cd)pyrene	FTA-SW-06	0.16
Arsenic	FTA-SW-06 FTA-SW-07	7.9
Manganese	FTA-SW-04	1,190
Thallium	FTA-SW-02	0.32

Surface drainage at Site 1 flows towards surrounding wetland areas or to the nearby stream located approximately 1,200 ft to the northeast. Arsenic, manganese, and thallium were the only metals that exceeded the human health PSLs in surface water. PCB Aroclor-1260 was not detected in any surface water sampling locations. PCB Aroclor-1254 was detected at one surface water sampling location (FTA-SW-06) in 2014. Several PAHs were also detected at FTA-SW-06 above the human health PSLs. The highest concentration of PAHs identified at location FTA-SW-06 is indeno(1,2,3-cd)pyrene at a concentration of 0.16 µg/L. The PAH exceedances of PSLs are limited to one location; therefore, PAHs in surface water are not a widespread problem.

Sediment

Total PCBs (primarily PCB Aroclor-1260), PAHs, and two metals (arsenic and chromium) were identified above PSLs in sediment. **Table ES-4** summarizes the maximum concentrations detected for these chemicals.

Table ES-4:
Maximum Concentrations of Selected Chemicals Identified Above PSLs in Sediment

Chemical	Location	Concentration (mg/kg)
PCB Aroclor-1260	FTA-SED-04	2.1
Benzo(a)pyrene	FTA-SED-01	2.4
Arsenic	FTA-SED-04	19
Chromium	FTA-SED-07	33.7

PCB Aroclor-1260 was detected in 15 of 16 sediment sampling locations. Benzo(a)pyrene was detected in 8 of 16 sediment sampling locations above the PSL. Arsenic concentrations were detected in all sediment samples and exceeded the sediment PSL in 15 of 16 sampling locations. Total chromium exceeded the sediment PSL in all 16 samples. Hexavalent chromium was not

detected in sediment. During this evaluation and in the risk assessment, it was assumed that the chromium in sediment was entirely trivalent chromium and the trivalent chromium PSL was used.

Human Health Risk Assessment Summary

The HHRA included a quantitative evaluation of potential human exposures to surface soil, subsurface soil, groundwater, and wetland surface water and sediment. Exposure scenarios were: Current/Future Construction Worker; Current/Future On-Site Recreational User/Trespasser; Future Outdoor Industrial Worker; Future Indoor Industrial Worker; and Hypothetical Future On-Site Resident.

For soil, two soil exposure areas (**Figure ES-2**) were defined and referred to as Soil Exposure Area 1 and Soil Exposure Area 2 within the FTA site boundaries. Soil Exposure Area 1, (5.56 acres) includes all soil within the FTA boundaries outside of Soil Exposure Area 2. Soil Exposure Area 2 (1.45 acres), is located in the southern portion of the FTA. In general, Soil Exposure Area 1 contains lower chemical of potential concern (COPC) concentrations and Soil Exposure Area 2 contains higher COPC concentrations. The soil exposure areas do not include the wetlands, which were treated as a one separate exposure area for surface water and sediment. Groundwater exposure was evaluated based on groundwater data collected from permanent monitoring wells between 2012 and 2016. Upgradient wells not affected by site activities were excluded in the evaluation of receptor risks.

The HHRA concluded that chemicals potentially posing a risk for one or more receptors included:

- Surface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Manganese, benzo(a)pyrene, and Total PCBs (primarily PCB Aroclor-1260)
- Subsurface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Arsenic, manganese, and Total PCBs (primarily PCB Aroclor-1260)
- Groundwater (hypothetical future drinking water scenario)
  - Arsenic
  - Manganese
  - Trichloroethene
  - Vinyl chloride

Ecological Risk Assessment Summary

The ERA evaluated the potential for risks to ecological receptors exposed to COPCs in surface soil, surface water, and sediment. The first ERA step was screening of chemicals against very conservative generic ecological standards. Based on this Tier 1 ecological Screening Risk Assessment, a Tier 2, Step 3a baseline ERA (BERA) was performed using more realistic assumptions more closely reflecting site conditions.

The Tier 2, Step 3a BERA concluded that there may be a potential for risks to small insectivorous birds and mammals (American robin and the short-tailed shrew) exposed to Total PCBs in surface soil. It was also concluded that no further evaluation is warranted for the following receptors:

- Terrestrial Plant Community
- Soil Invertebrate Community
- Freshwater Benthic Invertebrate Community
- Freshwater Aquatic Community
- Wildlife In Freshwater Exposure Areas
- Herbivorous Wildlife in Terrestrial Exposure Areas

Conclusions and Recommendations

The HHRA concluded that human health risks may exist for the following receptors: Current/Future Construction Worker; Current/Future On-Site Recreational User/Trespasser; Future Outdoor Industrial Worker; and Hypothetical Future On-Site Resident. Risk drivers in soil were Total PCBs, benzo(a)pyrene, arsenic, and manganese. Risk drivers in groundwater include trichloroethene, vinyl chloride, arsenic, and manganese. No risk drivers were identified in surface water or sediment in the wetland area.

The ERA concluded that there may be a potential for risks to small insectivorous birds and mammals (American robin and the short-tailed shrew) due to exposure to Total PCBs in surface soil and due to consumption of earthworms with bioaccumulated PCBs from terrestrial portions of the former FTA.

Arsenic was found to have concentrations in site media less than or consistent with concentrations in site background . The highest manganese subsurface soil detection (1,530 mg/kg at FTA-SB-214) is located in the southwestern portion of the site. There are no reported uses of metals at the FTA in a manufacturing process or primary waste storage or disposal. From 1999 to 2013, approximately 1.8 million gallons of water were pumped and treated and approximately 40,326 tons of soil have been removed from the FTA during the historical removal actions at the site. Based on the data that show the remaining site soil metals concentrations are within or similar to

site background levels, no release of metals to site media is indicated and remediation of metals is not warranted.

PAHs are anthropogenic compounds that are found in man-made sources and are persistent in the environment. PAHs also occur naturally. PAHs are present in oil, coal, and tar deposits and in asphalt pavement as well as natural deposits of peat. Their presence at the FTA in soils is consistent with their slow environmental degradation and the presence of peat deposits at the site. Based on this information, a release of PAHs to site media appears unlikely.

Based on the investigations performed and the findings of the risk assessments, the conceptual site model presented in **Section 7.0** was updated to illustrate the distribution of COCs in site media that warrant being addressed in a Feasibility Study (FS). The following chemicals and areas will be evaluated in a FS:

- PCBs in surface soil and subsurface soil are present in the vicinity of the former fire-training activities and the DDA. A remaining PCB-impacted area that was left behind after the 2013 AGVIQ excavation represents an area of unacceptable risk. The total extent of the area affected by PCBs to be addressed in the FS is approximately 300 square ft, located in the southwest portion of the site. The FS will focus on remedial alternatives to address the unacceptable risk from PCBs in soil in this portion of the site.
- Benzo(a)pyrene is present in surface soil in Soil Exposure Area 2 at concentrations that represent potentially unacceptable risks to hypothetical residential and recreational receptors. There are no potentially unacceptable risks for industrial receptors. Therefore, while benzo(a)pyrene will be addressed in the FS, cleanup actions are unlikely as residential and recreational future site uses are not anticipated.
- A small plume of chlorinated solvents is present at the site. However, migration appears limited because trichloroethene and its breakdown product cis-1,2-dichloroethene are not present in monitoring wells downgradient of the potential source area. This empirically suggests that trichloroethene may be degrading as it migrates. Only trace amounts of the next degradation daughter product, vinyl chloride, are found in the downgradient portions of the site. This is supported by the negative oxidation reduction potential values measured in the field during the September 2015 groundwater sampling event. The FS will focus on remedial alternatives to continue monitoring the VOCs in groundwater.

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Figure ES-1
Site Location Map
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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Legend

Sampled Media

- Groundwater/Soil Boring
- Sediment/Surface Water
- Groundwater
- Soil Boring
- Approximate Soil Confirmation Samples (AGVIQ 2015)
- Removal Areas (AGVIQ 2015)
- Approximate Extent of 2009 Drum Disposal Area Excavation (Shaw 2010)
- Soil Exposure Area 1
- Soil Exposure Area 2
- September 2004 Approximate Extent of Sand Wedge Excavation (a.k.a. Restored Wetland Area)
- Approximate Extent of 2006-2009 Excavation (a.k.a Created Wetland Area) (UNITEC 2008; Tetra Tech 2009; Shaw 2010)

AOC/Site Boundary

FTA-SB-200 FTA-SB-303
FTA-MW-11
FTA-MW-14
FTA-SED-08 FTA-SW-08
FTA-MW-12
FTA-MW-9
FTA-SB-201
FTA-SB-302
FTA-SB-219 FTA-SB-301
FTA-SED-07 FTA-SW-07
FTA-SW-06
FTA-MW-10
FTA-MW-5
FTA-SB-202 FTA-SB-305
FTA-MW-218 FTA-SB-218
FTA-SED-05 FTA-SW-05
FTA-SB-217
FTA-SB-300
FTA-SB-203
FTA-SB-304
FTA-SED-04 FTA-SW-04
FTA-SED-03 FTA-SW-03
FTA-SB-216
FTA-SS-23
FTA-SED-01 FTA-SW-01
FTA-SW-02
FTA-SS-25
FTA-SB-204
FTA-SS-13
DDA-NE-13I
FTA-SS-19
FTA-AREAA-01
FTA-AREAA-02
FTA-SB-215
DDA-NW-10Q
DDA-NW-10G
DDA-NW-10E
FTA-MW-206
FTA-AREAB-02
FTA-SB-205
DP-35
FTA-SB-209
DDA-NW-9M
DDA-NW-9B
DDA-NW-8R
DDA-NW-8I
DDA-NW-9E
FTA-AREAB-01
FTA-AREAG-01
FTA-AREAI-01
DDA-NE-7I
DDA-NW-6R
FTA-MW-210
DDA-NE-6E
FTA-AREAC-01
FTA-AREAG-02
FTA-SB-210
DDA-NE-5E
FTA-SB-212
DDA-NW-4F
A31-SB04
FTA-SB-214
DDA-NW-3R
DDA-NE-2I
DDA-NW-2P
FTA-SB-211
FTA-ANOM2-SO-INT
FTA-MW-1
A31-SB03
DDA-E-1E
FTA-AREAF-01
DDA-SW-2F
DDA-SE-2D
FTA-SB-213
DDA-SW-3G
FTA-AREAJ-01
DDA-SE-3D
FTA-AREAH-01
FTA-SB-220
FTA-AREAD-01
FTA-AREAD-02
DDA-SW-5C
DDA-SE-5B
FTA-SB-208 FTA-MW-208

Map Location

N

0 40 80

Feet

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Figure ES-2
FTA Sample Locations
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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1.0 INTRODUCTION

Section 1.0 discusses the purpose of this Remedial Investigation (RI) report, site background, and report organization.

1.1 Purpose of Report

Resolution Consultants has prepared this RI report on behalf of the Naval Facilities Engineering Command (Navy) under the Comprehensive Long-Term Environmental Action Navy contract number N62470-11-D-8013. This RI report was conducted in accordance with the Administrative Order by Consent between the Navy and the Maine Department of Environmental Protection (MEDEP), which is the lead regulatory agency for the Cutler Environmental Restoration Program. The state agreement allows the Navy to follow the Comprehensive Environmental Response, Compensation, and Liability Act requirements through the Navy Environmental Restoration Program. This RI report provides a summary of investigation activities conducted at Site 1, Fire Training Area (FTA) and the Drum Disposal Area (DDA), located at the Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det) in Cutler, Maine (Cutler) (**Figure 1-1**). Site 1 (FTA) is defined as a former gravel pit that was used by the Navy for firefighting training exercises from the early 1960s to the 1980s. The DDA is defined as a disposal area located on the southern edge of the FTA. Since the DDA was physically located within the boundaries of the FTA, the FTA and DDA were combined in 2012 and all environmental issues are being addressed as Site 1. For this RI report, the discussion of Site 1 includes all investigation activities that have occurred at both the FTA and the DDA.

The primary objectives of this RI report are to determine the nature and extent of chemicals of concern (COCs), assess potential threats to human health and the environment, and provide a basis for determining whether or what types of response actions are required. This report includes data collected from multiple investigations conducted at the FTA and DDA between 1991 and 2016. Specific data sets are summarized in **Section 2.4**. The information, data, and interpretations presented in this RI report serve as the basis for the screening level human health risk assessment (HHRA), included as **Section 6.0** of this RI report. The objective of the screening level HHRA is to evaluate whether residual soil concentrations of Site 1-related constituents have impacted the environment at concentrations that may pose unacceptable risk to human health. The objective of the ecological risk assessment (ERA), included as **Section 7.0** of this RI report, is to evaluate whether Site 1-related constituents pose unacceptable risk to the environment.

1.2 Site Background

Section 1.2 discusses the site description, history, and previous investigations.

1.2.1 Site Description

The NCTAMS LANT Det Cutler facility is located near the town of Cutler, Washington County, Maine. Construction began in the late 1950s, and on June 23, 1961, NCTAMS LANT Det Cutler was established as a communications facility that provides radio signal transmissions with United States (U.S.) ships, planes, and submarines operating mainly in the North Atlantic and Arctic Oceans, and the Mediterranean Sea. The entire facility occupies approximately 3,000 acres originally consisting of three main areas: (1) the Administrative and Housing Area, (2) the High Frequency (HF) Area, and (3) the Very Low Frequency (VLF) Peninsula Area. In 2000, the Navy transferred military operations of these areas to civilian staffing (**Figure 1-1**). With that, approximately 80 acres of the facility, including the living quarters and support facilities for Navy personnel (the Administrative and Housing Area), were transferred to the Cutler Development Corporation. The Navy maintains ownership of the HF and VLF Peninsula Areas, which continue to operate with civilian staffing.

The FTA is approximately 10.27 acres in size and located in the northern portion of the Cutler Peninsula, to the north of the VLF Peninsula, east of Holmes and Machias Bays, and west of Little Machias Bay (**Figure 1-1**). Undeveloped forested land and several freshwater wetlands surround the site. The site was historically used for firefighting operations and disposal of fuel oil. A 2009 removal action of impacted soil was conducted in the center of the site and an existing wetland was enhanced during restoration activities. The rest of the site mainly consists of open or forested area, with forested area around the perimeter. The DDA is located in the southwest corner of the FTA, immediately to the south and directly upgradient of the 2009 enhanced wetland (**Figure 1-2**). During previous removal actions, 76 waste oil drums and drum remnants were removed from the DDA.

1.2.2 Site History

The FTA is an abandoned gravel pit that was historically used for fire-training exercises by NCTAMS LANT Det Cutler personnel from the 1960s to the 1980s. According to a preliminary assessment report completed by the Naval Energy and Environmental Support Activity in 1988, fire-training activities utilized two 4,200-gallon tanks, approximately 8 feet (ft) in diameter and 8 ft high in size, that had been cut in half. Waste fuel oil was burned in these tanks. The tanks were partially filled with water before the waste fuel oil was added and ignited. Some of the fuel oil is believed to have been released to the environment due to overfilling or overflow resulting from precipitation (NEESA 1988). According to Naval Computer and Telecommunications Area Master Station (NCTAMS) Fire Department officials, a maximum of 300–400 gallons of waste fuel were burned each year (HMM 1994). Additionally, it was reported that waste No. 6 fuel oil was brought

to the FTA and spread on the ground in the early 1980s when base Power Plant engines were switched from No. 6 fuel oil to No. 2 fuel oil.

The DDA was originally identified as Area of Concern (AOC) 31 (FTA DDA) in the 2007 Preliminary Site Assessment (PSA) Report based on the discovery of a drum in 2006. In 2010, the DDA was elevated from an AOC to an Installation Restoration (IR) Site. The DDA was combined with the FTA in early 2012 due to their close proximity and similar contaminants, and both sites are referred to together as Site 1 (FTA).

1.2.3 Previous Investigations

Several previous investigations and removal actions have been performed at Site 1 between 1991 and 2016 by other contractors to address environmental contamination. **Table 1-1** presents a brief summary of those previous investigations and the corresponding reports. More details of the previous investigations key figures from those reports are included in **Appendix A**.

Until 2012, the FTA and the DDA were investigated separately. To differentiate the locations of the activities, **Table 1-1** specifies where the investigation occurred (FTA or DDA) until 2012 when the two sites were combined as Site 1 FTA.

1.3 Report Organization

The subsequent sections of this RI report provide the following information:

- **Section 2.0** provides discussions of investigation activities conducted at the FTA and the target constituents and data sets in support of this RI report.
- **Section 3.0** provides the physical characteristics of Site 1.
- **Section 4.0** provides the nature and extent of the contaminants.
- **Section 5.0** provides the fate and transport of the contaminants.
- **Section 6.0** includes the HHRA and the ERA. The complete HHRA is included as **Appendix D** and the complete ERA is included as **Appendix E**.
- **Section 7.0** provides the Conceptual Site Model (CSM).
- **Section 8.0** provides the summary, conclusions, and recommendations based on the investigatory findings.
- **Section 9.0** is a list of references used in this RI report.

A summary of previous investigations and historical figures referenced in the RI report is included in **Appendix A**. Data summary tables of the historic and 2015 and 2016 data referenced in the RI report are included in **Appendix B**. A background reference data evaluation is included in

Appendix C. The HHRA is included in **Appendix D** and the ERA in **Appendix E**. **Appendix F** includes the August 2017 Technical Memorandum Evaluation of Groundwater Analytical Results for the FTA for sampling conducted in September 2015. A White Paper that addresses hexavalent chromium in soil and sediment at the FTA is included in **Appendix G**.

2.0 STUDY AREA INVESTIGATION

This report uses data from historical investigation and removal activities obtained prior to the RI and during several RI-specific phases of sampling from 1991 to 2016 (**Section 1.2**). Figures in **Appendix A** of this report present the historical sample locations in and around Site 1. Many previous sample locations have been removed as part of the interim removal actions, as discussed in **Section 1.2.3** and **Appendix A**. Samples that were excavated have been omitted from the data set used in this evaluation.

Samples that were not removed as part of the historical interim removal actions are used in this evaluation as they are still present in media in and around Site 1. The data are included in **Appendix B**.

Site monitoring wells were sampled most recently as part of this RI in 2015 to obtain current data to evaluate the plume stability and support the risk assessment. The nature and extent of groundwater contamination including contaminant trends from 2002 to 2015 are summarized in **Section 4.0**. The 2017 Technical Memorandum Evaluation of Groundwater Analytical Results is included in **Appendix F**.

2.1 Site Characterization Field Activities

Historical site characterization of Site 1 of surface features, contaminant sources, meteorology, human population, ecology, site geology, and characterizations of site media not conducted by Resolution are summarized in **Section 1.0** and **Appendix A**. Characterization activities conducted by Resolution are described in the following sections.

2.1.1 Groundwater Investigations

Groundwater samples were collected during 2014 at 12 existing wells (MW-1, MW-5, MW-9, MW-10, MW-11, MW-12, MW-14, MW-206, MW-208, MW-210, MW-218, and DP-35). The samples were analyzed for volatile organic compounds (VOCs), volatile petroleum hydrocarbons (VPH)/extractable petroleum hydrocarbons (EPH), semivolatile organic compounds (SVOCs), and metals (total and dissolved) to confirm previous groundwater conditions. Additionally, groundwater samples were collected in 2012, 2014, and 2015 and analyzed for per- and polyfluoroalkyl substance (PFAS) because these emerging contaminants are found in aqueous firefighting foams used at FTAs. Monitoring well MW-210 was also analyzed for polychlorinated biphenyls (PCBs) because it is near the former DDA. One groundwater sample collected from monitoring well MW-208 in November 2016 was analyzed for both total and hexavalent chromium. Water level measurements were conducted in June and September 2015 to develop groundwater contours and interpret flow direction.

Groundwater samples were collected in accordance with the U.S. Environmental Protection Agency (USEPA) Low Stress (Low Flow) Purging and Sampling Procedure (USEPA SOP-GW001, Revision 2010). A peristaltic pump was used for groundwater sampling. Dedicated tubing was used at each monitoring well to avoid potential cross-contamination between monitoring wells. Samples collected for dissolved metals analysis were filtered in the field using a new, disposable in-line 0.45-micron (pore size) filter and a pump.

Field water quality parameters were monitored using an YSI 600 series (or similar) meter coupled with a flow-through cell. Turbidity was measured separately using a LaMotte Model 2020 or equivalent nephelometer. Field water quality parameters are detailed in the 2017 Technical Memorandum Evaluation of Groundwater Analytical Results provided in **Appendix F**.

Groundwater samples were containerized for laboratory analyses as indicated in Worksheet #18 of the project Sampling and Analysis Plan (Resolution 2015), which includes analytical methods, sample containers, preservation, and holding time requirements for each analytical group.

2.2 Sampling for Hexavalent Chromium

Soil, sediment, and groundwater samples were collected during previous investigations at the FTA and analyzed for metals, including total chromium. Since the speciation of the chromium was unknown, the chromium results were conservatively evaluated as hexavalent chromium in soil and sediment, as requested by MEDEP (Tetra Tech 2014). The evaluation of total chromium as 100-percent hexavalent chromium requested by MEDEP is a conservative approach and leads to overestimation of the potential risk or hazard index (HI) for total chromium.

During November 2016, samples were collected and analyzed for total chromium and hexavalent chromium in order to determine whether chromium present in site media is in the more toxic hexavalent form. Trivalent chromium concentrations were calculated by subtracting hexavalent chromium from the total chromium result. At the FTA, 10 soil samples and one sediment sample were collected. One sample of groundwater was also collected and analyzed from well MW-208 for total chromium, hexavalent chromium, and trivalent chromium in November 2016. Total chromium has never been detected in surface water at the FTA and therefore was not included in the November 2016 sampling.

Sampling was conducted in accordance with the Field Sampling Plan (Resolution 2016) at selected locations based on historical high total chromium concentrations. The Field Sampling Plan was reviewed by the Navy and MEDEP. MEDEP responded that due to soil disturbance in the area, the originally proposed locations may be compromised and not representative of undisturbed soil. The samples collected as part of this field effort reflect the revised sample locations in areas known to be undisturbed, as approved by Navy and MEDEP.

Appendix B, Tables B-8, B-9, and B-10 present the validated results of the November 2016 sampling. A White Paper that addresses hexavalent chromium in soil and sediment at the FTA is included in **Appendix G**.

2.3 Target Constituents

Past activities at the FTA have included historical use for fire-training exercises from the 1960s to the 1980s during which PFAS were likely used in firefighting foams; spreading of waste No. 6 fuel oil on the ground at the FTA in the early 1980s when base Power Plant engines were switched from No. 6 fuel oil to No. 2 fuel oil; and disposal and burial of drums of waste oils and fluids.

PFAS include perfluorooctanesulfonic acid (also known as perfluorooctane sulfonate [PFOS]) and perfluorooctanoic acid (PFOA). According to the USEPA website (2017), USEPA uses PFAS rather than perfluorinated compounds (PFCs) consistently to collectively describe PFOA, PFOS, and the other chemicals in this group. This report will refer to PFOS and PFOA collectively as PFASs.

Based on the past activities, samples collected at the FTA have been analyzed for a variety of constituents. Soil samples have been analyzed for VOCs, SVOCs, PCBs, pesticides, and diesel range organics (DRO)/gasoline range organics (GRO) and metals. Groundwater samples have been analyzed for VOCs, SVOCs, PCBs, PFASs, VPH, EPH, and metals. Surface water and sediment samples have been analyzed for VOCs, SVOCs, VPH, EPH, and metals. In addition, sediment samples have been analyzed for PCBs and pesticides.

2.4 Remedial Investigation Data Set

As discussed in **Section 1.2.3**, several historical investigations and removal actions have been performed to address contamination at the FTA. Groundwater, surface soil, subsurface soil, sediment, and surface water samples have been collected at the FTA at various times between 1991 and 2016. Resolution reviewed all available data and determined the appropriate and representative data to include in this RI. The analytical data summary tables for these historical investigations are included in **Appendix B**.

The soil data set was reviewed and soil sample locations which were identified as excavated in previous removal actions were removed from the data set. Sediment samples and surface water samples collected from 2012 to 2016 and groundwater samples collected from 1999 to 2016 were also compiled in the RI data set included in **Appendix B**.

The *Background Study for Remedial Investigations for Installation Restoration Sites at NCTAMS LANT Det in Cutler, Maine* (Battelle 2005) described the collection of background surface soil samples (0 to 1 foot [ft] below ground surface [bgs]). Samples collected from 15 locations in each of the two primary soil types (glacial till and glaciomarine sediments) were considered to be

applicable to the FTA. **Appendix C** presents the background evaluation of these samples considered in the HHRA and ERA for the FTA RI.

While chemicals within background levels are not attributed to Navy activities, background levels are considered in the HHRA and the ERA included in **Appendix D** and **Appendix E**, respectively.

The analytical data set was compared against project screening levels (PSLs) to evaluate the nature and extent of contamination. The selection of PSLs is described in **Section 4.1**.

MEDEP provides Remedial Action Guidelines (RAGs) for soil, groundwater, and indoor air (MEDEP 2016) for the protection of human health. RAGs are not available for surface water or sediment, or for ecological impacts. The RAGs may be used to simplify derivation of clean-up goals in the absence of a site-specific risk assessment (MEDEP 2016). Alternatively, a site-specific risk assessment may be used to determine whether site action is warranted and, if necessary, develop site-specific clean-up goals (MEDEP 2016). The latter approach was selected for the FTA; therefore, the RAGs are not applicable to the FTA RI.

Table 2-1 and **Table 2-2** compare the PSLs with the various soil and groundwater MEDEP RAGs. For soil, the selected PSLs are lower than MEDEP RAGs for 79 of the 97 detected compounds. For groundwater, the selected PSLs are lower than MEDEP RAGs for 41 of the 44 detected compounds. Therefore, the human health PSLs were used to evaluate the nature and extent of contamination at the FTA.

2.5 Analytical Data Validation and Usability Assessment

2.5.1 Data Validation

The analyses were validated using the following documents and variances, as applicable to each method:

- September 2016 Final Sampling and Analysis Plan: Site-Specific Quality Assurance Project Plan
- U.S. Department of Defense Quality Systems Manual for Environmental Laboratories, Version 5.0, July 2013
- USEPA National Functional Guidelines for Superfund Organic Methods Data Review, August 2014

Issues identified during the data validation resulted in the application of letter qualifiers to the data to ensure reported concentrations were accurately represented. Inclusion or exclusion of data for further analysis was based on review of analytical qualifiers and performed in accordance with guidelines noted previously:

- Analytical results bearing the U qualifier (indicating that the analyte was not detected at the given reporting limit) were retained in the data set and considered non-detects. If the limit of detection (LOD) was elevated above the limit of quantitation (LOQ), the LOQ was also elevated.
- Analytical results bearing the J qualifier (indicating that the reported value was estimated because of minor anomalies with the method quality objectives) were retained at the measured concentration.
- Analytical results bearing the UJ qualifier (indicating that the analyte was analyzed, but not detected, and the associated LOD is an estimate and may be inaccurate or imprecise) were retained at the measured concentration.

The data validation report (**Appendix B**) presents explanations for all of the qualified data in greater detail.

2.5.2 Data Usability Assessment

Although the RI data are considered reliable, some degree of uncertainty is unavoidable. Specific factors that may contribute to the uncertainty of the data evaluation are described in the following sections. The following Data Quality Indicators (Precision, Accuracy, Representativeness, Comparability, Completeness, Compliance, and Sensitivity) are important components in assessing data usability. When evaluated using these parameters, the data are determined to be of high quality.

2.5.2.1 Precision

Precision is the degree of agreement among repeated measurements of the same characteristic on the same sample or on separate samples collected as closely as possible in time and place. Field sampling precision is measured with the field duplicate relative percent differences (RPDs); laboratory precision is measured with calibration verification, laboratory control spike (LCS) and matrix spike duplicate RPDs, and serial dilution percent differences.

Calibration verifications are performed routinely to ensure that instrument responses for all calibrated analytes are within established control criteria. LCS pairs are prepared by addition of known concentrations of each analyte in a matrix-free media known to be free of target analytes. LCS pairs were analyzed for each analytical batch to demonstrate the ability of the laboratory to

detect similar concentrations of a known quantity in matrix-free media. All LCS pairs met the RPD precision outlined in the Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP).

Field duplicate pair sets were collected to assess the overall sampling and measurement error for this sampling effort. The field duplicate sample was analyzed for the same analytes as the primary field sample. An RPD of 35 percent was used to evaluate the field duplicate precision in accordance with the UFP-QAPP. The field duplicate pairs performed on field samples FTA-MW-206-091815 and FTA-MW-14-092115. Field sample FTA-MW-206-091815 displayed anomalies for barium that resulted in field sample results being flagged J. Field sample FTA-MW-14-092115 displayed anomalies for copper and nickel. The J flag means that the associated numerical results are considered approximations of the actual sample concentrations.

A serial dilution is prepared by the laboratory after digestion for the metals analyses for each preparation batch by creating a 1:5 dilution of a digestate in water. The serial dilution result should be within 10 percent of the neat digestate concentration.

2.5.2.2 Accuracy

Accuracy is confidence in a measurement. The smaller the difference between the measurement of a parameter and its true or expected value, the more accurate the measurement. The more precise or reproducible the result, the more reliable or accurate the result. Accuracy is measured through percent recoveries in the LCSs, the matrix spike pairs, and surrogates.

LCSs are prepared by addition of known concentrations of each analyte in a matrix-free media known to be free of target analytes. LCSs were analyzed for each analytical batch to demonstrate that the analytical system was in control during sample preparation and analysis. One LCS pair displayed percent recoveries greater than the upper control limit of 120 percent for tetrachloroethene (FTA-MW-11-092115 and FTA-MW-14-092115-D). Three LCS pairs displayed recoveries lower than the lower control limit, which are 2-methylphenol (30 percent) and 1,1-biphenyl (32.5 percent) for FTA-DP-35-092115, FTA-MW-10-092115, FTA-MW-1-091815, FTA-MW-12-092115, FTA-MW-14-092115, FTA-MW-14-092115-D, FTA-MW-206-091815, FTA-MW-206-091815-D, and FTA-MW-218-091815. The associated field sample results were flagged J.

A matrix spike pair is prepared, analyzed, and reported for all preparation batches. Matrix spikes demonstrate that the analytical system was in control for the matrix being tested. Matrix spike pairs were analyzed for each analytical batch to demonstrate the ability of the laboratory to recover a concentration of a known quantity in site matrix media. The matrix spike performed on field sample FTA-MW-210-092115 displayed percent recoveries less than the lower control limit for isopropylbenzene, 2-methylphenol, caprolactam, 1,1'-biphenyl, 2-chlorophenol, 3,3'-dichlorobenzidine, bis(2-ethylhexyl)phthalate, m&p cresols, dibenzo(a,h)anthracene,

indeno(1,2,3-cd)pyrene, and n-nitrosodi-n-propylamine. The associated field sample results (FTA-MW-210-092115) were flagged J.

Surrogate compounds were added to all field samples and quality control (QC) samples during sample preparation. Surrogate compounds are substances with properties that mimic the analytes of interest. Surrogate compounds are unlikely to be found in field samples, and are added to demonstrate the laboratory's ability to detect a similar compound at a known concentration. Samples FTA-MW-5-091815, FTA-MW-1-091815, and FTA-MW-14-092115-D had high recoveries of the surrogate dibromofluoromethane (SW8260 SIM), which exceeded the acceptance limit of 130 percent. FTA-MW-14-092115, FTA-MW-10-092115, FTA-MW-208-092115, FTA-MW-12-092115, and FTA-DP-35-092115 had high recoveries of the surrogates 1,2-dichloroethane-d4 and dibromofluoromethane (SW8260) which exceeded the acceptance limit of 130 percent. Since a high recovery indicated a high bias and there were no target analytes detected above the method detection limit (MDL), no qualification was necessary.

2.5.2.3 Representativeness

Representativeness qualitatively expresses the degree to which data accurately reflect site conditions. Factors that affect the representativeness of analytical data include appropriate sample population definitions, proper sample collection and preservation techniques, analytical holding times, use of standard analytical methods, and determination of matrix or analyte interferences.

Field QC samples were collected to assess the representativeness of the data collected. Field duplicates were collected at a rate of 10 percent for all discrete samples. All preservation techniques were followed by the field staff and all technical and analytical holding times were met by the laboratory. The laboratory used approved standard methods as outlined in the UFP-QAPP for all analyses.

2.5.2.4 Comparability

Comparability is the extent to which data from one study can be compared directly to either past data from the current project or data from another study. Using standardized sampling and analytical methods, units of reporting, and site selection procedures helps ensure comparability. Standard field sampling and typical laboratory protocols were used.

2.5.2.5 Compliance

Method compliance was determined by evaluating sample integrity, preservation, holding time, laboratory blanks, and calibration against method specified requirements, while applying USEPA data validation guidelines. No data require qualification based on method compliance measurements and overall method compliance is acceptable based on the data reported.

2.5.2.6 Completeness

Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Completeness goals are set at 90–100 percent. Determination of completeness included a review of chain of custody records, laboratory analytical methods and detection limits (DLs), laboratory case narratives, and project requirements. Completeness also included 100-percent review of the laboratory sample data results and electronic data deliverables.

RI field activities spanned many years and occurred in several different phases. The total quantity of data collected is complete, of sufficient quality, and usable to complete the RI of the FTA and make decisions for potential cleanup.

2.5.2.7 Sensitivity

Sensitivity is the capability of a test method or instrument to discriminate between measurement responses representing different levels (e.g., concentrations) of a variable of interest. Examples of QC measures for determining sensitivity include laboratory fortified blanks, a MDL study, and calibration standards at the quantitation limit (QL). To meet the needs of the data users, project data must meet the measurement performance criteria for sensitivity and project QLs specified in the UFP-QAPP. The laboratory provided the requested MDL studies and provided applicable calibration standards at the QL. To achieve the data quality objectives for sensitivity outlined in the UFP-QAPP, the laboratory reported all field sample results at the lowest possible dilution. No non-detect field sample results were retained in the data set; all dilutions were performed appropriately and correctly.

3.0 PHYSICAL CHARACTERISTICS OF THE STUDY AREA

Section 3.0 discusses the physical characteristics of Site 1, FTA.

3.1 Surface Features

The former FTA is located at an elevation of approximately 80 ft above mean sea level (msl) based on the U.S. Geological Survey topographic map of the Machias Bay Quadrangle (USGS 2011). The ground surface slopes downward from south to north across the site and the topographic relief steepens rapidly in the southern portion of the DDA.

3.2 Surface/Water Hydrology

During the 2009 soil removal action at the FTA, a wetland area in the central portion of the site was enhanced to augment the wetland restoration area to the north (known as the Sand Wedge Excavation Area) as well as to provide additional habitat for wildlife. Surface overflow ran toward a wetland/open water habitat located in the northern portion of the site prior to the removal action. The elevation in the central portion of the FTA was reduced during the creation of the freshwater wetland, producing shallow groundwater levels at or near the ground surface. Currently, the majority of runoff drains into the wetland.

Surface drainage at Site 1 is flows towards surrounding wetland areas or to nearby streams located to the north and east.

3.3 Geology

Several removal actions have removed shallow layers of soils and replaced it with fill material consisting of cobbles, gravel, sand, and silt to at least a depth of 8 ft bgs, as reported during the October 1999 PCB soil characterization at Site 1 (EA 2000). The soil removal action areas are illustrated on Figure A-4 in **Appendix A** and described in more detail in the site history presented in **Section 1.2**.

Prior to soil removal activities, soil borings revealed a surficial geology composed of deposits from both glacial processes and marine depositional environments. According to EA Engineering, Science, and Technology, Inc. (2004), prior to soil removal activities, soils beneath the majority of the site consisted of an upper sand and gravel unit that was underlain by the silty-clay Presumpscot Formation. In the southeast portion of the site, the silty-clay is replaced by a lower sand and gravel unit. In the west/northwest portion of the site, the upper sand and gravel unit is replaced by a silt layer. The thickness of the upper sand and gravel unit ranged from 3 to 24 ft; and the thickness of the lower silty-clay unit ranged from 2 to 31 ft (EA 2004). The thickness of the lower sand and gravel unit is variable, but is at least 12.5 ft thick based on site borings. Peat deposits were noted in soil borings advanced in the immediate vicinity of the wetland near the northern portion of the site.

A depression in the lower silty-clay unit is located near the center of the FTA soil removal area (EA 2004). In this area, the silty-clay layer is found approximately 10 to 15 ft deeper than at other areas of the site. A few borings have been completed in this depression, including; FT-2, MW-6, SSS-4, DP-8, DP-41, DP-42, DP-43, SS-7, SS-10, SS-51, PECS-07, PECS-08, and PECS-09. Borings DP-41, DP-42, and DP-43 were completed as monitoring wells that are screened directly above the silty-clay layer. DP-41, DP-42, and DP-43 were destroyed during the soil excavation activities conducted between 2006 and 2009. Monitoring wells MW-16, MW-17, and MW-18 are screened in the silty-clay layer around this depression. Borings have been completed deep enough to encounter bedrock at locations MW-16 and MW-17. See **Figures 3-1** and **3-2** for geologic cross-sections of the FTA. At these locations, bedrock was inferred based on drill refusal and geologic knowledge, but was not confirmed by rock coring. Bedrock is approximately 40 ft bgs (EA 2004). Published documents have described the bedrock in the area as tuff-breccias and tuffs (EA 2004).

3.4 Hydrogeology

The former FTA is located on a State of Maine Significant Sand and Gravel Aquifer where surficial deposits are expected to yield more than 10 gallons per minute (Maine Geological Survey 2000). Based on historical water level data, the depth to groundwater ranges from less than 0.5 ft to approximately 5 to 6 ft bgs (EA 2004). There are seven water production wells at NCTAMS LANT Det Cutler, of which five are used as a water source for the facility. Two of the wells located at the Power Plant are no longer in use, due to saltwater intrusion. Three of the wells are located on the VLF Peninsula at Buildings 100, 132-135, and the Power Plant. Two of the wells are located in the area north of the VLF Peninsula at the HF Transmitter Building 400 and the Administrative and Housing Area. The only well used as a drinking water source services Building 132-135 and is regulated by the Maine Department of Health and Human Services (Tetra Tech 2007).

The 2009 soil removal action reduced the elevation in the center portion of the FTA, enhancing a freshwater wetland with groundwater likely near the surface. At the time of this removal action, dewatering was performed to allow backfilling and restoration activities. The dewatering system had a total operating capacity of 500 gallons per minute (gpm), but was normally operated at approximately 250 gpm. A total of 1.8 million gallons of water was treated by the system.

Historically, the depth to groundwater was shown to decrease from south to north across the site with a decrease in ground elevation. Based on September 2015 monitoring well gauging data, the direction of shallow groundwater flow, in the surficial materials, is generally to the north toward the wetland area. The hydrograph of groundwater elevation data from 2012 to 2015 (**Figure 3-4**) reveal no discernible trends in seasonal groundwater flow patterns.

Post-excavation groundwater elevations have not been gauged within the wetland areas; therefore, it is unknown if the groundwater potentiometric elevations have changed due to construction and

enhancements of wetlands. However, potentiometric elevations were gauged in wells located outside the wetland areas in 2015, during the monitoring well inspection survey, and potentiometric elevations ranged from approximately 91 ft in the southern portion of the site (MW-208) to approximately 67 ft in the northern portion of the site (MW-14 and MW-11). The September 2015 groundwater elevations illustrated on **Figure 3-3** are referenced to an arbitrary site datum rather than msl.

Hydraulic gradient values were calculated based on the groundwater elevation data from 2012 to 2015. Using the well pair from MW-208 to MW-11, the following hydraulic gradients were calculated: 0.0269 foot per foot (ft/ft) in November 2012; 0.0271 ft/ft in June 2014; 0.0310 ft/ft in June 2015; 0.0217 ft/ft in September 2015. No field permeability tests or hydraulic conductivity data appear to have been collected during the previous site investigations at this site.

Artesian conditions, which implies an upward hydraulic gradient from the lower silty-clay unit to the upper sand and gravel unit, have been observed in the deepest monitoring wells: MW-16, MW-17, and MW-18 (EA 2004). Monitoring wells MW-16, MW-17, and MW-18 are the only wells screened in the silty-clay unit.

3.5 Demography and Land Use

The NCTAMS LANT Det Cutler facility is situated on approximately 3,000 acres along the Gulf of Maine coast in Cutler, Maine. The facility is composed of three areas: the VLF Peninsula Area, the former Administration and Housing Area, and the HF Area. The former FTA is located on the VLF Peninsula Area, north of the VLF Peninsula, east of the former Salvage Yard Area (SYA) (Site 2), and west of the former Construction Debris Area (Site 3). Undeveloped wooded land is located to the east of the former FTA. The VLF Peninsula is bordered by Machias Bay to the west and Little Machias Bay to the east. Holmes Bay lies west of the Former Administration and Housing Area and HF Area. The location of FTA and DDA is shown on the Project Area Map (**Figure 1-2**).

The area surrounding the NCTAMS LANT Det Cutler facility is mostly rural, with some residential development in the vicinity of the base. Access to the VLF Peninsula Area is restricted by base security and can be gained only through a security checkpoint located in the northeastern portion of the base along Ridge Road. The entrance to the facility is accessed via Ridge Road located approximately 1.5 miles west of Route 191 in Cutler, Maine. While there are no physical access restrictions around the VLF Peninsula, human access to the operational array is prohibited and is restricted to base personnel performing operation and maintenance. Currently, there is no residential or recreational use of the base.

3.6 Ecology

During past removal activities, the removal areas were cleared of vegetation. Upon completion of removal activities, the removal areas were restored by backfilling with appropriate fill and grading

to act as a wetland to match the surrounding terrain. All disturbed areas were subsequently seeded and planted to compliment the surrounding area. The site is not mowed or maintained. Currently the site contains some gravelly areas with low scrub vegetation with trees. A thick layer of vegetation, consisting of herbaceous plants, shrubs, and trees surround the site. Similar vegetative cover was present at the site prior to the remedial activities and is expected to return to the site over time.

During the 2009 soil removal action at the FTA, a wetland area in the central portion of the site was enhanced to augment the wetland restoration area to the north (known as the Sand Wedge Excavation Area) as well as to provide additional habitat for wildlife. The total acreage of the Sand Wedge restored wetland and the enhanced wetlands within the FTA are 3.26 acres (**Figure 3-5**). Forested areas are located around the FTA.

Soil invertebrates such as earthworms are expected to inhabit the terrestrial portion of the site. Standing water may be seasonally present within the wetland; however, fish are not expected to be present within wetlands. Benthic and aquatic invertebrates and amphibians are expected to be found within the wetlands. Birds and mammals such as robin and raccoon are likely to forage on plants and prey items from terrestrial and wetland habitats within the former FTA and elsewhere on the peninsula.

4.0 NATURE AND EXTENT OF CONTAMINATION

Section 4.0 summarizes the soil, sediment, surface water, and groundwater analytical data obtained during environmental investigations and removal actions at the FTA and evaluates the distribution of contaminants at the FTA. Previous sample collection activities occurred from 1991 to 2016 and are summarized in **Section 1.2.3**.

Figure 4-1 depicts the locations of Soil Exposure Area 1, Soil Exposure Area 2, and the wetlands, as well as sample locations for soil, sediment, surface water, and groundwater. Due to the large number of samples located in Soil Exposure Area 2, **Figure 4-2** provides a magnification of Soil Exposure Area 2. In the HHRA discussed later in this report, the evaluation of soil exposure was performed for two soil distinct exposure areas, referred to as Soil Exposure Area 1 and Soil Exposure Area 2 within the FTA site boundaries. In general, Soil Exposure Area 1 (5.56 acres in size) contains lower chemical concentrations, and represents all the soil outside of Soil Exposure Area 2, which is located in the southern portion of the site. Soil Exposure Area 2 (1.45 acres in size) generally contains higher chemical concentrations. The definitions of the exposure areas are described in Section 2.1.1 of the HHRA (presented in **Appendix D**). Figures in **Appendix A** present the historical sample locations in and around Site 1. A tabular summary of all the RI analytical data used in this evaluation is provided in **Appendix B**.

4.1 Project Screening Levels

All RI analytical data results were compared against PSLs to evaluate the nature and extent of contamination. For the FTA, PSLs are based on USEPA Regional Screening Levels (RSLs), USEPA Maximum Contaminant Levels (MCLs), and USEPA and MEDEP surface water criteria. While MEDEP also provides RAGs, they are not applicable to the FTA because the site-specific risk assessments (**Appendix D** and **Appendix E**) will be used to determine the need for remedial action and develop clean-up goals, if required. Furthermore, the selected PSLs are overall more conservative than MEDEP RAGs. Therefore, the selected human health PSLs were used to conservatively evaluate the nature and extent of contamination at the FTA. The ERA (**Appendix E**) provides a detailed evaluation based on ecologically-based screening levels.

The selection of human health PSLs is discussed in detail in Section 3.2.1 of the HHRA (**Appendix D**) and is summarized in the following paragraphs.

Soil PSLs: The USEPA RSL (May 2016 version) for residential soil based on a target excess lifetime cancer risk (ELCR) of 10^{-6} and a target hazard quotient (HQ) of 0.1 was selected for each chemical, as presented in **Table 4-1.**

Sediment PSLs: Published human health screening levels are not available for sediment. Therefore, risk-based screening levels were calculated using the USEPA RSL Calculator in Section 3.2.5 of the HHRA (**Appendix D**), as presented in **Table 4-2**.

Surface Water PSLs: The lowest of the USEPA and MEDEP surface water criteria for the consumption of water and organisms and risk-based screening level calculated using the USEPA RSL Calculator in Section 3.2.4 of the HHRA (**Appendix D**) was selected for each chemical, as presented in **Table 4-4**.

Groundwater PSLs: The lowest of the USEPA MCL, USEPA RSL (May 2016 version) for tap water, and USEPA Vapor Intrusion Screening Level (VISL) for groundwater (May 2016 version) was selected for each chemical, as presented in **Table 4-3**. RSLs and VISLs based on a target ELCR of 10^{-6} and a target HQ of 0.1 were used.

Table 2-1 and **Table 2-2** in **Section 2.0** compare the PSLs with the various soil and groundwater MEDEP RAGs. For soil, the selected PSLs are lower than MEDEP RAGs for 79 of the 97 detected compounds. For groundwater, the selected PSLs are lower than MEDEP RAGs for 41 of the 44 detected compounds. Therefore, the human health PSLs were used to evaluate the nature and extent of contamination at the FTA.

4.2 Data Evaluation

Summary statistics were generated from the soil, sediment, surface water, and groundwater analytical results to provide a numeric summary of the frequency of analyte detections, range of detections, and number of detections above human health PSLs. The numeric summary provides information on the nature and extent of contamination in the FTA. There were no issues with the historical data and all data has been validated.

4.2.1 Sources

The history of the site suggests the sources of contamination include former fire-training activities as well as drum burial. According to a preliminary assessment report completed by the Naval Energy and Environmental Support Activity in 1988, fire-training activities utilized two 4,200-gallon tanks, approximately 8 ft in diameter and 8 ft high in size, that had been cut in half. Waste fuel oil was burned in these tanks. The tanks were partially filled with water before the waste fuel oil was added and ignited. Some of the fuel oil is believed to have been released to the environment due to overfilling or overflow resulting from precipitation (NEESA 1988). According to NCTAMS Fire Department officials, a maximum of 300-400 gallons of waste fuel were burned each year (HMM 1994). Additionally, it was reported that waste No. 6 fuel oil was brought to the FTA and spread on the ground in the early 1980's when base Power Plant engines were switched from No. 6 fuel oil to No. 2 fuel oil.

The DDA, located in the southern portion of the site, was originally identified based on the discovery of a drum in 2006. During previous removal actions, 76 waste oil drums and drum remnants were removed from the DDA.

4.2.2 Soils and Vadose Zone

Surface and subsurface soil samples were collected from 2002 to 2016. Surface and subsurface soil sample locations are shown on **Figure 4-1** and **Figure 4-2**. The frequency of detection, the range of detection, location of the maximum detections, and number of detections above human health PSLs are provided as sitewide summary statistics in **Table 4-1** and **Table 4-2** for surface soil and subsurface soil, respectively.

As shown in **Table 4-1** and **Table 4-2**, Total PCBs (primarily PCB Aroclor-1260), polycyclic aromatic hydrocarbons (PAHs), and metals were frequently detected in soils above the PSLs.

PCB Aroclor-1260 had the highest frequency of detection of the PCB Aroclors. PCB Aroclor-1260 was detected in 103 of 107 surface soil samples and 64 of 114 subsurface soil samples. PCB-contaminated soil was excavated from two areas (PCB Area 1 and PCB Area 2) to a depth of 2-ft (AGVIQ 2015). Confirmation soil samples were collected to verify that the excavation achieved the project-specific removal action goal of 100 milligrams per kilogram (mg/kg) that was used during that effort. The PCB concentrations were less than the 100 mg/kg removal action goal in PCB Area 2 and the eastern side of PCB Area 1. The PCB concentration was greater than the removal action goal at six locations on the western region of PCB Area 1. One ft of soil was excavated from the areas where the PCB concentrations had exceeded the action level and then resampled for PCBs. PCB concentrations at three subsequent confirmation sample locations (PCBAREA1-013 [610 mg/kg], PCBAREA1-011 [240 mg/kg], PCBAREA1-014 [140 mg/kg]) exceeded the PCB removal action goal. Due to funding limitations, further excavation was discontinued and the portion of the excavation containing PCBs greater than the cleanup level was marked with plastic sheeting. PCB Aroclor-1260 results in comparison to human health PSLs are illustrated on **Figure 4-3** for all soil samples. The highest concentrations of PCB Aroclor-1260 were detected in confirmation soil samples located within the 2013 PCB Area 1 excavation conducted by AGVIQ. As illustrated on **Figure 4-3,** the highest PCB Aroclor-1260 soil exceedance (610 mg/kg at PCBAREA1-013) is a sidewall confirmation sample located along the southern wall of the 2013 PCB Area 1.

The highest concentrations of PAHs were identified in surface soil at location FTA-SB-216. Benzo(a)pyrene was detected at a concentration of 4.3 mg/kg at this location. While other samples showed PAH concentrations above human health PSLs, concentrations were much lower, with the next highest benzo(a)pyrene concentration detected at 0.12 mg/kg at location FTA-SB-209. Therefore, it appears that the elevated PAH concentrations in surface soil at location FTA-SB-216, which is located on the western edge of the wetland, are localized and not widespread in soils across the site.

Chromium was detected in surface soil and subsurface soil, but at concentrations less than PSLs. As discussed in **Section 2.4**, during November 2016, 10 soil samples were collected and analyzed for total chromium, hexavalent chromium, and trivalent chromium in order to determine whether chromium present in site media is in hexavalent form. Analytical results from the November 2016 sampling event for total chromium in soil ranged from 18.7 mg/kg to 32.9 mg/kg. Hexavalent chromium was not detected in any soil sample, with DLs ranging from 0.31 mg/kg to 1.6 mg/kg. The residential PSL for hexavalent chromium is 0.3 mg/kg. Even though the DLs exceed the 0.3 mg/kg residential PSL, based on the non-detectable concentrations, it is assumed that hexavalent chromium is not present in soil at the FTA greater than PSLs.

In soil, the frequency of detection was relatively high for various other metals with concentrations above human health PSLs, including aluminum, arsenic, cobalt, iron, manganese, and thallium. Metals concentrations at the FTA were further evaluated in conjunction with the results of the background evaluation (included in **Appendix C**) to determine if they are site-related or non-site-related (i.e., identified as being consistent with background based on a comparison of concentrations in site and background data sets). Aluminum and iron were found to have concentrations in site media less than or consistent with concentrations in site background.

Arsenic was found to have concentrations in site media less than or consistent with concentrations in site background (with the exception of subsurface soil in Soil Exposure Area 2). Cobalt was detected in all 37 of the surface soil samples and 53 of 54 subsurface soil samples in which it was analyzed. Cobalt analytical results exceeded its PSL of 2.3 mg/kg in all soil samples in which it was detected. The highest cobalt surface soil detection (24.2 mg/kg at FTA-SB-201) is located in the northern portion of the site. The highest cobalt subsurface soil detection (20.8 mg/kg at FTA-ANOM1C-SO-INT) is located in the southwestern portion of the site.

Figure 4-4 presents the distribution of manganese concentrations in soil. Manganese was detected in all 37 of the surface soil samples and all 54 subsurface soil samples in which it was analyzed. Manganese analytical results exceeded its PSL of 180 mg/kg in all soil samples. The highest manganese surface soil detection (8,600 mg/kg at FTA-SB-201) is located in the northern portion of the site. The highest manganese subsurface soil detection (1,530 mg/kg at FTA-SB-214) is located in the southwestern portion of the site.

Thallium was detected in all 37 surface soil samples (maximum of 0.14 mg/kg, location FTA-ANOM1E-SO-SURF) and in 52 of the 54 subsurface soil samples (maximum of 0.26 mg/kg, location SB-214) in which it was analyzed. As discussed in **Appendix C**, thallium was not detected in the background soil samples and detection limits were elevated. Therefore, no conclusions were drawn regarding thallium based on the background evaluation.

4.2.3 Groundwater

Groundwater sampling events at the FTA were conducted in 1999, 2007, 2012, 2013, 2014, 2015, and 2016. Groundwater samples were collected during 2014 at 12 existing monitoring well locations at the FTA to confirm previous groundwater conditions. The groundwater samples were collected and analyzed for VOCs, VPH/EPH, and total and dissolved metals. Additionally, groundwater samples were collected in 2012, 2014 and 2015 from the monitoring wells and analyzed for PFASs, as part of the new emerging-contaminant protocol. One groundwater sample collected from monitoring well FTA-MW-208 in November 2016 was analyzed for both total and hexavalent chromium.

Appendix B presents a tabular data summary of all the FTA groundwater analytical results from 1999, 2007, 2012, 2013, 2014, 2015, and 2016. The groundwater results from the 2015 sample event are also submitted in the *Technical Memorandum Evaluation of Groundwater Analytical Results Site 01 – Fire Training Area*. The Technical Memorandum is included in **Appendix F**.

Table 4-3 does not include groundwater data collected before 2012, as the more recent data are more reflective of current conditions. Furthermore, only groundwater data from permanent wells are included. As indicated in USEPA (2014), groundwater data from monitoring wells are preferred over data collected from soil borings and/or temporary well locations, as results for temporary wells may not be reproducible. Therefore, results from the following wells are included in the summary statistics presented in **Table 4-3**:

- FTA-MW-1
- FTA-MW-5
- FTA-MW-9
- FTA-MW-10
- FTA-MW-11
- FTA-MW-12
- FTA-MW-14
- FTA-MW-203
- FTA-MW-206
- FTA-MW-208
- FTA-MW-210
- FTA-MW-218
- DP-35

Historically, the depth to groundwater was shown to decrease from south to north across the site with a decrease in ground elevation. Based on September 2015 monitoring well gauging data, the direction of shallow groundwater flow is generally to the north. A September 2015 groundwater gradient contour map is illustrated on **Figure 3-3**. The hydrograph of groundwater elevation data from 2012 to 2015 (**Figure 3-4**) reveal no discernible patterns in seasonal groundwater flow patterns.

Post-excavation groundwater elevations have not been gauged within the enhanced wetland areas; therefore, it is unknown if the groundwater potentiometric elevations have changed due to the installation of the wetland. However, potentiometric elevations were gauged in wells located outside the wetland areas in 2015, during the monitoring well inspection survey, and potentiometric elevations ranged from approximately 91 ft in the southern portion of the site (MW-208) to approximately 67 ft in the northern portion of the site (MW-14 and MW-11).

4.2.3.1 PCBs

As shown in previous tables, PCBs, primarily PCB Aroclor-1260, were detected in surface soil, subsurface soil, and sediment at the former FTA. However, the groundwater data indicates no detections of PCBs in groundwater at the FTA.

4.2.3.2 PFASs

The groundwater samples from monitoring wells collected in 2012, 2014, and 2015 were also analyzed for PFASs. PFASs are found in some firefighting foams and are considered an emerging contaminant. PFASs have not been investigated at the FTA before 2012; however, it is possible that firefighting foam containing PFASs were used in firefighting activities at the FTA. PFOA and PFOS are fully fluorinated organic compounds and are the two perfluorinated chemicals most commonly found in firefighting reagents. Groundwater samples obtained from wells during the most recent sampling event (September 2015) exhibited the following detected PFOA results: MW-1 (0.015 microgram per liter [µg/L]); MW-210 (0.012 µg/L); DP-35 (0.018 µg/L); MW-14 (0.350 µg/L); MW-5 (0.30 µg/L); MW-9 (0.021 µg/L); MW-11 (0.017 µg/L); MW-10 (0.022 µg/L); and MW-12 (0.0056 µg/L). Groundwater samples obtained from wells in September 2015 exhibited the following detected PFOS results: MW-10 (0.011 µg/L); MW-1 (0.0016 µg/L); MW-9 (0.14 µg/L); MW-11 (0.15 µg/L); and MW-12 (0.011 µg/L). Results from the numerous PFAS sampling efforts have shown that five of the 27 samples exhibited PFOS in excess of the 0.04 µg/L PSL and the USEPA's Lifetime Drinking Water Health Advisory Level (HAL) of 0.07 µg/L (USEPA 2016a) while six of the 27 samples exhibited PFOA in excess of the 0.04 µg/L PSL and the USEPA HAL of 0.07 µg/L (USEPA 2016b). The maximum concentrations of PFOA and PFOS were found in the northern portion of the site (downgradient flow direction of groundwater) in MW-11 in 2014 (0.25 µg/L PFOS) and MW-14 in 2012 (0.45 µg/L PFOA). Both the PSL and the HAL for PFOS are protective of drinking water quality, and not groundwater from monitoring wells.

4.2.3.3 Metals

Concentrations of several metals exceed human health PSLs. Arsenic was detected above the PSL at a maximum concentration of 16 µg/L in MW-5 in September 2015.

Concentrations of total chromium in the permanent wells range from 1.4 µg/L to 26.6 µg/L. The highest concentration of total chromium were identified in the southern portion of the site in MW-208 (26.6 µg/L) in November 2012, however, below the total chromium PSL of 100 µg/L. Upgradient well FTA-MW-208 has exhibited the highest concentrations of total chromium historically and was therefore selected for inclusion in the November 2016 hexavalent chromium sampling event. The results of the speciated chromium sample collected from upgradient well MW-208 in November 2016 indicated a concentration of 5.2 µg/L trivalent chromium and 4.8 µg/L hexavalent chromium, above the PSL for hexavalent chromium of 0.035 µg/L. However, given well MW-208 upgradient location, the results from this well are reflective of background conditions rather than site conditions. Total chromium was not detected in upgradient well FTA-MW-203, and was detected in one sample from upgradient well FTA-MW-218 at a concentration of 4 µg/L.

The maximum concentrations of manganese were found in the northern portion of the site (downgradient flow direction of groundwater) in MW-9, ranging from 3,060 µg/L in June 2014 to 3,850 µg/L in September 2015. Based on the results of the HHRA (**Appendix D**), arsenic and manganese are the most likely risk drivers for a hypothetical future drinking water scenario.

4.2.3.4 VOCs and SVOCs

Other constituents detected above human health PSLs include infrequent detections of SVOCs, including 1,1-biphenyl (four out of 24 samples) and hexachlorocyclopentadiene (one out of 24 samples).

VOCs detected above human health PSLs included: cis-1,2-dichloroethene; trichloroethene; and vinyl chloride. Groundwater samples obtained from MW-206 exhibited the following VOC results in September 2015: trichloroethene (TCE) (10 µg/L); vinyl chloride (0.056 µg/L); and cis-1,2-dichloroethene (cis-DCE) (22 µg/L). Well MW-206 has exhibited consistent concentrations of these three chemicals since 2012. Groundwater samples obtained from downgradient monitoring wells have shown low levels of VOCs, including a maximum vinyl chloride concentration of 0.84 µg/L at MW-9.

4.2.3.5 Total Petroleum Hydrocarbons

Of the total petroleum hydrocarbons (TPH) fractions analyzed, VPH fractions were not detected. The EPH fraction C11-C22 aromatics was detected in MW-5. Potential impacts due to petroleum products are assessed using BTEX and PAH data, and therefore a PSL was not identified.

4.2.4 Surface Water

Surface drainage at Site 1 is assumed to flow towards surrounding wetland areas. Fourteen surface water samples were collected at the FTA during two sampling events in 2012 and 2014. Surface water samples could not be collected from co-located sediment sample locations FTA-SED-05 and FTA-SED-04 in 2014 because no surface water was present at these locations during this sampling event. The surface water samples locations are illustrated on **Figure 4-1**. As shown in **Table 4-4**, the maximum detections were primarily associated with location FTA-SW-06.

Arsenic, manganese, and thallium were the only metals that exceeded the human health PSLs in surface water.

PCB Aroclor-1260 was not detected in any surface water sampling locations during either sampling event. PCB Aroclor-1254 was detected at one surface water sampling location (FTA-SW-06) in 2014 at a concentration of 0.38 µg/L.

Several PAHs were also detected at FTA-SW-06 above the human health PSLs. The highest concentration of PAHs identified at location FTA-SW-06 is indeno(1,2,3-cd)pyrene at a concentration of 0.16 µg/L. Since the PAH exceedances of PSLs are relegated to location FTA-SW-06, it appears that the elevated PAH concentrations in surface water are localized and not widespread across the site.

4.2.5 Sediment

During sampling events conducted in 2012 and 2014, 16 sediment samples were collected. In 2012 and 2014, sediment samples were collected from eight locations (FTA-SED-01 through FTA-SED-08) and analyzed for: Total PCBs, metals, pesticides, TPH, VOCs, and SVOCs. One sediment sample was collected from location FTA-SED-07 in November 2016 and was analyzed for total and hexavalent chromium. The sediment samples were collected from the wetlands portion of the FTA.

The frequency of detection, the range of detection, location of the maximum detections, and number of detections above human health PSLs are provided in **Table 4-5**. The locations of sediment samples are illustrated on **Figure 4-1**.

As shown in **Table 4-5**, PCB Aroclor-1260 was detected in 15 of 16 sediment sampling locations with a maximum concentration of 2.1 mg/kg from FTA-SED-04.

Benzo(a)pyrene was detected in 8 of 16 sediment sampling locations above the PSL, with a maximum concentration of 2.4 mg/kg at location FTA-SED-01.

Arsenic concentrations were detected in all samples and exceeded the sediment PSL of 2.56 mg/kg in 15 of 16 sampling locations. The maximum concentration of arsenic was 19 mg/kg at FTA-SED-04.

Total chromium was detected in wetland sediments at concentrations ranging from 11.3 mg/kg to 33.7 mg/kg. The maximum concentration of total chromium was 33.7 mg/kg at FTA-SED-07. One sediment sample was collected from FTA-SED-07, the location of the maximum detected concentration, and was analyzed for both hexavalent and total chromium. Hexavalent chromium was not detected in this sediment sample. While the DL was elevated due to matrix interference and high moisture content, the DL is an artifact of the sediment matrix and requirements of the analytical method. As discussed in detail in **Appendix G**, multiple lines of reasoning were used to support the weight-of-evidence conclusion that hexavalent chromium is not present at the FTA. Site history, background concentrations, soil characteristics, and laboratory analysis all support the conclusion that hexavalent chromium is not present at the FTA. Therefore, total chromium is evaluated as trivalent chromium, and not hexavalent chromium in sediment, and the PSL based on trivalent chromium is used. Total chromium concentrations are below the sediment PSL of 52,600 mg/kg.

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5.0 CONSTITUENT FATE AND TRANSPORT

Section 5.0 addresses the persistence and migration characteristics of contaminants identified exceeding the screening criteria and background levels in soil, surface water, sediment, and groundwater media at the FTA as discussed previously in **Section 4.0**. In **Section 5.0**, the characteristics of these contaminants and their transport in the environment are further evaluated. Understanding the fate and transport of constituents is important in evaluating their potential impacts to receptors. The fate and transport of contaminants can occur in all three environmental media: terrestrial (soil and groundwater), aquatic (surface water and sediment), and atmospheric (air). Transport is the simple movement of the constituents, for example, with the flow of groundwater or surface water. Fate is a summary of all the physical and chemical processes that act on the constituents during transport.

5.1 General Fate and Transport Processes of Soil Constituents

The primary route of contaminant migration at the former FTA is via direct release to the ground surface or via drum and debris burial, then infiltration of the contamination into the soil, through the vadose zone and into to groundwater. A secondary route of migration is storm water runoff causing erosion of the contaminated soil at the surface and transport into the nearby drainage features, wetlands and streams. Once the contaminants reach the groundwater under the primary route, the groundwater flow system beneath the former FTA may cause the contaminants to migrate toward and potentially discharge into the downgradient drainage features north of the former FTA. However, historical groundwater sampling at the former FTA indicates that known groundwater plumes are stable or decreasing.

The fate and transport of chemicals in environmental media are affected by a variety of factors, including chemical-specific and medium-specific characteristics. Chemical-specific characteristics are those that are related to the composition and structure of the contaminant, such as solubility, volatility, or the number of functional groups containing hydrocarbons, halogens, oxygen, and nitrogen. These characteristics affect the chemical behavior or reactivity of contaminants, which in turn affect their persistence in the environment. Medium-specific characteristics that affect the fate and transport of contaminants include atmospheric pressure, soil or sediment composition, and groundwater composition. These characteristics affect the physical transport of contaminants by evaporation, sorption, or affect the speciation of certain contaminants.

In order for a chemical to persist in the environment, it must be chemically stable, relative to the biogeochemical conditions to which it is exposed. Chemicals that are inert or do not react under a broad range of conditions are less likely to degrade or be retarded during transport. In addition to a chemical's reactivity, its persistence in the environment may be affected by uptake by various organisms, where it is accumulated or degraded by biological metabolic processes.

Contaminants generally migrate in response to chemical concentration gradients through diffusion processes. They also migrate in conjunction with the movement of solids or fluids in response to an external driving force such as gravity or hydrostatic pressure. The mobility of a contaminant through a specific medium will reflect the combined effects of medium-specific properties, the presence of any anthropomorphic structures, such as underground sewer pipes, and the responses to climatic conditions. Sediments and soils containing high levels of clay and organic matter are more likely to retard the movement of contaminants than sandy materials with low organic contents.

5.2 Site-Specific Fate and Transport

As discussed in **Section 4.0**, Total PCBs (primarily PCB Aroclor-1260), PAHs, and metals in soil; PCB Aroclor-1260, benzo(a)pyrene, arsenic and total chromium in sediment; arsenic, manganese, thallium, PCB Aroclor-1254, and PAHs in surface water; and PFOS, PFOA, arsenic, hexavalent chromium, manganese, PAHs, and chlorinated VOCs (cis-DCE, TCE, and vinyl chloride) in groundwater were identified above PSLs in the environment. The physical and chemical properties and potential release mechanisms and routes of migration for each of these constituent groups are discussed in the following sections.

5.2.1 PCBs

PCBs were detected above PSLs in soils, sediment, and surface water at the former FTA. Wastes gathered at the FTA and DDA have included electrical equipment and drums of waste oils and fluids, which are known to contain PCBs. The PCBs contained within the gathered wastes at the former FTA likely migrated via direct release to the ground surface and via leaking buried drums, followed by infiltration of the contamination into the soil. Sediment and surface water were likely impacted by storm water runoff and erosion of the contaminated soil at the surface and transport into the wetlands.

PCB Aroclors are composed of various combinations of PCBs with different properties such as vapor pressure, solubility, and viscosity. Data for PCBs were primarily available based on PCB Aroclor analysis with a smaller set of samples submitted for analysis of PCB homologues. PCB Aroclor-1260 had the highest frequency of detection of the PCB Aroclors. PCB Aroclor-1260 was detected in 103 of 107 surface soil samples and 64 of 114 subsurface soil samples. PCB Aroclor-1260 was detected in 15 of 16 sediment sampling locations. Total PCBs (as homologues) were detected in one surface water sampling location, and the concentration exceeded the human health-based USEPA National Recommended Water Quality Criteria (NRWQC) and MEDEP surface water criteria.

PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until their manufacture was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black

waxy solids. Due to their non-flammability, chemical stability, high boiling point, and electrical-insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications. PCBs were principally used as dielectric fluids in electrical transformers and capacitors. The principal source of PCB contamination is typically spillage or leakage of dielectric fluids containing PCBs.

PCB compounds are highly persistent in soil. These compounds demonstrate strong adsorption to soil and sediment media, indicating that significant leaching to groundwater should not occur. PCB compounds may leach into the groundwater when combined with organic solvents, which demonstrate significant leaching capabilities. Adsorption of PCB compounds is elevated by increased organic, clay, and microparticle content of the soil or sediment. Biodegradation can occur under both aerobic and anaerobic conditions, but only at a slow rate. No chemical process is known to degrade PCB compounds in soil. PCBs can biodegrade under anaerobic conditions via dechlorination. The persistence of PCBs at the site is consistent with the strong adsorptive affinities of PCBs for soils. Total PCBs detected in the sediment are also expected to be persistent and may become mobilized from the sediment during erosional processes related to storm events.

5.2.2 Metals

Several metals were detected above PSLs in soil, sediment, surface water and groundwater. Metals are ubiquitous and occur naturally in soil as well as groundwater, sediment and surface water.

Chromium was detected in surface soil and subsurface soil, but at concentrations less than PSLs. As discussed in the hexavalent chromium White Paper (**Appendix G**), the soil characteristics at the site play an important role in the fate of chromium. The overburden materials encountered in the FTA consist generally of medium to coarse sand with lesser amounts of gravel overlying a layer of silty clay. The predominant soil type underlying the FTA is the Pits sand and gravel (USDA NRCS 2016). This soil comprises sediments deposited mainly as glaciofluvial sands and gravels with some glacial till. Soil pH measured for the FTA site indicates that the Pits is an acidic soil. The pH measurements from 19 surface soils collected at the FTA range from 4.5 to 7.1 with the most frequent pH value being 5.4. The acidic soil conditions present at the FTA is not conducive to the presence of chromium in its hexavalent state. Analytical results from the November 2016 sampling event for total chromium in soil ranged from 18.7 mg/kg to 32.9 mg/kg. Hexavalent chromium was not detected in any soil sample, with DLs ranging from 0.31 mg/kg to 1.6 mg/kg. The residential PSL for hexavalent chromium is 0.3 mg/kg. Even though the DLs exceed the 0.3 mg/kg residential PSL, based on the non-detectable concentrations and the soil conditions not conducive to hexavalent chromium, it is assumed that hexavalent chromium is not present in soil at the FTA greater than PSLs.

In soil, the frequency of detection was relatively high for various other metals with concentrations above human health PSLs, including aluminum, arsenic, cobalt, iron, and manganese. Aluminum and iron were found to have concentrations in site media less than or consistent with concentrations in site background. Arsenic was found to have concentrations in site media less than or consistent with concentrations in site background.

In sediment, arsenic exceeded the human health PSL. In surface water, arsenic, manganese, and thallium were the only metals that exceeded the human health PSLs. In groundwater, concentrations of total chromium in the permanent wells range from 1.4 µg/L to 26.6 µg/L. The highest concentration of total chromium were identified in the southern portion of the site in MW-208 (26.6 µg/L) in November 2012, however, below the total chromium PSL of 100 µg/L. The November 2016 results for FTA-MW-208 indicated that total chromium was detected at a concentration of 9.97 µg/L and hexavalent chromium was detected at a concentration of 4.8 µg/L, above the PSL of 0.035 µg/L for hexavalent chromium. However, given well MW-208 upgradient location, the results from this well are reflective of background conditions rather than site conditions. Concentrations of several metals exceed human health PSLs. Arsenic was detected above the PSL at a maximum concentration of 16 µg/L in MW-5 in September 2015. The maximum concentrations of manganese were found in the northern portion of the site (downgradient flow direction of groundwater) in MW-9, ranging from 3,060 µg/L in June 2014 to 3,850 µg/L in September 2015.

There are no reported uses of chromium or other metals at the FTA in a manufacturing process or primary waste storage or disposal. The FTA is an abandoned gravel pit that was historically used for fire-training exercises from the 1960s through the 1980s and disposal of waste fuel oil and drum disposal. Buried drums were removed from the site and residual PCB contamination was identified. From 1999 to 2013, approximately 1.8 million gallons of water were pumped and treated and approximately 40,326 tons of soil have been removed from the FTA during the historical removal actions at the site. These actions would have also resulted in a reduction of site metals concentrations at the site. Based on the historical removal actions at the site and the data that show the remaining site soil metals concentrations are similar to site background levels, no release of metals to site media (including soil, groundwater, sediment and surface water) due to site activities is indicated.

5.2.3 PAHs

PAHs at the former FTA could be the result of burning of waste oils during fire training activities and were likely contained within buried drums of waste oil. However, PAHs, including benzo(a)pyrene, are anthropogenic compounds that are found in man-made sources and are persistent in the environment. PAHs also occur naturally. PAHs are present in oil, coal, and tar deposits and in asphalt pavement. They are also found in terrestrial and aquatic plants, in soils and

bottom sediments, in fresh and marine waters, and in natural deposits of peat as well as emissions from forest fires. Their presence at the FTA in soils is consistent with their slow environmental degradation.

PAHs are persistent and generally immobile in soil matrices under normal environmental conditions. PAHs are hydrophobic, and their persistence in the environment is mainly due to their chemical stability and low water solubilities. In general, the solubility of the PAHs decreases as the molecular weight increases. High-molecular-weight PAHs have higher hydrophobicity and tend to persist in environmental media. Their transport may be enabled by the presence of organic colloids or bacterial materials. Low-molecular-weight PAHs (e.g., naphthalene) volatilize more easily.

The PAHs tend to bioaccumulate because they are non-polar. In surface water, PAHs tend to sorb to particles that either have settled to the bottom or are suspended in the water column. These high-molecular-weight PAHs appear to have lower settling fluxes and tend to be buried in sediment layers. Biodegradation rates decrease with increasing molecular weight. PAHs can be reduced through microbial metabolism. In soil, PAHs tend to degrade because of microbial metabolism. The rate of degradation is dependent upon factors such as temperature, pH, oxygen availability, soil type, contaminants present, and PAH concentrations.

The highest concentrations of PAHs were identified in surface soil at location FTA-SB-216. Benzo(a)pyrene was detected at a concentration of 4.3 mg/kg at this location. While other samples showed PAH concentrations above human health PSLs, concentrations were much lower, with the next highest benzo(a)pyrene concentration detected at 0.12 mg/kg at location FTA-SB-209. Therefore, it appears that the elevated PAH concentrations in surface soil at location FTA-SB-216, which is located on the western edge of the wetland, are localized and not widespread in soils across the site. In groundwater, PAHs were detected above human health PSLs infrequently. Additionally, their maximum detection in wells MW-5 and MW-10, which are located in the vicinity of the site near the subsurface peat deposits, indicates the peat may be acting as a natural source of the PAHs. Since the PAH exceedances of PSLs are infrequent and the maximum detections are located near the peat deposits, no potential release of PAHs to groundwater from site activities is indicated.

In surface water, several PAH detections above the human health PSLs were relegated to FTA-SW-06. Since the PAH exceedances of PSLs are relegated to location FTA-SW-06, it appears that the elevated PAH concentrations in surface water are localized and not widespread across the site. Because of the localized elevated PAH concentrations, no release of PAHs to surface water from site activities is indicated.

Benzo(a)pyrene was detected in 8 of 16 sediment sampling locations above the PSL, with a maximum concentration of 2.4 mg/kg at location FTA-SED-01. Benzo(a)pyrene was also detected in

soil at the FTA. The highest concentrations of PAHs were identified in surface soil at location FTA-SB-216 at a concentration of 4.6 mg/kg.

5.2.4 VOCs

VOCs at the former FTA are possibly the result of the use of combustible chlorinated solvents during fire-training activities and were possibly contained within buried drums. The VOC-containing solvents would have been spilled onto the ground surface and then infiltrated into the soil and into groundwater. The VOC detection pattern at the FTA is consistent with the characteristic environmental behavior of chlorinated solvents. Commonly, chlorinated solvents, when released to the environment (e.g., surface spills, historic disposal practices), will migrate downward through the soil matrix to the groundwater under density-driven flow, provided that the contaminant mass is sufficient to overcome pore throat entry pressure and the retardation properties of the soil matrix.

Chlorinated VOCs are generally mobile in the environment, primarily due to their high volatility, low adsorption to some soils, and low to high aqueous solubilities. They are relatively persistent in the environment because they do not degrade very easily under oxidizing conditions and therefore are not easily degraded by bacteria or taken up by other organisms in these environments. Chlorinated aliphatics, such as cis-DCE, TCE, and vinyl chloride, have been observed in groundwater at the former FTA. These hydrocarbons have variable solubilities and may be carried for some distance in groundwater. Because of these characteristics, the primary fate and transport mechanisms affecting VOCs are volatilization into the air and migration in groundwater. The high volatility of VOCs somewhat limits the extent to which surface water or groundwater transport will be a major transport process, because VOCs may volatilize out of unconfined or partially confined aquifers. Due to the high mobility of VOCs, a decrease in their concentrations is anticipated with time, as long as there is no additional input of these compounds.

Chlorinated VOCs also tend to undergo degradation reactions in anaerobic soil systems (reducing environments). The degradation reactions involve the progressive loss of chlorine ions from the molecular structure, resulting in a stepwise dechlorination under reducing conditions. An oxidizing environment would not favor large-scale reductive degradation of the TCE/cis-DCE/vinyl chloride series of compounds. However, some of the elevated metals data suggest the groundwater flow system is more reducing in some areas of the FTA.

5.2.5 PFASs

PFASs at the former FTA were likely contained within the firefighting foam used in firefighting activities. Given the numerous soil removal actions at the FTA, it is unlikely that remaining soils contain PFASs. PFASs are compounds used in the formulation of firefighting foam. PFOA and PFOS are fully fluorinated organic compounds and are the two perfluorinated chemicals most commonly

found in firefighting reagents. These emerging contaminants have unique chemistry due to carbon-fluorine bonds, which are the strongest bonds in nature.

There are many different factors that can influence the fate and transport of PFASs. This is especially true when PFASs are co-mingled with hydrocarbon fuels as is often the case at FTAs. When hydrocarbon fuels are released, indigenous microorganisms rapidly biodegrade/oxidize the fuels resulting in anaerobic conditions (i.e., negative redox) at the source area. Firefighting foam contains long chain fluorotelomer alcohols that will also biodegrade and further reduce the redox conditions in source areas. This biodegradation will dead end at eight carbon compounds including PFOS and PFOA, which have not been shown to be aerobically or anaerobically biodegradable. Some of these long chain fluorotelomer alcohols will not biodegrade in the source area and will migrate downgradient until the fuels attenuate and the natural aerobic conditions prevail. These aerobic conditions will result in biodegradation of the fluorotelomer alcohols and result in increasing concentrations of PFOS and PFOA farther downgradient. An increase in concentrations can be incorrectly interpreted as another source area. Results from the PFC sampling efforts have shown that the maximum concentrations of PFOA and PFOS were found in the northern portion of the site (downgradient flow direction of groundwater) in MW-11 and MW-14.

5.2.6 TPH

TPH compounds represent a complex mixture of EPH and VPH ranges of aliphatic or aromatic hydrocarbons. TPH compounds at the former FTA are likely the result of the burning of petroleum waste oils during fire training activities and are likely contained within buried drums of waste oil. The waste oils would have been spilled onto the ground surface and then infiltrated into the soil and into groundwater. Residual petroleum hydrocarbons are typically contained in the soil and do not readily move, but can continue to act as a remaining source for groundwater contamination.

As described **Appendix A**, approximately 20,000 tons of petroleum-contaminated soil were removed and treated at the site in 2006 and 2008. Of the TPH fractions analyzed, VPH fractions were not detected in groundwater. The EPH fraction C11-C22 aromatics was detected in MW-5 only. The limited TPH detections in groundwater are consistent with the characteristic that, after a petroleum release, the bulk of the hydrocarbon remained as residual material adsorbed to soil particles or accumulated between soil particle pore space at the site, with a small percentage of the petroleum hydrocarbon mass dissolving into the aqueous phase.

The past excavation efforts at the site resulted in the removal of remaining soil sources of petroleum groundwater contamination and have resulted in limited TPH groundwater contamination.

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6.0 BASELINE RISK ASSESSMENT

Section 6.0 discusses the baseline risk assessment.

6.1 Human Health Evaluation

The HHRA was conducted in accordance with *Navy Policy for Conducting Human Health Risk Assessments* (DON 2001), *Navy Human Health Risk Assessment Guidance* (DON 2008), *USEPA Risk Assessment Guidance for Superfund* (USEPA 1989), and MEDEP risk assessment guidance (MEDEP 2011), as referenced in the complete HHRA report attached as **Appendix D**. The tiers of evaluation that were followed to conduct the HHRA were the Tier IA Human Health Risk-Based Screening Evaluation and the Tier II Baseline HHRA.

The HHRA approach used in the HHRA generally follows the approach used for evaluation of the Site 4/VLF Peninsula risk assessment (Resolution 2016a) and the Site 2/SYA risk assessment (Resolution 2016b) to provide consistency in the HHRA approach between multiple sites within NCTAMS LANT Det Cutler.

The primary objective of the HHRA is to evaluate whether exposure to COPCs attributable to past operations at the FTA may pose a risk to human health above USEPA or MEDEP target levels. The evaluation focuses on quantitative estimation of current and potential future risks and hazards to current and potential future human receptors that may come into contact with site-related chemicals in soil, groundwater, air, sediment, and surface water at the former FTA.

6.1.1 Data Evaluation and Hazard Identification

The analytical data set evaluated in the HHRA is described in detail in Section 2.0 of the HHRA (**Appendix D**). The Hazard Identification and selection of COPCs for evaluation in the HHRA is described in Section 3.2 of the HHRA (**Appendix D**).

6.1.1.1 Soil

Soil samples were collected during multiple sampling events conducted between 2002 and 2016 from various depth intervals between the ground surface and 10 ft bgs. Samples identified as removed during excavations were not included in the HHRA. For the purposes of the HHRA, and for consistency with the VLF Peninsula/SYA HHRAs (Resolution 2016b, 2017) surface soil is defined as soil collected within the 0–2 ft depth interval and subsurface soil is defined as soil collected within the depth interval ranging from >2 to 15 ft bgs.

Soil exposure areas were defined based on a review of analytical data and the spatial distribution of key COPCs, primarily Total PCBs and secondarily PAHs. **Figure 4-3** spatially depicts concentrations of PCB Aroclor-1260. Significant remediation has been conducted on the northern portion of the former FTA, historically used for firefighting training. Chemical concentrations are generally lower than in the more southern portion of the site, historically used for drum disposal. Therefore, the

evaluation of soil exposure in the HHRA was performed for two soil distinct exposure areas, referred to as Soil Exposure Area 1 and Soil Exposure Area 2 within the FTA site boundaries. In general, Soil Exposure Area 1 (5.56 acres in size) contains lower COPC concentrations, and represents all the soil outside of Soil Exposure Area 2. Soil Exposure Area 2 (1.45 acres in size) generally contains higher COPC concentrations. The definitions of the exposure areas are described in Section 2.1.1 of the HHRA (presented in **Appendix D**). The wetlands (3.26 acres) were not included in the soil exposure areas, which were treated as one exposure area for sediment and surface water.

Soil COPCs were selected for evaluation in the HHRA based on the PSLs described in **Section 4.1**, and are PCBs, PAHs, pesticides, and metals.

Figure 4-1 depicts the locations of Soil Exposure Area 1, Soil Exposure Area 2, and the wetlands.

6.1.1.2 Groundwater

Groundwater samples were collected during multiple sampling events conducted between 1999 and 2016. The hydrograph of groundwater elevation data from 2012 to 2015 (**Figure 3-4**) reveals no discernible patterns in seasonal groundwater flow. Therefore, the use of multiple rounds of data from the same well is appropriate for this HHRA. The latest two rounds of sampling include June 2014 and June 2015 (with one additional round included at FTA-MW-206 in September 2013 for PCBs, pesticides, SVOCs, and VOCs, and one additional round included at FTA-MW-208 in November 2016 for total and hexavalent chromium only). However, because the 2014 and 2015 rounds had slightly varying analyte lists for SVOCs and VOCs, the November 2012 round was included to ensure adequate data points per chemical and well. Groundwater data collected before 2012 were not used in the HHRA, as the more recent data are more reflective of current conditions.

Based on September 2015 monitoring well gauging data, the direction of shallow groundwater flow, in the surficial materials, is generally to the north toward the wetland area. FTA-MW-203, FTA-MW-208, and FTA-MW-218 are located hydraulically upgradient from the wetland area and distant from any site-related activities. With the exception of a very low level detection of PFOA in FTA-MW-218, only inorganics were detected in these wells, suggesting the wells are not site impacted and more consistent with upgradient conditions. The PFOA detection is an estimated concentration at or near the DL and below the PSL, and likely represents a sampling artifact rather than a site-related condition. Therefore, these three upgradient wells were not included in the HHRA. The permanent groundwater wells included in the HHRA are listed as follows:

- FTA-MW-1
- FTA-MW-5
- FTA-MW-9

- FTA-MW-10
- FTA-MW-11
- FTA-MW-12
- FTA-MW-14
- FTA-MW-206
- FTA-MW-210
- DP-35

Groundwater COPCs were selected for evaluation in the HHRA based on the PSLs described in **Section 4.0**, and include PFOS, PFOA, select SVOCs, and VOCs, and metals.

6.1.1.3 Surface Water and Sediment

The total acreage of the Sand Wedge restored wetland (0.44 acres) and the enhanced wetland (2.84 acres) within the FTA is 3.26 acres. Both the restored wetland (also known as the Sand Wedge) and the enhanced wetland were evaluated as one exposure area for both surface water and sediment.

Surface water and sediment COPCs were selected for evaluation in the HHRA based on the PSLs described in **Section 4.1**, and are PCBs, PAHs, and metals.

6.1.2 Exposure Assessment

Currently, the FTA is unused and undeveloped open space. While there are no physical access restrictions to the FTA, human access to the area is prohibited and is restricted to Cutler base personnel performing operation and maintenance. Currently, there is no residential or recreational use, and children are not permitted to access the FTA. Access to the peninsula is restricted by base security and can only be gained through a security checkpoint located in the northern portion of the base along Ridge Road. The entrance to the NCTAMS LANT Det Cutler is accessed via Ridge Road located approximately 1.5 miles west of Route 191 in Cutler, Maine (Tetra Tech 2010). There are currently no future redevelopment plans.

For the purposes of the HHRA, it was conservatively assumed that humans may trespass onto the site under current conditions. Currently, there are no workers at the FTA, although a construction worker is assumed to be potentially exposed under the current and future scenario. The FTA is not regularly maintained and there are no activities occurring in the area. Future land use of the site is likely to remain constant into the future. However, it was conservatively assumed that future receptors may include industrial workers and residents under a hypothetical scenario in which the area is redeveloped for regular commercial/industrial and/or residential use. While no residential

development is planned for the site, this unlikely future scenario was evaluated in the HHRA to provide useful information for decision-making purposes (e.g., implementation of land use restrictions or remedial activities).

Based on the information discussed previously, the following receptors and potential exposure pathways were evaluated in the HHRA:

- Current/Future Construction Worker
  - Exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air.
  - Exposure to groundwater in an excavation trench through incidental ingestion, dermal contact, and inhalation of volatiles in air within the trench.
  - Exposure to surface water and sediment through incidental ingestion and dermal contact.
- Current/Future On-Site Recreational User/Trespasser
  - Exposure to surface soil (current/future) or subsurface soil (future) through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air (current/future use scenario).
  - Exposure to surface water and sediment through incidental ingestion and dermal contact.
- Future Outdoor Industrial Worker
  - Exposure to surface soil (current/future) or subsurface soil (future) through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air (current/future use scenario).
- Future Indoor Industrial Worker
  - Exposure to indoor air via volatilization from groundwater (i.e., vapor intrusion).
- Hypothetical Future On-Site Resident
  - Exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air.
  - Exposure to groundwater through ingestion of drinking water and dermal contact and inhalation during bathing/showering.

- Exposure to indoor air via volatilization from groundwater (i.e., vapor intrusion).
- Exposure to surface water and sediment through incidental ingestion and dermal contact.

The HHRA evaluated all receptors for both a reasonable maximum exposure (RME) and central tendency exposure (CTE) scenarios.

As noted previously, the site has been divided into two areas for the evaluation of soil: Soil Exposure Area 1 and Soil Exposure Area 2 (**Figure 4-1**). Under a hypothetical future use exposure scenario, the site could be developed for residential use, where the site may be divided into separate residential lots. The area of a typical residential lot is considered to be a minimum of 0.5 acre, especially given the rural nature of Cutler. While chemical concentrations between the two areas are different (Soil Exposure Area 1 has lower concentrations), the chemical concentrations within each exposure area are relatively consistent; therefore, exposure is expected to be similar regardless of how the areas could be subdivided in the future. With the exception of the construction worker, receptors are assumed to be exposed to surface soil only (the construction worker is assumed to be exposed to both surface and subsurface soil). However, under future conditions, redevelopment could result in mixing of surface and subsurface soil, or re-grading, potentially exposing subsurface soil as surface soil. Given the uncertainty surrounding hypothetical future mixing and/or grading of site soils, two future scenarios were evaluated, one in which receptors are potentially exposed to current surface soil and one in which receptors are potentially exposed to current subsurface soils.

Exposure to groundwater COPCs was evaluated based on permanent monitoring well data collected between 2012 and 2016. Under a hypothetical future use scenario, it is assumed that a private potable well may be installed for residential use anywhere on the site. Similarly, it is assumed that under a hypothetical future use scenario, a residential or commercial/industrial building may be constructed anywhere on the site, in which volatiles in groundwater may potentially migrate to overlying indoor air.

In addition, it is assumed that construction/excavation-type activities may be performed anywhere on the site. Based on September 2015 water level data from 26 site monitoring wells, the depth to groundwater ranges from less than 0.5 ft to approximately 13 ft bgs. Given the relatively shallow groundwater present, it was assumed that a construction worker may contact groundwater during construction/excavation-type activities.

Standing water may be seasonally present within the wetland area; however, fish suitable for human consumption are not expected to be present. Maximum water depths during the 2014 wetland sampling effort were approximately 6 inches with no standing water present at some

locations. Therefore, any activities involving surface water (e.g., wading) are expected to be minimal. Nonetheless, both surface water and sediment exposure are conservatively evaluated in the HHRA.

6.1.3 Toxicity Assessment

The toxicity assessment was conducted in accordance with USEPA guidance and considers chronic (long-term) and subchronic (fewer than 7 years) exposures for both carcinogenic and noncarcinogenic COPCs. Toxicity values were selected in accordance with USEPA's hierarchy of sources.

6.1.4 Risk Characterization

Appendix D, Tables 11.1 (RME and CTE) through 11.5 (RME and CTE) provide summaries of potential ELCRs and noncarcinogenic HIs for the exposure pathways evaluated. Potential ELCRs and HIs above MEDEP or USEPA target levels are identified separately to facilitate risk management decisions. **Appendix D**, Tables 11.1 (RME and CTE) through 11.5 (RME and CTE) also list the chemicals identified as risk drivers for each exposure scenario in which the total potential ELCR or total potential HI are above MEDEP target levels (i.e., total ELCR > 10^{-5}, and total HI > 1 per target endpoint), as requested by MEDEP (Tetra Tech 2014). For each associated exposure pathway (scenario [i.e., RME or CTE]/receptor/medium) with a potential risk/HI above MEDEP target levels, risk drivers were defined as COPCs with an individual ELCR > 10^{-6} or target organ HI > 1.

Summary tables showing the total receptor ELCRs and HIs for risk drivers only are presented in **Appendix D** (Tables 10.1.RME/CTE through 10.5.RME/CTE). The identified risk drivers were further evaluated in conjunction with the results of the background evaluation (included as **Appendix C** and described in **Section 2.4**) to determine if they are site-related or non-site-related (i.e., identified as being consistent with background based on a comparison of concentrations in site and background data sets). The following risk drivers identified based on the HHRA results were found to have concentrations in site media less than or consistent with concentrations in background and are therefore not considered site-related COCs for the FTA:

- Soil Exposure Area 1
  - *Surface Soil:* Arsenic
  - *Subsurface Soil:* Arsenic
- Soil Exposure Area 2
  - *Surface Soil:* Arsenic

An overall summary of potential ELCR and HI results for the receptors evaluated at the former FTA is presented in **Appendix D**, Tables 11.1 (RME and CTE) through 11.5 (RME and CTE). A summary

of the HHRA conclusions by each receptor group, including a summary of the risk drivers, is presented as follows.

6.1.4.1 Current/Future Construction Worker

A current/future construction worker was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air; groundwater through incidental ingestion, dermal contact, and inhalation of volatiles in an excavation trench; and exposure to surface water and sediment in the wetland area through incidental ingestion and dermal contact. Potential soil exposure scenarios were evaluated on an exposure area basis. Potential groundwater exposure scenarios were evaluated based on exposure point concentrations (EPCs) developed for the wells listed in **Section 6.1.1.2**. Both the restored wetland and enhanced wetland were evaluated as one exposure area for both surface water and sediment.

All total ELCRs for the RME and CTE current/future construction worker are within USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers are identified based on potential carcinogenic risk utilizing USEPA guidance or MEDEP guidance.

Target organ HIs are greater than MEDEP's and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- Soil Exposure Area 1
  - *Surface Soil:* Manganese (RME and CTE)
  - *Subsurface Soil:* Manganese (RME and CTE)
- Soil Exposure Area 2
  - Surface Soil: Manganese and Total PCBs (RME only)
  - *Subsurface Soil:* Manganese (RME and CTE)

6.1.4.2 Current/Future On-Site Recreational User/Trespasser

A current/future on-site recreational user (adult/child) was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air; and exposure to surface water and sediment in the wetland area through incidental ingestion and dermal contact. Potential soil exposure was evaluated on an exposure area basis.

The total ELCRs for the RME and CTE current/future recreational user/trespasser are within USEPA's target ELCR range of 10^{-6} to 10^{-4}. Therefore, no risk drivers are identified based on potential carcinogenic risk utilizing USEPA guidance.

Total ELCRs/HIs are above MEDEP's target ELCR of 10^{-5} and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following risk drivers:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME and CTE), and benzo(a)pyrene, (RME only)

6.1.4.3 Future Outdoor Industrial Worker

A future outdoor industrial worker was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air on an exposure area basis.

The total ELCRs for the RME and CTE future outdoor industrial worker are below or within USEPA's target ELCR range of 10^{-6} to 10^{-4}. Therefore, no risk drivers are identified based on potential carcinogenic risk utilizing USEPA guidance.

Total ELCRs/HIs are above MEDEP's target ELCR of 10^{-5} and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following risk drivers:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME only)

6.1.4.4 Future Indoor Industrial Worker

A future indoor industrial worker was evaluated for exposure to volatiles in groundwater via the vapor intrusion pathway. Potential exposure for this scenario was evaluated assuming a commercial/industrial building may be constructed anywhere on site under a hypothetical future use scenario.

The total potential ELCRs for the RME and CTE future indoor industrial worker are below USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Total potential HIs are below USEPA/MEDEP's target HI of 1. Therefore, no risk drivers are identified for the future industrial indoor worker.

6.1.4.5 Hypothetical Future On-Site Resident

A hypothetical future on-site resident was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air; exposure to volatiles in groundwater via showering/bathing and in indoor air via the vapor intrusion pathway; and exposure to surface water and sediment in the wetland area through incidental ingestion and dermal contact. Potential soil exposure scenarios were evaluated on an exposure area basis. Potential groundwater exposure scenarios were evaluated based on EPCs developed for wells listed in **Section 6.1.1.2**. The restored and enhanced wetland was

evaluated as one exposure area for both surface water and sediment. It is assumed that a residence may be constructed anywhere on the site and/or a private potable well may be installed for residential use anywhere on the site under a hypothetical future use scenario.

Total ELCRs are above MEDEP's target ELCR of 10^{-5} and/or above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME and CTE) and benzo(a)pyrene, (RME only)
  - *Subsurface Soil:* Total PCBs (RME and CTE) and arsenic (RME only)
- Groundwater
  - Trichloroethene, vinyl chloride, arsenic, and manganese (RME and CTE)

6.1.5 Uncertainty Assessment

Estimation of potential risks to human health that may result from exposure to chemicals in the environment is a complex process that often requires the combined efforts of multiple disciplines. Each assumption, whether regarding the toxicity value to use for a particular chemical or the value of a parameter in an exposure equation, has a degree of variability and uncertainty associated with it. In each step of the risk assessment process, beginning with the data collection and analysis, and continuing through the toxicity assessment, exposure assessment, and risk characterization, conservative assumptions are made that are intended to be protective of human health and to ensure that risks are not underestimated. There is a probability of overestimating health risks or hazards for a number of reasons. The HHRA (included as **Appendix D**) provides a discussion of the key uncertainties that may affect the final estimates of human health risk in this HHRA.

6.1.6 HHRA Conclusions

The HHRA results (included in **Appendix D**) identified the following risk drivers not attributable to background for one or more receptors/exposure areas:

- Surface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Manganese, benzo(a)pyrene, and Total PCBs
- Subsurface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Arsenic, manganese, and Total PCBs

- Groundwater (hypothetical future drinking water scenario)
  - Arsenic
  - Manganese
  - Trichloroethene
  - Vinyl chloride

6.2 Ecological Risk Assessment

The ERA was conducted in accordance with *Navy Policy for Conducting Ecological Risk Assessments* and *Navy Guidance for Conducting Ecological Risk Assessments* (DON 1999a,b). The complete risk assessment approach, with data tables and figures, is included as **Appendix E**. The approach was consistent with the eight-step tiered approach presented in *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final* (USEPA 1997). As described in Navy guidance (DON 1999a,b), a tiered approach that incorporates different levels of assessment complexity is used to evaluate the potential for ecological risk. The tiered approach may be implemented in its entirety depending on the level and magnitude of risk that is determined in prior tiers.

The Tier 1 ecological Screening Risk Assessment (SRA) is being submitted with the RI report for regulatory review. Based on the results of the Tier 1 ecological SRA, a preliminary Tier 2, Step 3a Baseline ERA (BERA) was prepared to further assess the potential for adverse effects to ecological receptors associated with the former FTA. The Tier 2, Step 3a evaluation is frequently a free-standing evaluation conducted following agency review of the Tier 1 ecological SRA scientific/management decision point. However, in this instance, the approach for the evaluation of ecological risks included a refined evaluation to be included in Step 3a.

The approach for the ERA follows the approach used recently for the VLF Peninsula and SYA ERAs (Resolution 2016a,b). An ERA Work Plan was not generated for the former FTA, but the 2012 Tier II Sampling and Analysis Plan for the former FTA (Tetra Tech 2012) identified ecological screening levels and relevant exposure pathways that were similar to those considered at the SYA; both areas included terrestrial and wetland habitats.

The primary objective of the ERA for the former FTA was to evaluate the potential for ecological risks associated with the historic use of the area for firefighting operations and disposal of fuel oil. The ERA focuses on surface soil, surface water, and sediment exposure pathways. Chemicals in surface soil may be contacted directly by plants and invertebrates living in the soil. Chemicals in sediment and surface water may be contacted directly by aquatic or benthic invertebrates living in the wetland. Wildlife foraging within the former FTA could also be exposed directly to chemicals in

soil, surface water, and sediment through incidental ingestion of soil, surface water, and sediment and/or indirectly by ingestion of contaminated prey items living at the Site.

Environmental data used in the ERA include surface soil, freshwater sediment, and freshwater surface water collected between 2006 and 2016. The analytical data set considered in the ERA is described in more detail in Section 2 of **Appendix E** and the data are included in Attachment A of **Appendix E**.

The following sub-sections summarize the findings of the Tier 1 ecological SRA, the Tier 2, Step 3a evaluation, the uncertainties associated with the ERA, and the conclusions of the ERA. The ERA is presented in **Appendix E**.

6.2.1 Tier 1 Ecological Screening Risk Assessment

The primary objective of a Tier 1 ecological SRA is to determine which, if any, exposure pathways and COPCs warrant further evaluation in a more refined ERA. The SRA included comparisons of maximum detected concentrations of chemicals against conservative media-specific benchmarks and food web modeling using conservative assumptions to assess whether further evaluation was warranted for any exposure pathways and COPCs. The SRA evaluated the following exposure areas, receptors, and media:

- *Surface Soil (0–2 ft horizon):* Evaluated for potential risks to plants, soil invertebrates, birds, and mammals in the terrestrial portions of the former FTA.
- *Freshwater Surface Sediment (0–0.5 ft horizon):* Evaluated for potential risks to freshwater benthic invertebrates, birds, and mammals in the wetlands of the former FTA.
- *Freshwater Surface Water:* Evaluated for potential risks to the aquatic community, birds, and mammals in the wetlands of the former FTA.

Section 3.3 of **Appendix E** presents the conclusions and recommendations for the SRA. The Tier 1 ecological SRA concluded that certain metals, pesticides, SVOCs, VOCs, and Total PCBs may pose a potential risk to plants, invertebrates, and/or wildlife. As described in Section 3.5 of **Appendix E**, based on the results of the Tier 1 ecological SRA, a Tier 2, Step 3a BERA was prepared to further assess the potential for adverse effects to ecological receptors associated with the former FTA.

6.2.2 Tier 2 Baseline Ecological Risk Assessment

The purpose of Tier 2, Step 3a is to reevaluate COPCs that were retained in the SRA and to identify and eliminate from further consideration those COPCs that were retained because of the use of very conservative exposure scenarios. Using less conservative but more realistic Tier 2, Step 3a assumptions, the Tier 1 ecological SRA risk estimates were recalculated for the pathways and COPCs retained at the end of the Tier 1 ecological SRA.

Refinements included in the Tier 2, Step 3a evaluation included the use of the upper confidence limit (UCL) on the arithmetic mean (instead of the maximum concentrations) and means as EPCs, the use of alternate media-specific benchmarks, the use of refined exposure parameters for birds and mammals, and consideration of Site media concentrations in the context of background conditions.

The results of the Tier 2, Step 3a evaluation are summarized in the following sections, and details are provided in the ERA included as **Appendix E**. Section 4.3 of **Appendix E** describes the refinements included in the Tier 2, Step 3a evaluation and Section 4.4 presents the refined risk calculations. Section 4.5 discusses uncertainties in the evaluation, Section 4.6 presents the risk characterization discussion, and Section 4.7 summarizes the results of the ERA.

6.2.2.1 Terrestrial Plants and Soil Invertebrates

The potential for risks to terrestrial plants and soil invertebrates was evaluated by comparing soil EPCs against benchmarks and identifying COPCs that are consistent with background. Due to the conservative nature of the benchmarks, a review of the basis of the toxicity information behind the benchmarks was also conducted to assess whether the benchmarks were overly conservative.

The benchmark comparisons in the Tier 2, Step 3a evaluation indicated the potential for risks to terrestrial plants or soil invertebrates due to manganese, selenium, vanadium, nine pesticides, four SVOCs, two VOCs, and Total PCBs using the refined maximum EPC; however, there are significant uncertainties about the true bioavailability and toxicity of these COPCs to plants and invertebrates. In addition, three of the organic COPCs (endrin aldehyde, carbazole, and dibenzofuran) were infrequently detected and selenium and vanadium were consistent with background; therefore, these COPCs can be eliminated from further evaluation. Risks due to the remaining pesticides and other organic COPCs are likely overestimated due to the conservative nature of the benchmarks and/or the limited number of detected concentrations.

Potential manganese risks to plants and invertebrates cannot be ruled out based on background or the alternate toxicity value review. However, given the relatively low magnitude of the exceedances relative to the alternate toxicity values, the infrequency of the exceedances, and the much lower manganese concentrations in sediments of the nearby restored Sand Wedge wetland, it is expected that risks to plants and soil invertebrates are overestimated and not sufficient to warrant carrying manganese further in the ERA process.

6.2.2.2 Wildlife in Terrestrial Exposure Areas

The terrestrial food web models identified HQs above 1 for the American robin and the short-tailed shrew for several COPCs. The models used to evaluate these receptors may overestimate potential risks because they assume that the receptors are only foraging on soil invertebrates within the terrestrial exposure area. It is more likely that receptors are consuming a mixed diet from locations

within and outside the former FTA. In addition, the limited vegetation in the open terrestrial areas likely provide lower quality habitat (i.e., less attractive) than the surrounding forested areas outside the former FTA. Therefore, the focus of the risk characterization is on COPCs and receptors with HQs above 1 when the average EPC and the lowest-observed-adverse-effect level (LOAEL)-based toxicity reference value (TRV) are considered.

Selenium, Total PCBs, and endrin ketone are the only COPCs with HQs above 1 when the average EPC and LOAEL-based TRV are considered. These HQs range from 1.9 to 3.9 for the robin and from 2.3 to 2.9 for the shrew. The endrin ketone HQ for the shrew is below 1 when the average EPC and LOAEL-based TRV are considered. Based on the background evaluation, selenium is consistent with background and does not warrant further evaluation.

Given the relatively low levels of endrin ketone detected in the majority of the samples and uncertainties associated with the estimation of worm tissue concentrations in the food web model, it is expected that risks to wildlife due to endrin ketone are overestimated and not sufficient to warrant carrying endrin ketone further in the ERA process.

Although the robin and shrew HQs for Total PCBs are relatively low and there are some conservative assumptions included in the refined food web model, there may be a potential for risks to small insectivorous birds and mammals due to exposure to Total PCBs in surface soil and earthworms in the terrestrial portion of the former FTA. However, the refined food web model assumed a 100 percent earthworm diet for these receptors obtained only from within the terrestrial portion of the former FTA, when in reality this assumption is likely an overestimate and there may be low risk from the former FTA soils to these receptors.

6.2.2.3 Freshwater Benthic Invertebrates

The potential for risks to freshwater benthic invertebrates was evaluated by comparing sediment EPCs against benchmarks. Due to the small size of the freshwater sediment background data set, only a qualitative comparison against background conditions was conducted.

For benthic invertebrates, only one HQ above 1 was calculated in the Tier 2, Step 3a evaluation. The maximum EPC for Total PCB slightly exceeded the effect-based screening ecological value (SEV) resulting in an HQ of 1.3. No other COPCs exceeded the refined benchmarks in the Tier 2, Step 3a evaluation. Given the low magnitude of the HQs and the lack of other COPCs with HQs above 1, these results indicate that risks to benthic invertebrates are expected to be minimal within the wetlands of the former FTA and no further evaluation is warranted.

6.2.2.4 Aquatic Community

The potential for risks to freshwater aquatic invertebrates was evaluated by comparing surface water EPCs against benchmarks. Due to the small size of the freshwater surface water data sets, only a qualitative comparison against background conditions was conducted.

For aquatic invertebrates, total recoverable phase aluminum results in HQs above 1 in the Tier 2, Step 3a risk evaluation using the refined maximum EPC. When the average EPC is considered, all HQs are less than 1. None of the dissolved phase metals exceeded the refined SEVs and metals concentrations in most samples were similar to levels in background samples. The former FTA wetlands do not support a fish community so the surface water benchmarks may be overly conservative for the aquatic community present in the wetland and no further evaluation is warranted.

6.2.2.5 Wildlife in Freshwater Exposure Areas

The food web models identified HQs above 1 for the wetland, but not for the raccoon. The model for the wren may overestimate potential risks because it assumes that, when the wren is present, it only forages for benthic invertebrates within the wetlands of the former FTA. It is unlikely that the former FTA can support a population of wrens and it is more likely that any wrens present in the former FTA wetlands also forage from locations across, and potentially off, the peninsula. Therefore, the focus of the risk characterization is on COPCs and receptors with HQs above 1 when the average EPC and the LOAEL-based TRV are considered.

None of the COPCs had HQs above 1 when the average EPC and the LOAEL-based TRV were considered. Therefore, it can be concluded that risks to birds and mammals are expected to be minimal within the wetlands of the former FTA and no further evaluation is warranted.

6.2.3 Uncertainties in the ERA

As described in more detail in Sections 3.2.3 and 4.5 of **Appendix E**, there are several potential sources of uncertainty in the ERA. In general, the assumptions made at multiple points in the SRA tend to err on the side of overestimating risks. The more realistic exposure assumptions made in the Tier 2, Step 3a wildlife evaluation (e.g., use of UCLs and average EPCs) help to refine some of these uncertainties; however, other conservative assumptions remain (e.g., 100 percent earthworm diet from the former FTA).

The media-specific benchmarks represent one source of uncertainty because they are typically based on laboratory studies conducted under conditions likely to increase bioavailability (e.g., low total organic carbon [TOC] soils, bioavailable forms of the tested chemical) relative to what would likely be found under field conditions (e.g., higher TOC, weathered chemicals). Therefore, the benchmarks may overestimate risks.

Worm and soil concentrations from Site 4 on the VLF Peninsula were used to derive regression equations to predict worm tissue concentrations when site-specific worm tissue data were not available. However, there are some uncertainties for these regression equations including lack of true co-location in time and space between soil and worm tissue samples and the fact that the regression data set does not capture the full range of soil concentrations across the peninsula. It is also uncertain whether the soil-to-worm relationships at the former FTA are consistent with those associated with the VLF Peninsula towers.

There is the potential for the Total PAH and Total PCB concentrations used in the ERA to underestimate risks because they are based on the sum of only the individual detected PAHs or PCBs within a sample (i.e., assuming non-detects equal zero). An alternate calculation was also considered for the Tier 2, Step 3a evaluation which assumed non-detects were equal to the reporting limit. Overall, the results of the comparisons of PCB and PAH total calculations indicate that, while assuming non-detects are equal to the reporting limit (i.e., a more conservative assumption than used in the ERA) increases the EPCs, it does not change the overall findings of the ERA.

6.2.4 Conclusions of the ERA

The Tier 1 ecological SRA concluded that metals, PCBs, pesticides, SVOCs, and VOCs associated with surface soil, surface water, or freshwater sediment at the former FTA may pose potential risk to plants, invertebrates, and/or wildlife. Based on the results of the Tier 1 ecological SRA, a preliminary Tier 2, Step 3a BERA has been prepared to further assess the potential for adverse effects to ecological receptors at the former FTA. The Tier 2, Step 3a risk evaluation for the former FTA evaluated COPCs that failed the Tier 1 ecological SRA and the results are summarized as follows.

For terrestrial plants and soil invertebrates, HQs are greater than 1 for several metals and organic COPCs. Two metal COPCs with HQs above 1 are consistent with background (selenium, vanadium) and do not require further valuation and three of the organic COPCs are eliminated from further evaluation based on low frequency of detections (endrin aldehyde, carbazole, and dibenzofuran). For the remaining COPCs, there are significant uncertainties about the true bioavailability and toxicity of these COPCs to plants and invertebrates.

Based on a review of the benchmark sources and additional toxicity information and given the relatively low magnitude of the exceedances, the infrequency of the exceedances, it is expected that risks to plants and soil invertebrates are overestimated and not sufficient to warrant carrying these COPCs further in the ERA process.

For small insectivorous birds and mammals exposed to surface soil and earthworms, selenium, Total PCBs, and endrin ketone are the only COPCs with HQs above 1 when the average EPC and

LOAEL-based TRV are considered. As stated previously, selenium is consistent with background and the endrin ketone HQs are expected to overestimate risk due to the limited nature of the elevated concentrations and the uncertainties associated with the worm tissue estimates; therefore, these COPCs do not warrant further evaluation. Although the robin and shrew HQs are relatively low and there are some conservative assumptions included in the food web model, there may be a potential for risks to small insectivorous birds and mammals due to exposure to Total PCBs in surface soil and due to consumption of earthworms with bioaccumulated PCBs from the terrestrial portion of the former FTA. However, as stated previously, the refined food web model assumption of a 100 percent earthworm diet from the former FTA for these receptors likely overestimates risks and in reality, there may be low risk from the former FTA soils to these receptors.

In the wetland exposure area, risks are expected to be minimal and generally similar to background; no further evaluation is warranted for the aquatic community or the benthic invertebrate community. Risks to birds and mammals are also expected to be minimal within the wetlands of the former FTA and no further evaluation is warranted.

7.0 CONCEPTUAL SITE MODEL

As indicated in **Section 6.0**, the HHRA results identified the following risk drivers for one or more receptors/exposure areas:

- Surface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Manganese, benzo(a)pyrene, and Total PCBs
- Subsurface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Arsenic, manganese, and Total PCBs
- Groundwater (hypothetical future drinking water scenario)
  - Arsenic
  - Manganese
  - Trichloroethene
  - Vinyl chloride

The ERA results indicated there may be a potential risk to small insectivorous birds and mammals due to exposure to Total PCBs in surface soil and earthworms in the terrestrial portion of the former FTA.

As discussed in **Sections 4.0** and **5.0**, several metals were detected above PSLs in soil, sediment, surface water and groundwater. Metals are ubiquitous and occur naturally in soil as well as groundwater, sediment and surface water. In soil, the frequency of detection was relatively high for various metals above human health PSLs, including arsenic and manganese. Arsenic was found to have concentrations in site media less than or consistent with concentrations in site background. In sediment, arsenic exceeded the human health PSL. In surface water, arsenic and manganese exceeded the human health PSLs. In groundwater, arsenic was detected above the PSL at a maximum concentration of 16 µg/L in MW-5 in September 2015 and the maximum concentration of manganese was in MW-9 at 3,850 µg/L in September 2015.

There are no reported uses of chromium or other metals at the FTA in a manufacturing process or primary waste storage or disposal. The FTA is an abandoned gravel pit that was historically used for fire-training exercises from the 1960s through the 1980s and disposal of waste fuel oil and drum disposal. Buried drums were removed from the site and residual PCB contamination was identified. From 1999 to 2013, approximately 1.8 million gallons of water were pumped and treated and approximately 40,326 tons of soil have been removed from the FTA during the historical removal actions at the site. These actions would have also resulted in a reduction of site metals

concentrations at the site. Based on the data that show the remaining site soil metals concentrations are similar to site background levels, no release of metals to site media (including soil, groundwater, sediment and surface water) due to site activities is indicated and remediation of metals is not warranted.

PAHs are anthropogenic compounds that are found in man-made sources and are persistent in the environment. PAHs also occur naturally. PAHs are present in oil, coal, and tar deposits and in asphalt pavement. They are also found in terrestrial and aquatic plants, in soils and bottom sediments, in fresh and marine waters, and in natural deposits of peat as well as emissions from forest fires. Their presence at the FTA in soils is consistent with their slow environmental degradation and the presence of peat deposits at the site. The highest concentrations of PAHs were identified in surface soil at location FTA-SB-216. Benzo(a)pyrene was detected at a concentration of 4.3 mg/kg at this location. While other samples showed PAH concentrations above human health PSLs, concentrations were much lower, with the next highest benzo(a)pyrene concentration detected at 0.12 mg/kg at location FTA-SB-209. Therefore, it appears that the elevated PAH concentrations in surface soil at location FTA-SB-216, which is located on the western edge of the wetland, are localized and not widespread in soils across the site. In groundwater, PAHs were detected above human health PSLs infrequently. Additionally, their maximum detection in wells MW-5 and MW-10, which are located in the vicinity of the site near the subsurface peat deposits, indicates the peat may be acting as a natural source of the PAHs. In surface water, PAH exceedances of PSLs are relegated to location FTA-SW-06; therefore, the detected PAH concentrations in surface water are localized and not widespread across the site.

Figure 7-1 presents a CSM of Site 1 FTA as a cross-section parallel to the flow of groundwater extending from well MW-208 to downgradient wells MW-11 and MW-14. The CSM is based on the data from the lithological subsurface and analytical data collected during the previous investigations. The CSM illustrates the hydrogeology of the site and distribution of contaminants that are not ubiquitous substances and occur naturally in the environment (i.e., PCBs in soil and VOCs in groundwater).

At the former FTA, the source of the contaminants includes fire-training activities and disposal of waste fuel oil and buried drums. Therefore, the immediate exposure medium is the surface soil and subsurface soil. Based on the RI data evaluation and the HHRA, the soil contaminants at the former FTA above the human health PSLs can generally be grouped into two distinct soil exposure areas, referred to as Soil Exposure Area 1 and Soil Exposure Area 2. In general, Soil Exposure Area 1 contains lower chemical concentrations, and represents all the soil outside of Soil Exposure Area 2 (5.56 acres), and Soil Exposure Area 2 (1.45 acres) contains higher chemical concentrations. These areas are conceptually illustrated on **Figure 7-1**.

There is no evidence for current active sources releasing contaminants to the site media. The FTA was located within an abandoned gravel pit that was historically used for fire-training exercises. According to a 1988 preliminary assessment report, fire-training activities utilized two 4,200-gallon tanks, approximately 8 ft in diameter and 8 ft high in size, that had been cut in half. Waste fuel oil was burned in these tanks. The tanks were partially filled with water before the waste fuel oil was added and ignited. Some of the fuel oil is believed to have been released to the environment due to overfilling or overflow resulting from precipitation. Additionally, it was reported that waste No. 6 fuel oil was brought to the FTA and spread on the ground in the early 1980's when base Power Plant engines were switched from No. 6 fuel oil to No. 2 fuel oil. The DDA is a small area located on the southern portion of the FTA where buried drums and contaminated soil were identified in the late 2000's. **Figure 7-1** shows the approximate location of the two tanks used for fire-training exercises and the location of ground surface oil staining as observed during site walks conducted in the early 2000's. Previous removal actions have removed approximately 76 drums of waste oils and 10 drum carcasses, as well as the fire-training tanks and stained soil from the site.

Despite the previous removal actions, there is evidence for the following potential historical contamination sources that remain in place:

1. A potential residual source for PCB in soil is located within Soil Exposure Area 2 at the PCB Area 1/Anomaly 1 Drum Removal Area (illustrated on **Figure 7-1**) that was excavated by AGVIQ in 2013. PCB-contaminated soil was excavated to a depth of 2-ft. Confirmation soil samples were collected and PCB concentrations at three locations (PCBAREA1-013 [610 mg/kg], PCBAREA1-011 [240 mg/kg], PCBAREA1-014 [140 mg/kg]) on the western region of PCB Area 1/Anomaly 1 Drum Removal Area exceeded the PCB cleanup level of 100 mg/kg that was used by AGVIQ during the field effort. Further excavation was discontinued and the PCB-contaminated soil was left in place.
2. Groundwater samples obtained from MW-206, which is also in the vicinity of the firefighting area, exhibited the following VOC results in September 2015: TCE (10 µg/L); vinyl chloride (0.056 µg/L); and cis-DCE (22 µg/L). Well MW-206 has exhibited consistent concentrations of these three chemicals since 2012. Sources of the VOCs are potentially flammable solvents that were spilled or applied to the ground surface during firefighting training activities or from contents within the buried drums. It is likely the firefighting activities in the vicinity of this well, which is approximately 100 ft away from the tanks, impacted the subsurface, or flammable solvents could have reached this area during tank overfilling or overflow. Groundwater samples obtained from downgradient monitoring wells have shown low levels of VOCs, including a maximum vinyl chloride concentration of 0.84 µg/L at MW-9. VOCs would have impacted downgradient areas by migrating downward through the soil matrix to the

groundwater and then migrating in conjunction with the movement of groundwater in response to an external driving force such as gravity or hydrostatic pressure.

The CSM shows the following:

- The patterns of the detected VOCs in groundwater are parallel to the groundwater flow direction derived from the groundwater contour maps. This indicates these chemicals are following the predominant groundwater flow path towards the northeast.
- The absence of TCE and cis-DCE in monitoring wells downgradient of the potential source area suggests sufficient biodegradation of the TCE is occurring, as it moves downgradient from the potential source, to result in trace levels of the TCE biodegradation daughter product, vinyl chloride, in the downgradient portions of the site. This is supported by the negative oxidation reduction potential values measured in the field during the September 2015 groundwater sampling event (see Attachment B of **Appendix F**, the August 2017 Technical Memorandum Evaluation of Groundwater Analytical Results). Negative oxidation reduction potential values indicate anaerobic conditions in the subsurface, which are optimum conditions for biodegradation of chlorinated volatile compounds.
- The patterns of the detected PCBs in surface soil and subsurface soil suggest the source of the PCBs is the vicinity of the former fire-training activities as well as the drum burial area. The remaining impacted area that was left behind after the 2013 AGVIQ excavation represents an area of unacceptable risk. The extent of this area is approximately 300 square ft and located in the southwest portion of the site.

8.0 SUMMARY AND CONCLUSIONS

Section 8.0 presents the summary and conclusions of this RI.

8.1 Summary

Resolution Consultants has prepared this RI report on behalf of the Navy under the Comprehensive Long-Term Environmental Action Navy contract number N62470-11-D-8013. The primary objectives of this RI report are to determine the nature and extent of COCs and potential threat to human health and the environment, and provide a basis for determining whether or what types of response actions are required.

Site 1, FTA, occupies an area of 10.27 acres, of which 3.26 acres are wetland, located in the northern portion of the Cutler Peninsula. The FTA is located within an abandoned gravel pit that was historically used for fire-training exercises by NCTAMS LANT Det Cutler personnel from the 1960s to the 1980s. Fire-training activities utilized two 4,200-gallon tanks, approximately 8 ft in diameter and 8 ft high in size, that had been cut in half. Waste fuel oil was burned in these tanks. The tanks were partially filled with water before the waste fuel oil was added and ignited. Some of the fuel oil is believed to have been released to the environment due to overfilling or overflow resulting from precipitation. According to NCTAMS Fire Department officials, a maximum of 300–400 gallons of waste fuel were burned each year (HMM 1994). Additionally, it was reported that waste No. 6 fuel oil was brought to the FTA and spread on the ground in the early 1980's when base Power Plant engines were switched from No. 6 fuel oil to No. 2 fuel oil.

The DDA was originally identified as AOC 31 in the 2007 PSA Report due to the discovery of a drum in 2006. In 2010, the DDA was elevated from an AOC to an IR Site. The DDA was combined with the FTA in early 2012 due to their close proximity and similar contaminants, and both sites are referred to together as Site 1 (FTA).

Several historical investigations and removal actions have been performed to address contamination at the FTA. Groundwater, surface soil, subsurface soil, sediment, and surface water samples have been collected at the FTA at various times between 1991 and 2016. Resolution reviewed all available data and determined the appropriate and representative data to include in this RI. Based on the past activities, samples collected at the FTA have been analyzed for a variety of constituents. Soil samples have been analyzed for VOCs, SVOCs, PCBs, pesticides, and DRO/GRO and metals. Groundwater samples have been analyzed for VOCs, SVOCs, PCBs, PFASs, VPH, EPH, and metals. Surface water and sediment samples have been analyzed for VOCs, SVOCs, VPH, EPH, and metals. In addition, sediment samples have been analyzed for PCBs and pesticides.

From 1999 to 2013, approximately 1.8 million gallons of water were pumped and treated and approximately 40,326 tons of soil have been removed from the FTA during the historical removal actions at the site.

8.1.1 Nature and Extent of Contamination

Section 8.1.1 discusses the nature and extent of contamination at Site 1, FTA.

8.1.1.1 Soil

Based on the frequency of detection and exceedances of PSLs, and based on Resolution's evaluation of the data, the primary chemicals of interest in soil are PCBs (primarily PCB Aroclor-1260).

PCB Aroclor-1260 had the highest frequency of detection of the PCB Aroclors. PCB Aroclor-1260 was detected in 103 of 107 surface soil samples and 64 of 114 subsurface soil samples. PCB-contaminated soil was excavated in 2013 from two areas (PCB Area 1 and PCB Area 2) to a depth of 2 ft. PCB concentrations at three confirmation sample locations (PCBAREA1-013 [610 mg/kg], PCBAREA1-011 [240 mg/kg], PCBAREA1-014 [140 mg/kg]) exceeded the project-specific PCB removal action goal of 100 mg/kg.

While select PAHs were detected above PSLs, it appears that the elevated PAH concentrations in surface soil at location FTA-SB-216, which is situated on the western edge of the wetland, are localized and not widespread in soils across the site.

8.1.1.2 Sediment

In 2012, sediment samples were collected from eight locations (FTA-SED-01 through FTA-SED-08). In 2014, sediment samples were collected from the same eight locations. Samples in 2012 and 2014 were analyzed for: Total PCBs, metals, pesticides, TPH, VOCs, and SVOCs. One sediment sample was collected from location FTA-SED-07 in November 2016 and was analyzed for total and hexavalent chromium. The sediment samples were collected from the wetlands portion of the FTA.

Based on the frequency of detection and exceedances of PSLs, and based on Resolution's evaluation of the data, the primary chemical of interest in wetland sediment is PCB Aroclor-1260. PCB Aroclor-1260 was detected in 15 of 16 sediment sampling locations with a maximum concentration of 2.1 mg/kg from FTA-SED-04.

Select PAHs were detected above PSLs from location FTA-SED-01.

8.1.1.3 Surface Water

The primary chemical of interest in surface water is PCB Aroclor-1254. PCB Aroclor-1254 was detected at one surface water sampling location (FTA-SW-06) in 2014 at a concentration of 0.38 µg/L.

8.1.1.4 Groundwater

Based on September 2015 water level data from 26 site monitoring wells, the depth to groundwater ranges from less than 0.5 ft to approximately 13 ft bgs. Based on September 2015 monitoring well gauging data, the direction of shallow groundwater flow, in the surficial materials, is generally to the north. Hydrographs of groundwater elevation data reveal no discernible trends in seasonal groundwater flow patterns.

Based on the frequency of detection and exceedances of PSLs and based on Resolution's evaluation of the data, the primary chemicals of interest in groundwater are PFOS, PFOA, and chlorinated VOCs (cis-DCE, TCE, and vinyl chloride). Groundwater samples collected from site monitoring wells indicated maximum concentrations of PFOS and PFOA were detected above the PSLs in the northern portion of the site in MW-11 (0.25 µg/L of PFOS) and MW-14 (0.45 µg/L of PFOA). Groundwater samples obtained from MW-206 exhibited the following VOC results in September 2015: TCE (10 µg/L); vinyl chloride (0.056 µg/L); and cis-DCE (22 µg/L). MW-206 has exhibited consistent concentrations of these three chemicals since 2012. Groundwater samples obtained from downgradient monitoring wells have shown low levels of VOCs, including a maximum vinyl chloride concentration of 0.84 µg/L at MW-9.

8.1.2 Fate and Transport

As discussed in **Section 4.0**, Total PCBs (primarily PCB Aroclor-1260), PAHs, and metals in soil; PCB Aroclor-1260, benzo(a)pyrene, arsenic and total chromium in sediment; arsenic, manganese, thallium, PCB Aroclor-1254, and PAHs in surface water; and PFOS, PFOA, arsenic, hexavalent chromium, manganese, PAHs and chlorinated VOCs (cis-DCE, TCE, and vinyl chloride) in groundwater were identified above PSLs in the environment. The physical and chemical properties and potential release mechanisms and routes of migration for each of these constituent groups are discussed as follows.

8.1.2.1 PCBs

PCBs were detected above PSLs in soils, sediment, and surface water at the former FTA. Wastes gathered at the FTA and DDA have included electrical equipment and drums of waste oils and fluids, which are known to contain PCBs. The PCBs contained within the gathered wastes at the former FTA likely migrated via direct release to the ground surface and via leaking drum burial, followed by infiltration of the contamination into the soil. Sediment and surface water were likely impacted by storm water runoff and erosion of the contaminated soil at the surface and transport into the wetlands.

PCB Aroclors are composed of various combinations of PCBs with different properties such as vapor pressure, solubility, and viscosity. Data for PCBs were primarily available based on PCB Aroclor analysis with a smaller set of samples submitted for analysis of PCB homologues. PCB Aroclor-1260

had the highest frequency of detection of the PCB Aroclors. PCB Aroclor-1260 was detected in 103 of 107 surface soil samples and 64 of 114 subsurface soil samples. PCB Aroclor-1260 was detected in 15 of 16 sediment sampling locations. Total PCBs (as homologues) were detected in one surface water sampling location, and the concentration exceeded the human health-based USEPA NRWQC and MEDEP surface water criteria.

8.1.2.2 VOCs

VOCs at the former FTA are possibly the result of the use of combustible chlorinated solvents during fire-training activities and were possibly contained within buried drums. The VOC-containing solvents would have been spilled onto the ground surface and then infiltrated into the soil and into groundwater. The VOC detection pattern at the FTA is consistent with the characteristic environmental behavior of chlorinated solvents. Commonly, chlorinated solvents, when released to the environment (e.g., surface spills, historic disposal practices), will migrate downward through the soil matrix to the groundwater under density-driven flow, provided that the contaminant mass is sufficient to overcome pore throat entry pressure and the retardation properties of the soil matrix.

Chlorinated VOCs are generally mobile in the environment, primarily due to their high volatility, low adsorption to some soils, and low to high aqueous solubilities. They are relatively persistent in the environment because they do not degrade very easily under oxidizing conditions and therefore are not easily degraded by bacteria or taken up by other organisms in these environments. Chlorinated aliphatics, such as cis-DCE, TCE, and vinyl chloride, have been observed in groundwater at the former FTA. These hydrocarbons have variable solubilities and may be carried for some distance in groundwater. Because of these characteristics, the primary fate and transport mechanisms affecting VOCs are volatilization into the air and migration in groundwater. The high volatility of VOCs somewhat limits the extent to which surface water or groundwater transport will be a major transport process, because VOCs may volatilize out of unconfined or partially confined aquifers. Due to the high mobility of VOCs, a decrease in their concentrations is anticipated with time, as long as there is no additional input of these compounds.

Chlorinated VOCs also tend to undergo degradation reactions in anaerobic soil systems (reducing environments). The degradation reactions involve the progressive loss of chlorine ions from the molecular structure, resulting in a stepwise dechlorination under reducing conditions. An oxidizing environment would not favor large-scale reductive degradation of the TCE/cis-DCE/vinyl chloride series of compounds. However, some of the elevated metals data suggest the groundwater flow system is more reducing in some areas of the FTA.

8.1.3 Risk Assessment

Section 8.1.3 summarizes the risk assessment results.

8.1.3.1 HHRA

A summary of the HHRA conclusions is presented as follows by receptor; only COCs (i.e., risk drivers not attributable to background) are discussed. An overall summary of potential ELCR and HI results for the receptors evaluated at the FTA is presented in the HHRA (**Appendix D**, Tables 11.1.RME/CTE through 11.5.RME/CTE).

Current/Future Construction Worker: All total ELCRs for the RME and CTE current/future construction worker are within USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Target organ HIs are greater than MEDEP's and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following COCs:

- Soil Exposure Area 1
  - *Surface Soil:* Manganese (RME and CTE)
  - *Subsurface Soil:* Manganese (RME and CTE)
- Soil Exposure Area 2
  - *Surface Soil:* Manganese (RME and CTE), Total PCBs (RME only)
  - *Subsurface Soil:* Manganese (RME and CTE)

Current/Future On-Site Recreational User/Trespasser: The total ELCRs for the RME and CTE current/future recreational user/trespasser are within USEPA's target ELCR range of 10^{-6} to 10^{-4}. Total ELCRs/HIs are above MEDEP's target ELCR of 10^{-5} and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following COCs:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME and CTE), and benzo(a)pyrene, (RME only)

Future Outdoor Industrial Worker: Total ELCRs/HIs are above MEDEP's target ELCR of 10^{-5} and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following COCs:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME only)

Future Indoor Industrial Worker: The total potential ELCRs for the RME and CTE future indoor industrial worker are below USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Total potential HIs are below USEPA/MEDEP's target HI of 1. Therefore, no risk drivers or COCs are identified for the future industrial indoor worker.

Hypothetical Future On-Site Resident: Total ELCRs are above MEDEP's target ELCR of 10^{-5} and/or above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following COCs:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME and CTE) and benzo(a)pyrene, (RME only)
  - *Subsurface Soil:* Total PCBs (RME and CTE) and arsenic (RME only)
- Groundwater
  - Trichloroethene, vinyl chloride, arsenic, and manganese (RME and CTE)

COC Summary: The HHRA concluded that COCs not attributable to background for one or more receptors included:

- Surface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Manganese, benzo(a)pyrene, and Total PCBs
- Subsurface Soil
  - *Soil Exposure Area 1:* Manganese
  - *Soil Exposure Area 2:* Arsenic, manganese, and Total PCBs
- Groundwater (hypothetical future drinking water scenario)
  - Arsenic
  - Manganese
  - Trichloroethene
  - Vinyl chloride

8.1.3.2 ERA

Based on the results of the Tier 1 ecological SRA, a Tier 2, Step 3a BERA was prepared to assess the potential for adverse effects to ecological receptors associated with the former FTA.

Tier 2, Step 3a reevaluated COPCs that were retained at the conclusion of the Tier 1 ecological SRA and identified and eliminated from further consideration those COPCs that were retained because of the use of very conservative exposure scenarios. Using more realistic Tier 2, Step 3a assumptions, the Tier 1 ecological SRA risk estimates were recalculated for the pathways and COPCs retained at the end of the Tier 1 ecological SRA.

The Tier 2, Step 3a risk evaluation for the FTA evaluated COPCs that failed the Tier 1 ecological SRA. The ERA concluded that there may be a potential for risks to small insectivorous birds and mammals (American robin and the short-tailed shrew) due to exposure to Total PCBs in surface soil and due to consumption of earthworms containing bioaccumulated PCBs from the former FTA. The ERA also concluded that no further evaluation is warranted for the following receptors:

- Terrestrial Plant Community
- Soil Invertebrate Community
- Freshwater Benthic Invertebrate Community
- Freshwater Aquatic Community
- Wildlife in Freshwater Exposure Areas
- Herbivorous Wildlife in Terrestrial Exposure Areas

8.2 Conclusions and Recommendations

Section 8.2 summarizes the findings and provides recommendations for next steps.

8.2.1 Conclusions

Based on investigations and risk analyses, the preparation of a Feasibility Study (FS) is recommended. The FS will develop, screen, and evaluate alternative remedial actions that will address potential risks, identified in this RI report, to human health and ecological risk to small insectivorous birds and mammals.

Based on the CSM presented in **Section 8.0**, the following unacceptable risks and areas will be addressed in the FS:

- The patterns of the detected PCBs in surface soil and subsurface soil suggest the source of the PCBs is the vicinity in which the former fire-training activities took place as well as the drum burial area. The remaining impacted area that was left behind after the 2013 AGVIQ excavation represents an area of unacceptable risk. The extent of this area is approximately 300 square ft and located in the southwest portion of the site. The FS will focus on remedial alternatives to address the unacceptable risk from PCBs in soil in this portion of the site.
- The absence of TCE and cis-DCE in monitoring wells downgradient of the potential source area suggests sufficient biodegradation of the TCE is occurring, as it moves downgradient from the potential source, to result in trace levels of its biodegradation daughter product, vinyl chloride, in the downgradient portions of the site. This is supported by the negative oxidation reduction potential values measured in the field during the September 2015

groundwater sampling event. The FS will focus on remedial alternatives to continue to monitor the VOCs in groundwater.

8.2.2 Recommended Remedial Action Objectives

FS development will include remedial action objectives (RAOs) which seek to protect human and ecological receptors at Site 1. RAOs will focus on site-specific COCs, exposure routes, receptors, and preliminary remediation goals.

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FIGURES

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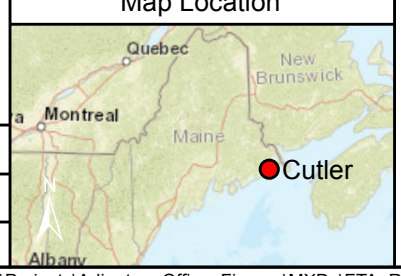
Approved:	TC	07/17/2017
Project #:	60282029	

Map Location



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Feet

Figure 1-1
Site Location Map
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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SITE 1:
Fire Training Area

SITE 5:
Drum Disposal Area for
Fire Training Area (Now Site 1)

Legend

- Restored Wetland Area - Sand Wedge
- Created Wetland Area
- Site Boundary

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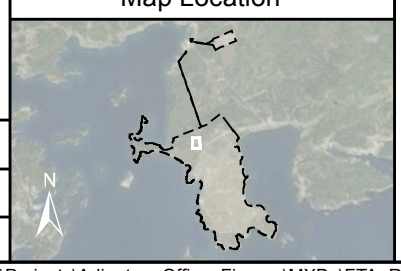
Map Location



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Feet

Figure 1-2
Location of Site 1 and Site 5
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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LEGEND

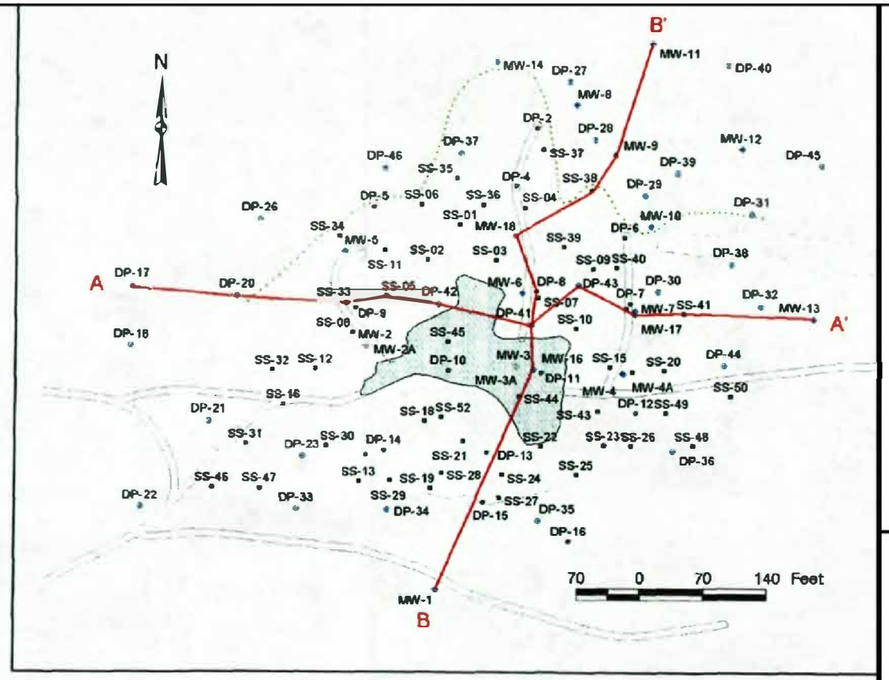
MW-13 ▽83.56 ▽82.19 — Boring Location; Ground Surface; November 2003 Groundwater Elevation; Fall 2001 Groundwater Elevation

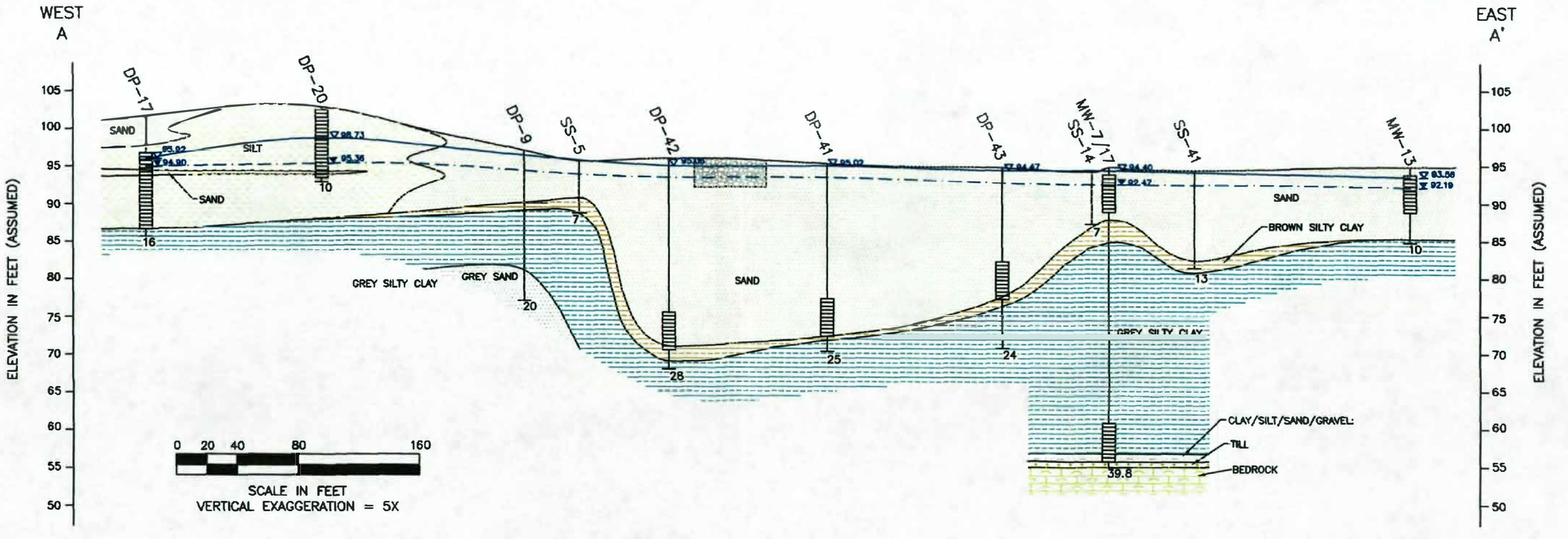
10 — Total Depth (ft below ground surface)

Screened Interval

SOIL DESCRIPTION

SAND:	Grey brown fine to coarse sand, some fine to coarse gravel, trace to little silt
FOSTER WHEELER EXCAVATION:	Boulder fill
SILT:	Brown grey clayey silt, some sand, gravel and rounded cobbles, trace clay
BROWN SILTY CLAY:	Brown clayey silt and silty clay, trace coarse sand and gravel with some fine sand lenses
GREY SILTY CLAY:	Grey silty clay, some very fine to fine sand with some very fine to fine sand lenses becoming more frequent with depth, medium to high plasticity
GREY SAND:	Grey fine to coarse sand, some gravel
CLAY/SILT/SAND/GRAVEL:	Grey clay with silt, sand and gravel with angular pebbles, medium to high plasticity
TILL:	Grey brown silt with rounded pebbles, hard, compact
BEDROCK:	Dark grey siltstone (observed in rock fragments from split spoon at MW-16)





Source: EA Engineering, Science and Technology. Remedial Investigation Report for the Fire Training Area, NCTAMS Cutler, Maine. December 2004.

NOTES: (1) SOIL AND BEDROCK CONTACTS ARE INFERRED BELOW AND BETWEEN BORINGS.
(2) THE GEOLOGIC UNIT DEPTHS SHOWN ARE BASED ON SOIL BORING RECORDS.

N

Scale: See Map

Figure 3-1
West-East Geologic Cross Section
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

Approximate Map Location

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LEGEND

MW-1 — Boring Location

Ground Surface

107.77 ▽ — November 2003 Groundwater Elevation

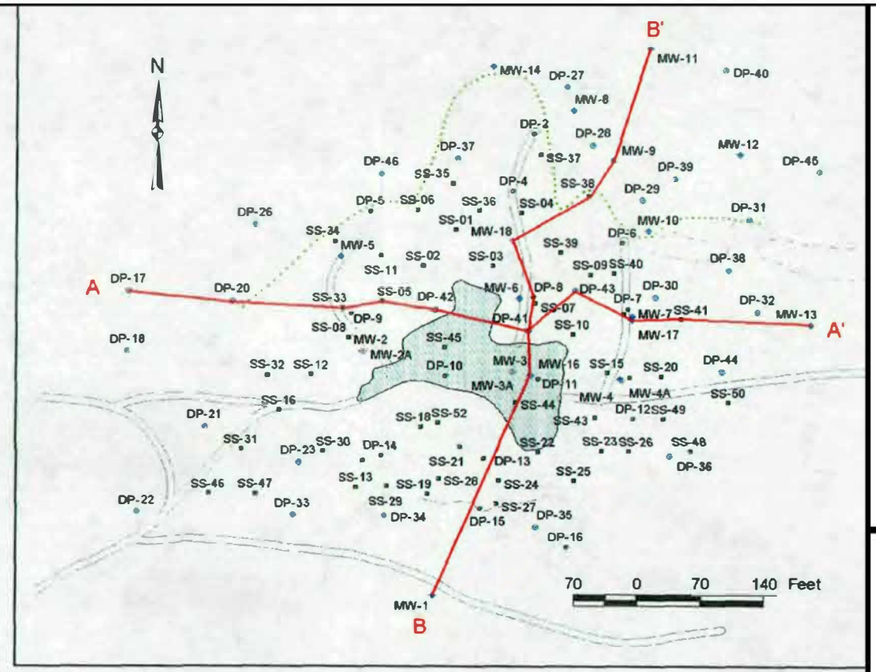
103.78 ▽ — Fall 2001 Groundwater Elevation

Screened Interval

17 — Total Depth (ft below ground surface)

SOIL DESCRIPTION

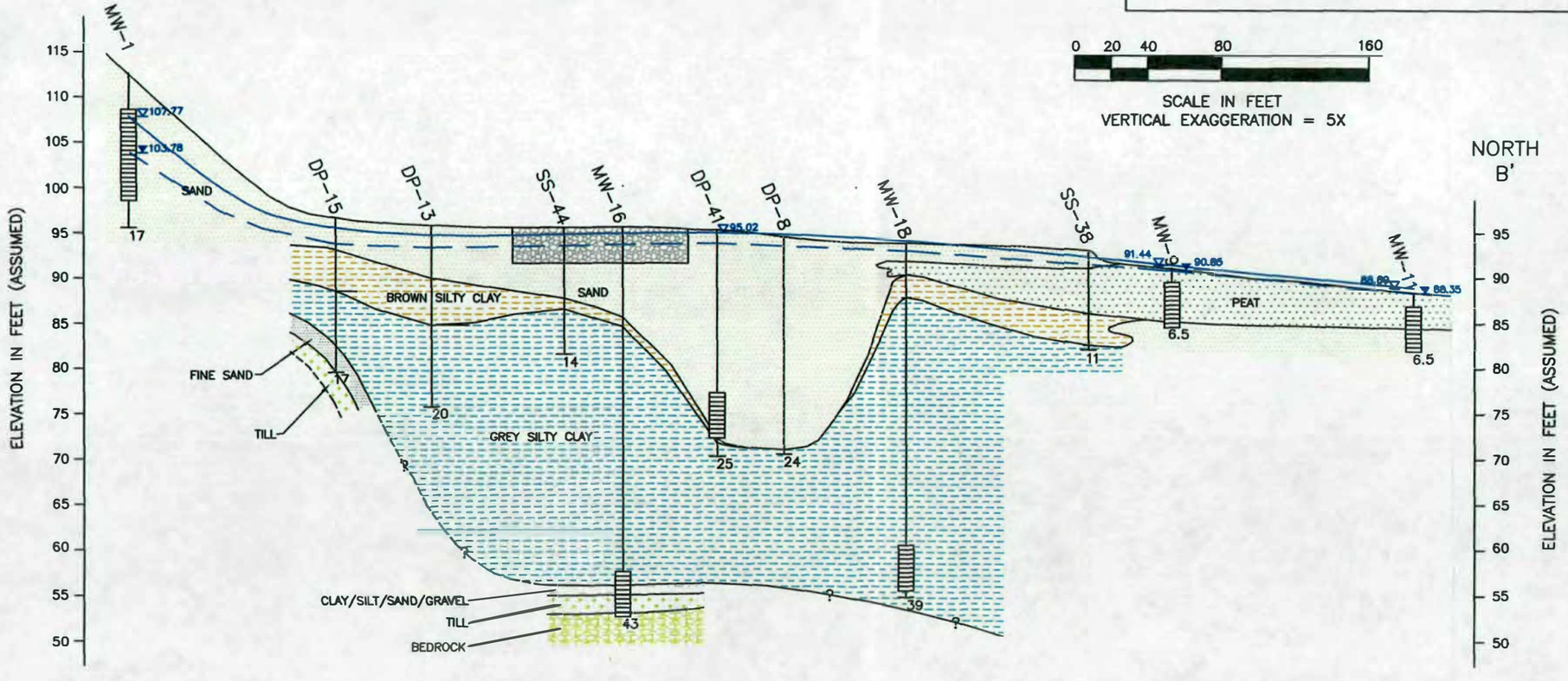
SAND:	Grey brown fine to coarse sand, some fine to coarse gravel, trace to little silt
FOSTER WHEELER EXCAVATION:	Boulder fill
PEAT:	Dark brown organic matter
BROWN SILTY CLAY:	Brown clayey silt and silty clay, trace coarse sand and gravel with some fine sand lenses
GREY SILTY CLAY:	Grey silty clay, some very fine to fine sand with some very fine to fine sand lenses becoming more frequent with depth, medium to high plasticity
FINE SAND:	Grey fine sand, trace to some coarse sand and gravel
CLAY/SILT/SAND/GRAVEL:	Grey clay with silt, sand and gravel with angular pebbles, medium to high plasticity
TILL:	Grey brown silt with rounded pebbles, hard, compact
BEDROCK:	Dark grey siltstone (observed in rock fragments from split spoon at MW-16)



0 20 40 80 160

SCALE IN FEET
VERTICAL EXAGGERATION = 5X

SOUTH B



NOTES: (1) SOIL AND BEDROCK CONTACTS ARE INFERRED BELOW AND BETWEEN BORINGS.
(2) THE GEOLOGIC UNIT DEPTHS SHOWN ARE BASED ON SOIL BORING RECORDS.

Source: EA Engineering, Science and Technology. Remedial Investigation Report for the Fire Training Area, NCTAMS Cutler, Maine. December 2004.

N

Scale: See Map

Figure 3-2
North-South Geologic Cross Section
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

Approximate Map Location

NAVFAC

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Project #:	60282029	

MW-14
66.87

MW-11
66.79

MW-8
67.99

MW-12
68.6

MW-201

MW-9
68.81

MW-10
70.56

MW-18

MW-5
70.49

MW-218
77.07

MW-203
71.33

MW-13
71.42

MW-17

MW-16

MW-204

MW-206
81.57

DP-35
78.34

MW-210
82.94

MW-1
84.54

MW-208
83.58

67
68
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84

Legend

- Monitoring Well
- September 2015 Groundwater Elevation (feet)
- Inferred September 2015 Groundwater Elevation (feet)
- Direction of Groundwater Flow

NAVFAC

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Approved:	TC	07/17/2017
Project #:	60285299	

Map Location

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0 37.5 75

Feet

Figure 3-3
Groundwater Elevation Map - September 2015
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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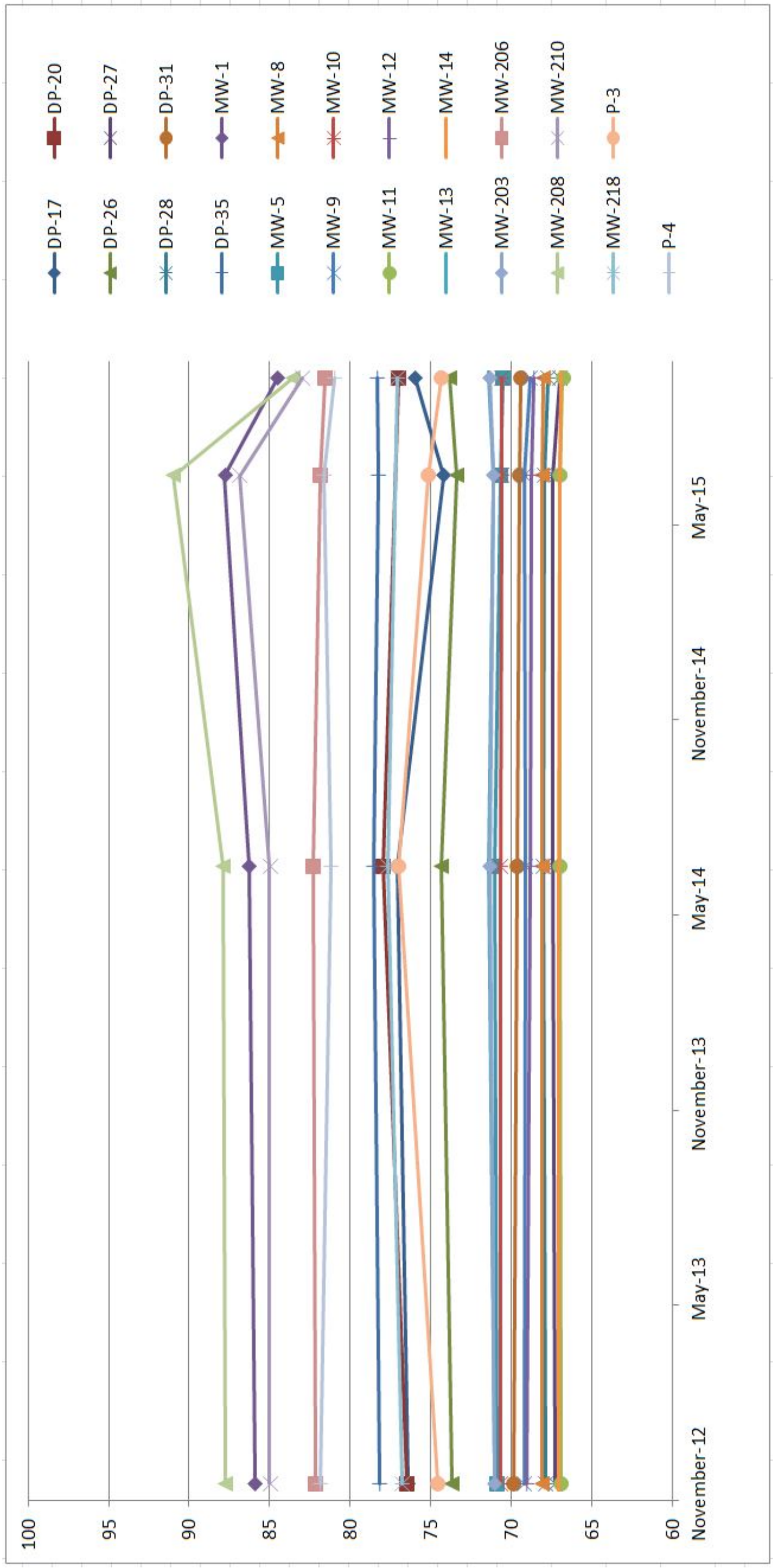
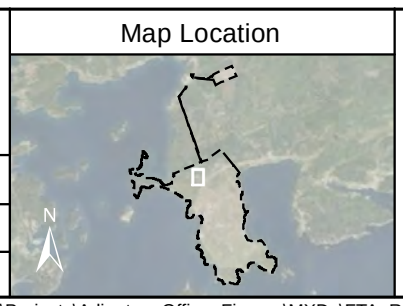


NAVFAC	Map Location 	*Not to Scale*
Drawn: AC 07/17/2017 Approved: TC 07/17/2017 Project #: 60285299		Figure 3-4 Hydrograph of Groundwater Elevation Data from 2012 to 2015 Site 1, Fire Training Area Remedial Investigation Report NCTAMS LANT Det Cutler, Maine

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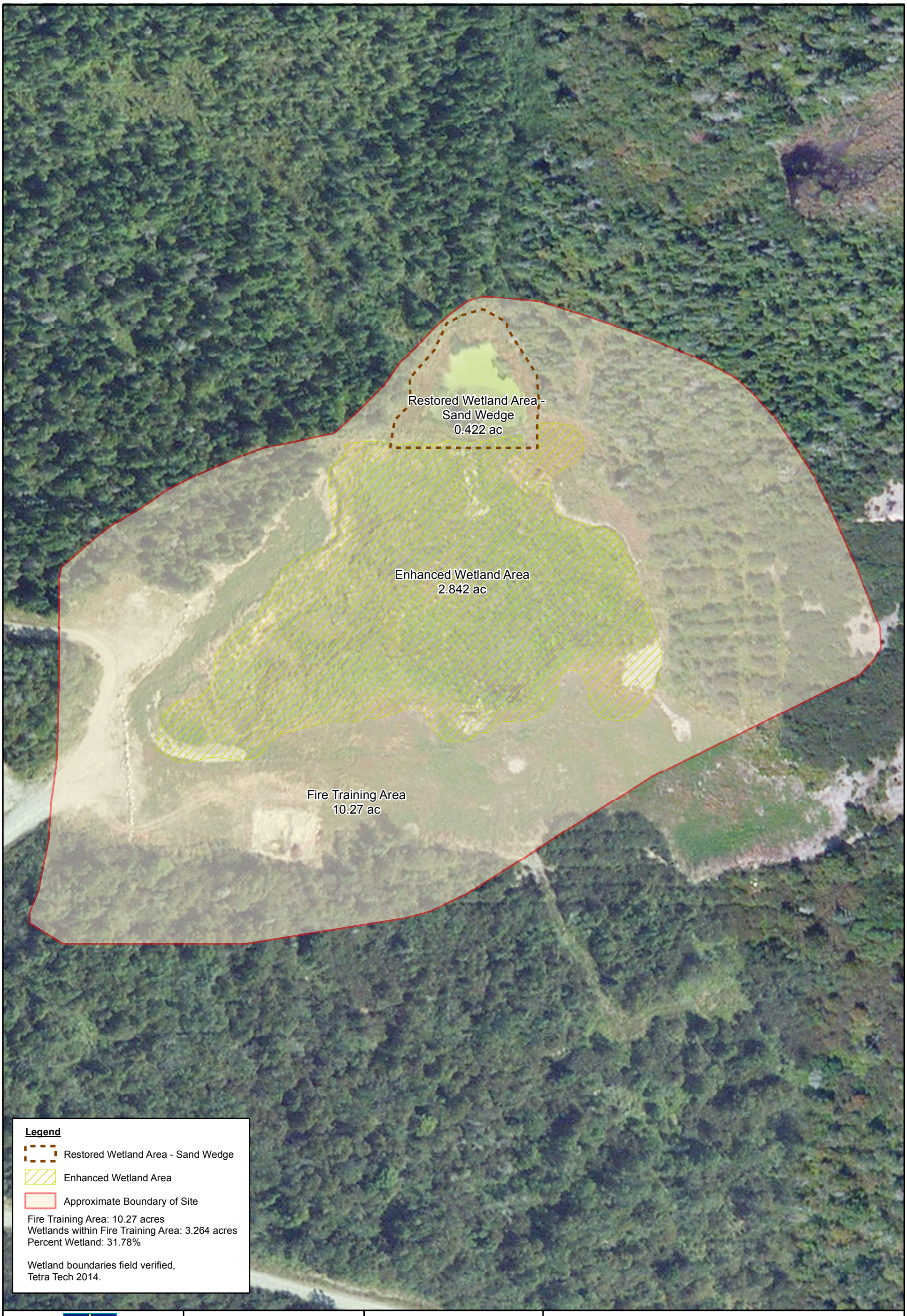

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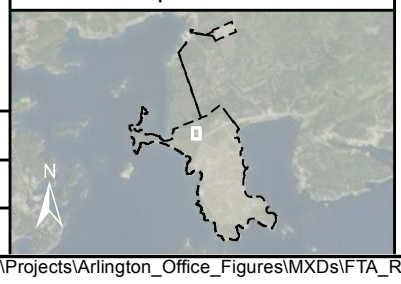
Map Location



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Feet

Figure 3-5
Wetlands
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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Legend

Sampled Media

- Groundwater/Soil Boring
- Sediment/Surface Water
- Groundwater
- Soil Boring
- Approximate Soil Confirmation Samples (AGVIQ 2015)
- Removal Areas (AGVIQ, 2015)
- Approximate Extent of 2009 Drum Disposal Area Excavation (Shaw 2010)
- Soil Exposure Area 1
- Soil Exposure Area 2
- September 2004 Approximate Extent of Sand Wedge Excavation (a.k.a. Restored Wetland Area)
- Approximate Extent of 2006-2009 Excavation (a.k.a Created Wetland Area) (UNITEC 2008; Tetra Tech 2009; Shaw 2010)

AOC/Site Boundary

FTA-SB-200 FTA-SB-303
FTA-MW-11
FTA-MW-14
FTA-SED-08 FTA-SW-08
FTA-MW-12
FTA-SB-201
FTA-SB-302
FTA-MW-9
FTA-SB-219 FTA-SB-301
FTA-SED-07 FTA-SW-07
FTA-SW-06
FTA-MW-10
FTA-MW-5
FTA-SB-202 FTA-SB-305
FTA-MW-218 FTA-SB-218
FTA-SED-05 FTA-SW-05
FTA-SB-217
FTA-SB-300
FTA-SB-203
FTA-SB-304
FTA-SED-04 FTA-SW-04
FTA-SED-03 FTA-SW-03
FTA-SB-216
FTA-SS-23
FTA-SED-01 FTA-SW-01
FTA-SW-02
FTA-SS-25
FTA-SB-204
FTA-SS-13
DDA-NE-13I
FTA-SS-19
FTA-AREAA-01
FTA-AREAA-02
FTA-SB-215
DDA-NW-10Q
DDA-NW-10G
DDA-NW-10E
FTA-MW-206
FTA-AREAB-02
FTA-SB-205
DP-35
FTA-SB-209
DDA-NW-9M
DDA-NW-9B
DDA-NW-8R
DDA-NW-8I
DDA-NW-9E
FTA-AREAB-01
FTA-AREAG-01
FTA-AREAI-01
DDA-NE-7I
DDA-NW-6R
FTA-MW-210
DDA-NE-6E
FTA-AREAC-01
FTA-AREAG-02
FTA-SB-210
DDA-NE-5E
FTA-SB-212
DDA-NW-4F
A31-SB04
FTA-SB-214
DDA-NW-3R
DDA-NE-2I
DDA-NW-2P
FTA-SB-211
FTA-ANOM2-SO-INT
FTA-MW-1
A31-SB03
DDA-E-1E
FTA-AREAF-01
DDA-SW-2F
DDA-SE-2D
FTA-SB-213
DDA-SW-3G
FTA-AREAJ-01
DDA-SE-3D
FTA-AREAH-01
FTA-SB-220
FTA-AREAD-01
FTA-AREAD-02
DDA-SW-5C
DDA-SE-5B
FTA-SB-208 FTA-MW-208

See Figure 4-2

NAVFAC

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Project #:	60285299	

Map Location

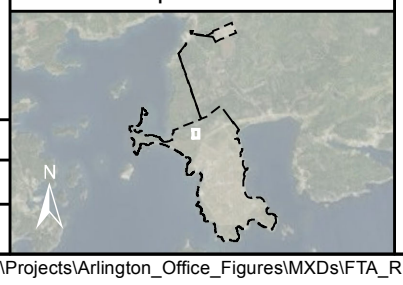

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Figure 4-1
FTA Sample Locations
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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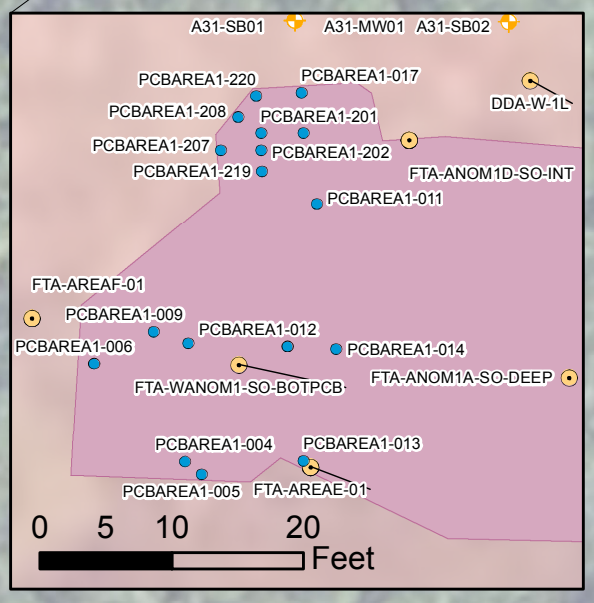
Legend

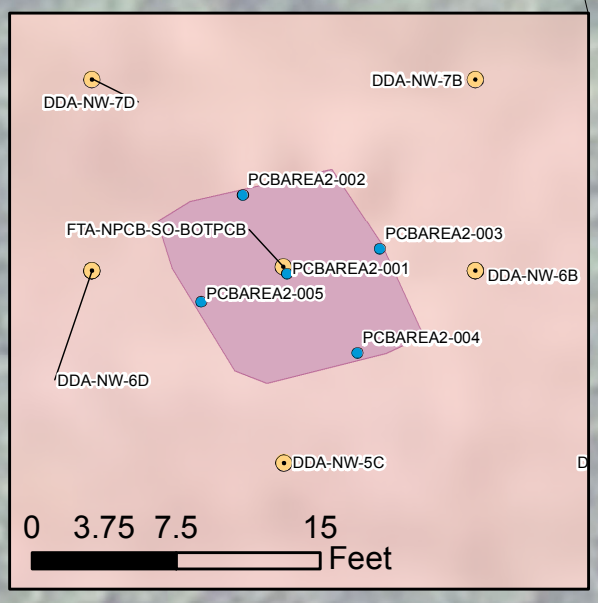
- Approximate Soil Confirmation Samples (AGVIQ 2015)

Sampled Media

- Groundwater/Soil Boring
- Sediment/Surface Water
- Groundwater
- Soil Boring
- Removal Areas (AGVIQ 2015)
- Soil Exposure Area 1
- Soil Exposure Area 2
- Approximate Extent of 2006-2009 Excavation (a.k.a. Created Wetland Area) (UNITEC 2008; Tetra Tech 2009; Shaw 2010)

FTA-MW-218, FTA-SB-217, FTA-SW-03, FTA-SED-03, FTA-SB-216, FTA-SED-01, FTA-SW-01, FTA-AREAA-01, FTA-SS-13, DDA-NE-13I, DDA-NW-9B, FTA-AREAA-02, DDA-NW-7B, DDA-NW-10E, FTA-SS-19, FTA-SB-215, DDA-NW-10Q, DDA-NW-10G, DDA-NE-10D, FTA-AREAB-02, DDA-NW-9M, DDA-NW-9E, DDA-NW-6B, DDA-NE-7D, FTA-SB-209, DDA-NW-7D, FTA-SB-206, DDA-NE-6D, DDA-NW-8R, DDA-NW-8I, DDA-NW-7E, DDA-NW-6C, FTA-AREAB-01, FTA-AREAG-01, FTA-AREAI-01, DDA-NE-8B, DDA-NE-7I, FTA-SB-210, DDA-NW-6E, DDA-NE-6C, DDA-NW-6R, DDA-NW-6F, FTA-AREAC-01, A31-SB02, DDA-N-5A, DDA-NE-6E, FTA-AREAG-02, DDA-NW-5G, DDA-NW-5F, DDA-NW-5C, DDA-NE-5C, DDA-NE-5E, DDA-NW-4Y, DDA-NW-4R, DDA-NW-4F, DDA-NW-4D, A31-SB04, DDA-NE-3E, DDA-NW-4P, FTA-SB-212, FTA-SB-214, DDA-NW-3R, DDA-NW-3F, DDA-N-3A, DDA-NE-2I, FTA-AREAG-03, DDA-NW-2F, DDA-NW-2D, FTA-ANOM2-SO-INT, DDA-NW-2P, DDA-NW-2G, DDA-N-2A, FTA-ANOM2-SO-DEEP, A31-SB01, FTA-SB-211, FTA-MW-1, DDA-W-1L, DDA-W-1F, DDA-SE-2C, DDA-E-1E, FTA-ANOM1D-SO-SURF, DDA-SW-2F, DDA-SE-2D, FTA-ANOM1E-SO-INT, FTA-AREAJ-01, DDA-SE-3D, FTA-SB-213, DDA-SE-4D, FTA-AREAF-01, FTA-WANOM1-SO-BOTPCB, FTA-AREAB-01, DDA-SW-5C, FTA-SB-220, DDA-SE-5B, DDA-SE-5D, FTA-ANOM1A-SO-DEEP, FTA-AREAD-01, FTA-ANOM1B-SO-DEEP, FTA-AREAD-02, DDA-SW-2I, DDA-SW-3G, DDA-W-1G, FTA-MW-208, FTA-AREAH-01, FTA-AREAH-01, FTA-SB-208





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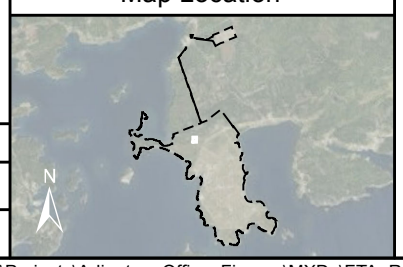

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Feet

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Approved:	TC	07/17/2017
Project #:	60285299	

Figure 4-2
FTA Sample Location – Enlargement
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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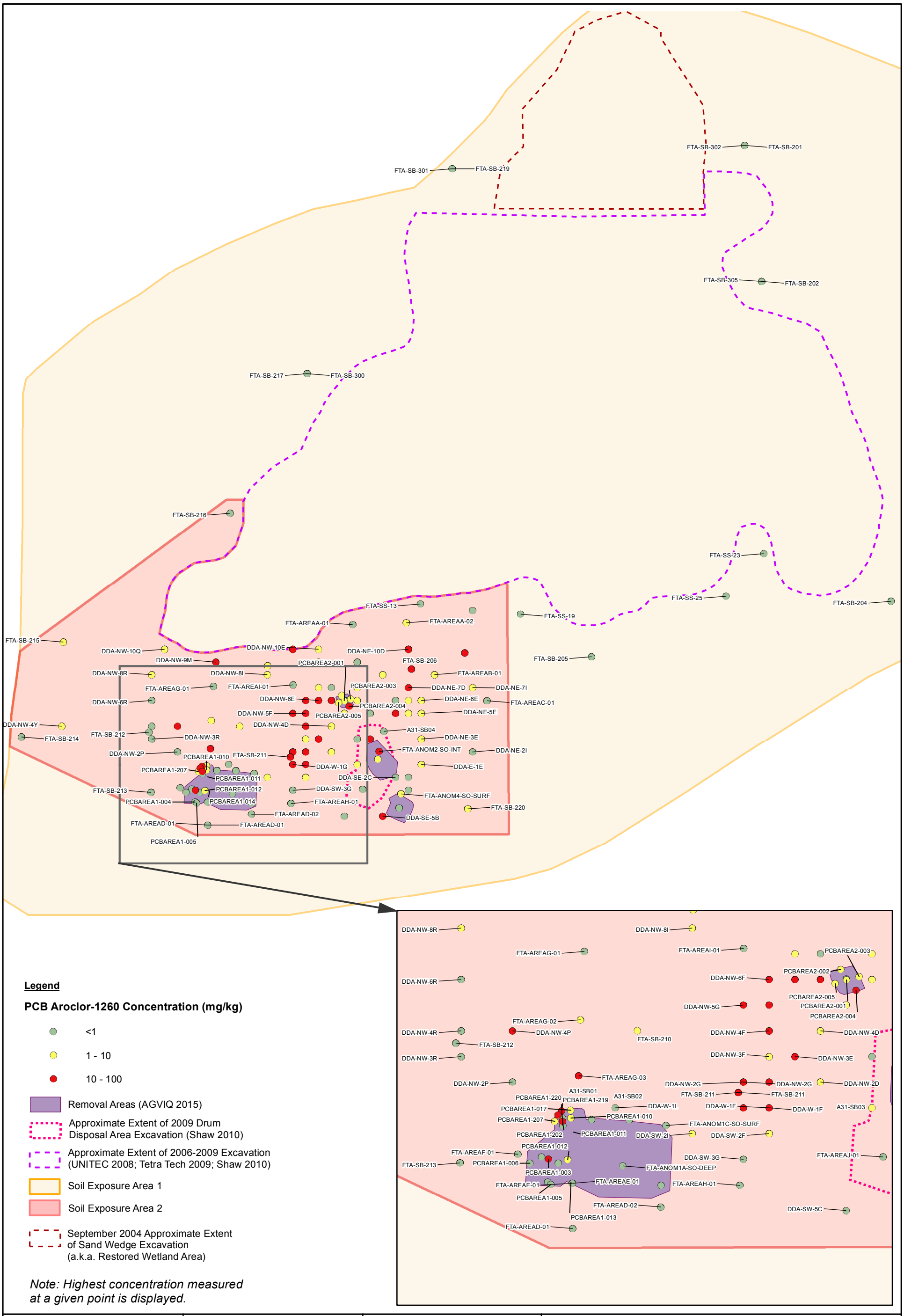


Legend

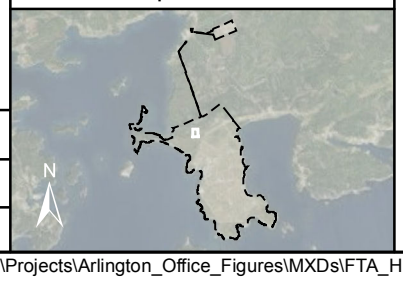
PCB Aroclor-1260 Concentration (mg/kg)

- <1
- 1 - 10
- 10 - 100
- Removal Areas (AGVIQ 2015)
- Approximate Extent of 2009 Drum Disposal Area Excavation (Shaw 2010)
- Approximate Extent of 2006-2009 Excavation (UNITEC 2008; Tetra Tech 2009; Shaw 2010)
- Soil Exposure Area 1
- Soil Exposure Area 2
- September 2004 Approximate Extent of Sand Wedge Excavation (a.k.a. Restored Wetland Area)

Note: Highest concentration measured at a given point is displayed.

Drawn:	AC 07/17/2017
Approved:	TC 07/17/2017
Project #:	60285299

Map Location



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Feet

Figure 4-3
PCB Aroclor-1260 Concentrations in Soil
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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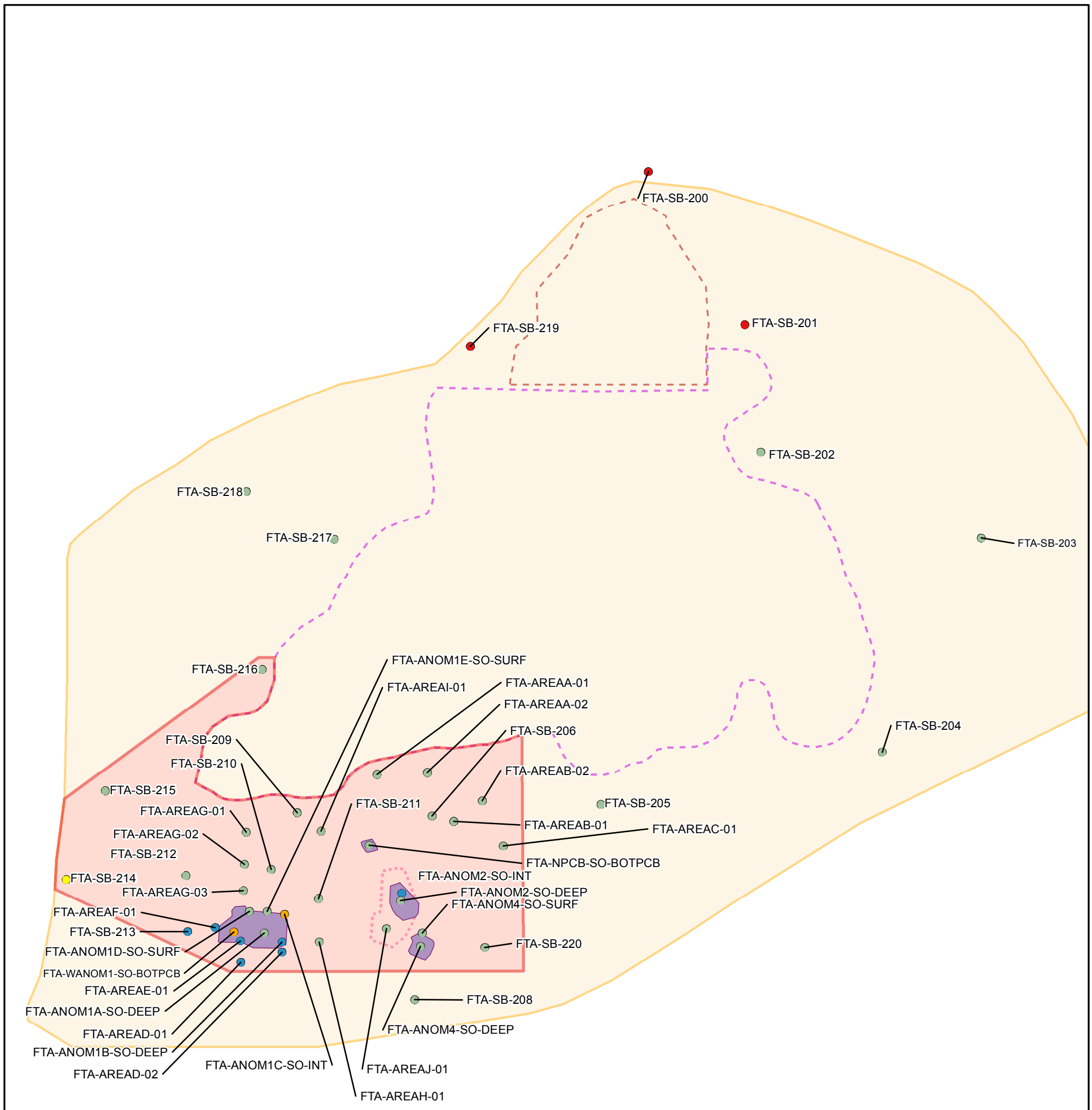


Legend

Manganese Concentration in Soil (mg/kg)

- <500
- 500 - 1000
- 1000 - 1500
- 1500 - 2000
- >2000

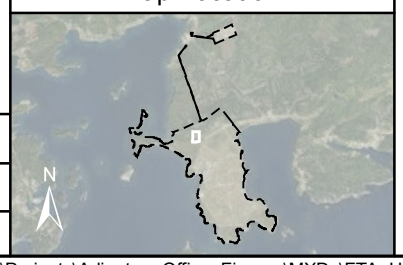
- Removal Areas (AGVIQ 2015)
- Soil Exposure Area 1
- Soil Exposure Area 2
- Approximate Extent Of 2009 Drum Disposal Area Excavation (Shaw 2010)
- Approximate Extent of 2006-2009 Excavation (UNITEC 2008; Tetra Tech 2009; Shaw 2010)
- September 2004 Approximate Extent of Sand Wedge Excavation (a.k.a. Restored Wetland Area)

Note: Highest concentration measured at a given point is displayed.

NAVFAC

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60285299	

Map Location



N

0 50 100

Feet

Figure 4-4
Manganese Concentrations in Soil
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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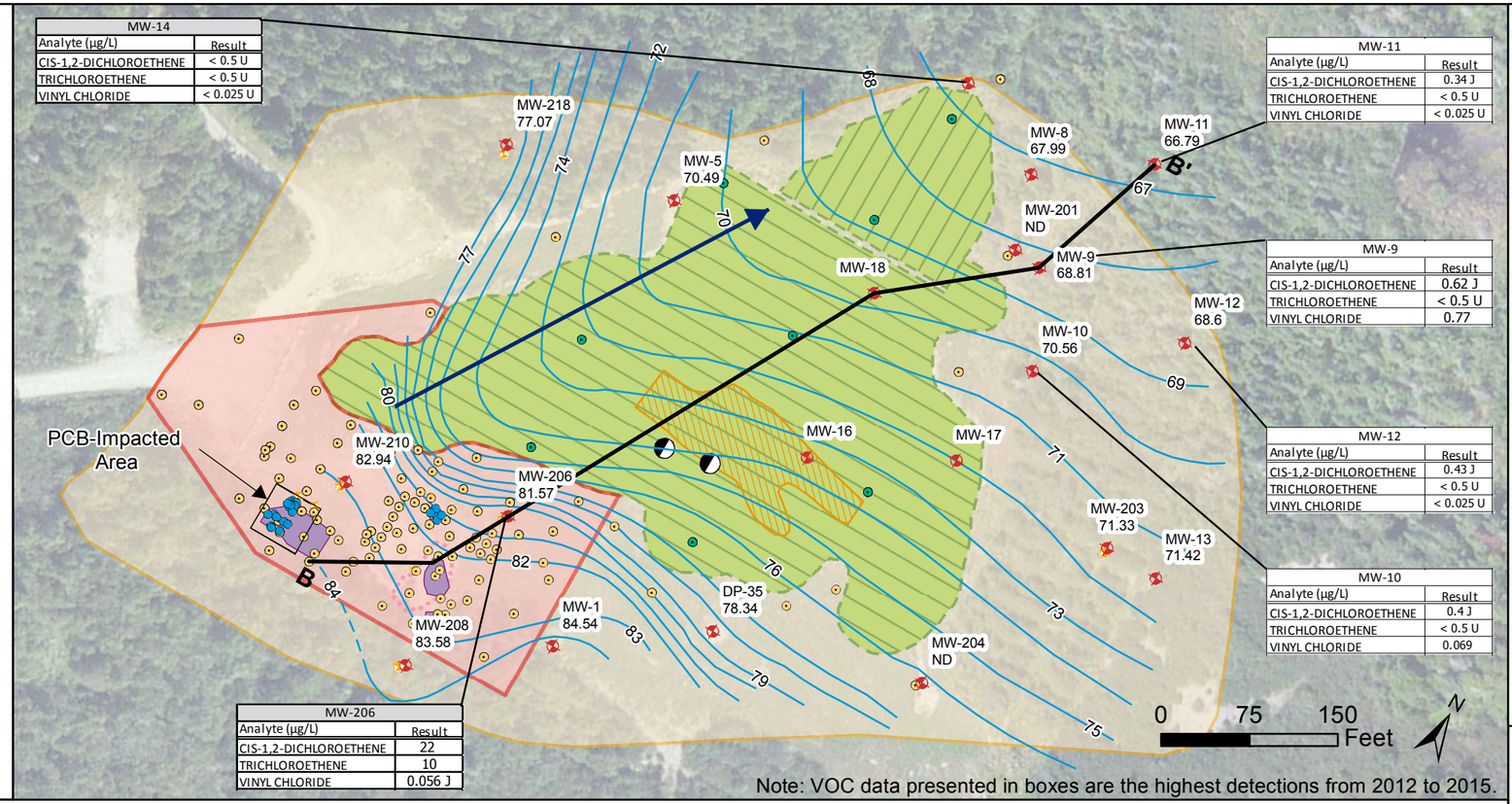
Legend

- Monitoring Well
- Approximate Soil Confirmation Samples (AGVIQ 2015)
- Groundwater/Soil Boring
- Sediment/Surface Water
- Soil Boring
- September 2015 Groundwater Elevation (feet)
- Inferred September 2015 Groundwater Elevation (feet)
- Approximate Location of Former Oil Tanks
- Approximate Area of Surficial Staining (EA 2000)
- Removal Areas (AGVIQ 2015)
- Soil Exposure Area 2
- Soil Exposure Area 1
- Approximate Extent of 2009 Drum Disposal Area Excavation (Shaw 2010)
- September 2004 Approximate Extent of Sand Wedge Excavation (a.k.a. Restored Wetland Area)
- Approximate Extent of 2006-2009 Excavation (a.k.a. Enhanced Wetland Area) (UNITEC 2008; Tetra Tech 2009; Shaw 2010)
- Groundwater Flow Direction



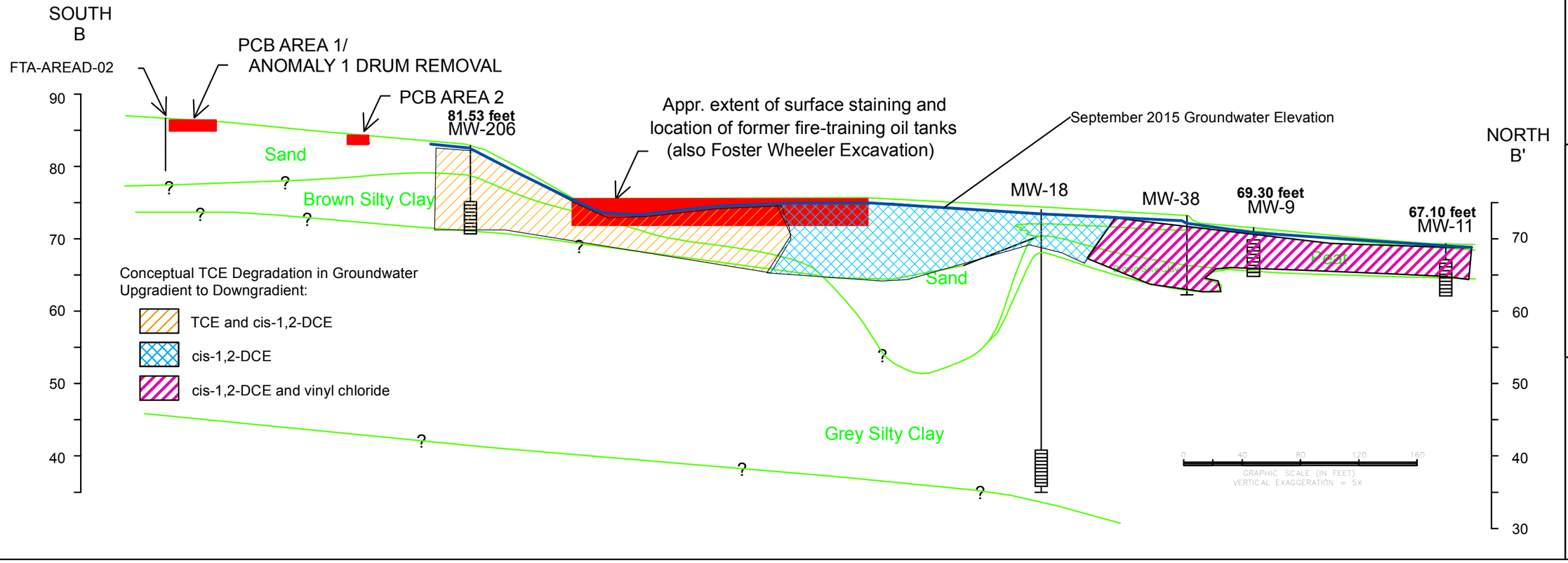


Figure 7-1
FTA Conceptual Site Model
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

See plan view for scale.

Map Location

NAVFAC

Drawn: AC 7/17/2017

Aproved: TC 7/17/2017

PROJECT #: 60285299

TABLES

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Table 1-1:
Summary of Previous Investigations and Removal Actions

Date	Event	Description	Reference
FTA			
1991	Site Investigation	The geophysical survey indicated the presence of two anomalies. Anomaly A indicated presence of contrasting subsurface materials (potentially fill), while anomaly B coincided with the approximate location of an oil stain. Soil samples were collected from nine borings advanced to 10 ft below the water table. Monitoring wells were installed in seven of the nine borings and groundwater samples were analyzed for the same analyte list as the soil samples.	HMM 1994
1999	Direct-Push Installation/Sampling and Test Pit Excavation	In May 1999, 14 direct-push points were installed and groundwater samples were collected at each location. No soil samples were submitted for laboratory analysis. Each groundwater sample was analyzed for VOCs, SVOCs, GRO, and DRO. In addition, 32 test pits were excavated. The tests pits were generally 5 to 7 ft deep, with a few other test pits several ft deeper.	EA 2002
1999	Contaminated Soil Excavation	During October 1999, 4,700 tons of visually-identified impacted soils were excavated by Foster Wheeler as part of site restoration activities. The excavation was initiated at the center of the impacted soil and was expanded using visual and flame-ionization detector screening. Foster Wheeler excavated approximately 0.25 acres of soil to approximately 4 ft below ground surface to where groundwater was encountered.	Foster Wheeler 2001
2001	Remedial Investigation	In August 2001, 14 shallow well points were installed by direct-push drilling methods at the FTA to further characterize the site. At the direct-push locations, groundwater samples were collected and analyzed for VOCs, GRO, and DRO. An additional four surface soil samples were collected adjacent to the perimeter of the Foster Wheeler excavation and analyzed for dioxins. In October 2001, 12 monitoring wells were installed at locations based on the August 2001 direct-push groundwater sample data. At this time, six subsurface soil samples were also collected.	EA 2002
2002	Field Investigation	In May 2002, 25 direct-push soil borings were used to assess the nature and extent of the petroleum contamination surrounding the 1999 remedial excavation area and determine whether the FTA was a source of the vinyl chloride found in groundwater samples previously collected downgradient from the FTA.	EA 2003

Table 1-1:
Summary of Previous Investigations and Removal Actions

Date	Event	Description	Reference
2003	Field Investigation	In November 2003, 27 direct-push soil borings were installed and 59 soil samples collected for analyses; 11 shallow direct-push wells were installed; 3 intermediate-depth direct-push wells were installed; and 1 deep permanent monitoring well was installed.	EA 2004
2004	Wetland Excavation and Restoration	In 2004, Tetra Tech excavated approximately 4,332 tons of DRO-contaminated soils (classified non-hazardous waste) and miscellaneous debris from the area designated as the Sand Wedge Excavation Area. The area of the excavation was approximately 18,841 square ft. After the soil was removed, the wetland was restored by placing a layer of organic enriched soil and seeding with a wetland plant mix and planting native saplings and other plants.	Tetra Tech 2005
2006	Soil Removal and Thermal Treatment	Starting in August 2006, UNITEC conducted Part 1 of a NTCRA to remove impacted soil at the FTA with TPH concentrations greater than the 400 mg/kg. After the thermal treatment was initiated, it was determined that the ABP was not able to treat the soils to below the cleanup goal for the 2006 removal action nor was it able to achieve the air emission standards for VOCs. Excavation and treatment activities ceased until 2008 when UNITEC returned to the site and completed the excavation and landfilled the contaminated soil. During the NTCRA excavation activities, a buried drum was discovered to the south of the excavation area.	UNITEC 2009
2008	Soil Removal and Thermal Treatment	In July 2008, UNITEC excavated an additional 9,412 tons (approximately 7,240 CY) of TPH-contaminated soils and disposed of it with the previously stockpiled soil from the August 2006 NTCRA.	UNITEC 2009
2007	Drum Discovery Investigation	On October 27, 2007, one soil boring was advanced at a buried drum location at the FTA where stained soil was observed during 2006 excavation activities. The soil boring was advanced to a total depth of 15 ft bgs and completed as a monitoring well.	Tetra Tech 2009
2009	Soil Removal	In May 2009, Tetra Tech conducted Part 2 of a NTCRA at the former FTA site. This work involved additional soil removal at the southwestern portion of the site. Tetra Tech excavated approximately 10,364 tons of soil. An area in the central portion of the site was created as wetlands to supplement the wetland area to the north (designated in 2004 as the Sand Wedge Excavation Area) as well as to provide additional habitat for wildlife.	Tetra Tech 2009
DDA			

Table 1-1:
Summary of Previous Investigations and Removal Actions

Date	Event	Description	Reference
2007	Site Discovery	As described previously, debris and one drum were uncovered during the 2006 NTCRA. The buried drum was encountered outside of the Site 1 NTCRA soil removal area. A limited removal, referred to as the Eastern DDA Removal Action, was performed in the summer of 2006 during which one crushed drum and impacted soil adjacent to the drum, were excavated by hand and containerized into 55-gallon drums. In total, seven 55-gallon drums and three 85-gallon over-pack drums containing soil and the crushed drum were removed from the site.	Tetra Tech 2007
2007	Preliminary Site Assessment	The DDA was investigated as part of a 2007 PSA and recommendations included excavation and removal of buried drums present in the immediate vicinity of the existing drum removal area, removal of impacted soil, and collection and analysis of soil samples for VOCs and DRO to verify that all of the impacted soil is removed from the AOC.	Tetra Tech 2008
2007	Site Investigation	As recommended from the 2007 PSA, geophysical surveys were conducted at the DDA and test pits were excavated between 2007 and 2009. Two geophysical anomalies were identified during the geophysical surveys: one area, identified as the northern asphalt debris area, was an area to the northwest of the FTA excavation, and is not within the DDA boundary. The second anomaly, referred to as the Western DDA Anomaly, was located south of the FTA and east of the drum described previously that was discovered in 2006. On October 26, 2007, four soil borings were advanced to depths of 7 to 15 ft below ground surface in the vicinity of the 2006 eastern DDA removal.	Tetra Tech 2009
2009	Western DDA Drum Removal	In July–September 2009, Shaw conducted Part 3 of a NTCRA at the Western DDA Anomaly to remove remaining petroleum-impacted soils, drums, and debris resulting from the historical use of waste fuel oil to conduct fire-training activities. A total of 34 drums were excavated from the anomaly area. Upon completion of all removal activities, the site was restored by backfilling with appropriate fill and grading to act as a wetland/heath to match the surrounding terrain. All disturbed areas were subsequently seeded and planted to compliment the surrounding area. A total of 1.8 million gallons of water was treated by an on-site water treatment system.	Shaw 2012
2010	Removal Site Evaluation	In 2010, the DDA was elevated from an AOC to an IR Site by MEDEP. In an effort to delineate the extent of PCB-contaminated soils at the DDA, a soil investigation was implemented in August 2010.	Tetra Tech 2011

Table 1-1:
Summary of Previous Investigations and Removal Actions

Date	Event	Description	Reference
2011	PCB Soil Investigation	The July 2011 PCB field investigation used the same sampling grid from the 2010 investigation. The grid was extended beyond the 2010 area to cover areas that required further investigation as recommended by Tetra Tech and MEDEP.	Tetra Tech 2012a
2012	Test Pit Investigation	In May 2012, a geophysical survey of the DDA area was conducted using EM-31 and EM-61 instrumentation. Four anomalies were identified south of the FTA excavation. Six test pits were excavated in late August 2012 at the anomalies. Drums were identified in three test pit locations and a drum top in one excavation.	Tetra Tech 2012b
2012	Time Critical Removal Action	A Time Critical Removal Action was performed in November 2012 to remove the contents of the drum that was punctured during test pit activities in August 2012. Additional investigation activities in the DDA were completed in late 2012 to characterize contaminants in soil, groundwater, surface water and sediments.	Tetra Tech 2012c
Site 1 FTA			
2012	Supplemental Remedial Investigation	In late 2012, a Supplemental Remedial Investigation was conducted by Tetra Tech. The objectives were to assess the current concentrations in soil, groundwater, surface water and sediment in areas that surrounded the previous excavations. Because PCBs were found in the vicinity of the DDA, PCBs were added to the list of analytes.	Tetra Tech 2013
2014	Field Sampling Investigation	In June 2014, Tetra Tech conducted groundwater, surface and subsurface soil, surface water and sediment sampling.	Tetra Tech 2014
2013	Removal Action	The removal of 35 buried 55-gallon drums was performed in August and September 2013. The drum removal activities were performed at Anomaly 1, Anomaly 4 and Anomaly 2. Soil was excavated from PCB-contaminated soil from two areas (PCB Area 1 and PCB Area 2) to a depth of 2-ft. A total of 202 CY of excavated material were managed and disposed of off-site.	AGVIQ 2015

Notes:

ABP	asphalt batch plant
CY	cubic yard
DRO	diesel range organics
GRO	gasoline range organics
mg/kg	milligram per kilogram
NTCRA	non-time critical removal action
PCB	polychlorinated biphenyl
SVOC	semivolatile organic compound
TPH	total petroleum hydrocarbons
UNITEC	Universe Technologies, Inc.
VOC	volatile organic compound

Table 2-1:
MEDEP RAGs and PSLs for Soil

Analyte	2016 MEDEP Soil RAGs					Human Health	
	Leaching to Groundwater	Residential	Park User	Commercial Worker	Construction Worker	PSL	Reference
PCBs (mg/kg)							
Aroclor-1254	—	—	—	—	—	0.12	RSL
Aroclor-1260	—	—	—	—	—	0.24	RSL
Total PCBs	—	2.4	4.1	12	6.5	0.12	RSL a
Metals (mg/kg)							
Aluminum	—	170,000	280,000	1,000,000	310,000	7,700	RSL
Antimony	—	68	110	680	120	3.1	RSL
Arsenic	—	1.4	2.3	4.2	42	0.68	RSL
Barium	—	10,000	10,000	10,000	10,000	1,500	RSL
Beryllium	—	340	570	3,400	620	16	RSL
Cadmium	—	11	18	94	19	7.1	RSL [b]
Calcium	—	—	—	—	—	—	—
Chromium (+6)	—	510	850	5,100	2,800	0.3	RSL
Chromium (+3)	—	10,000	10,000	10,000	10,000	12,000	
Cobalt	—	51	85	510	920	2.3	RSL
Copper	—	2,400	4,000	10,000	4,300	310	RSL
Iron	—	120,000	200,000	1,000,000	220,000	5,500	RSL
Lead	10,000	340	530	1,100	950	400	RSL
Magnesium	—	—	—	—	—	—	—
Manganese	—	4,100	6,800	10,000	7,400	180	RSL [c]
Mercury	—	51	85	510	930	2.3	RSL [d]
Nickel	—	510	850	5,100	930	150	RSL

Table 2-1:
MEDEP RAGs and PSLs for Soil

Analyte	2016 MEDEP Soil RAGs					Human Health	
	Leaching to Groundwater	Residential	Park User	Commercial Worker	Construction Worker	PSL	Reference
Potassium	—	—	—	—	—	—	—
Selenium	—	850	1,400	8,500	1,500	39	RSL
Silver	—	850	1,400	8,500	1,500	39	RSL
Sodium	—	—	—	—	—	—	—
Thallium	—	—	—	—	—	0.078	RSL
Vanadium	—	1,200	2,000	10,000	2,200	39	RSL
Zinc	—	10,000	10,000	10,000	10,000	2,300	RSL
Pesticides (mg/kg)							
4,4-dichlorodiphenyldichloroethylene	—	32	53	85	980	2.0	RSL
4,4-dichlorodiphenyldichloroethane	—	45	75	120	1,400	2.3	RSL
4,4-dichlorodiphenyltrichloroethane	—	38	64	120	140	1.9	RSL
Aldrin	—	0.64	1.1	1.7	10	0.039	RSL
Beta-BHC	—	6.0	10	16	140	0.3	RSL
Dieldrin	—	0.68	1.1	1.8	21	0.034	RSL
Endosulfan I	—	800	1,300	6,200	1,400	47	RSL [e]
Endosulfan II	—	800	1,300	6,200	1,400	47	RSL [e]
Endosulfan sulfate	—	800	1,300	6,200	1,400	47	RSL [e]
Endrin	—	40	67	310	480	1.9	RSL
Endrin aldehyde	—	40	67	310	480	1.9	RSL [f]
Endrin ketone	—	40	67	310	480	1.9	RSL [f]
Heptachlor epoxide	—	1.2	2.0	3.2	3.1	0.07	RSL
Lindane	—	0.61	1.0	5.4	2.8	0.57	RSL

Table 2-1:
MEDEP RAGs and PSLs for Soil

Analyte	2016 MEDEP Soil RAGs					Human Health	
	Leaching to Groundwater	Residential	Park User	Commercial Worker	Construction Worker	PSL	Reference
Methoxychlor	—	670	1,100	5,100	1,200	32	RSL
SVOCs (mg/kg)							
1,1-biphenyl	—	8,500	10,000	10,000	10,000	4.7	RSL
1,2,4,5-Tetrachlorobenzene	—	—	—	—	—	2.3	RSL
2,3,4,6-tetrachlorophenol	—	—	—	—	—	190	RSL
2,4-Dinitrotoluene	—	35	58	93	480	1.7	RSL
2,4,6-Trichlorophenol	—	130	220	1,000	240	6.3	RSL
2-Methylnaphthalene	3.6	500	830	3,600	600	24	RSL
Acenaphthene	170	7,500	10,000	10,000	9,800	360	RSL
Anthracene	2,400	10,000	10,000	10,000	3,800	1,800	RSL
Atrazine	—	47	78	120	710	2.4	RSL
Benzaldehyde	—	—	—	—	—	780	RSL
Benzo(a)anthracene	10,000	2.6	4.4	35	430	0.16	RSL
Benzo(a)pyrene	10,000	0.26	0.44	3.5	43	0.016	RSL
Benzo(b)fluoranthene	10,000	2.6	4.4	35	430	0.16	RSL
Benzo(g,h,i)perylene	10,000	3,700	6,200	10,000	10,000	180	RSL [g]
Benzo(k)fluoranthene	10,000	26	44	350	4,300	1.6	RSL
Bis(2-ethylhexyl)phthalate	10,000	770	1,300	2,100	10,000	39	RSL
Butylbenzylphthalate	—	5,700	9,500	10,000	10,000	290	RSL
Carbazole	—	540	900	1,400	10,000	240	RSL [h]
Chrysene	10,000	260	440	3,500	10,000	16	RSL
Dibenz(a,h)anthracene	10,000	0.26	0.44	3.5	43	0.016	RSL

Table 2-1:
MEDEP RAGs and PSLs for Soil

Analyte	2016 MEDEP Soil RAGs					Human Health	
	Leaching to Groundwater	Residential	Park User	Commercial Worker	Construction Worker	PSL	Reference
Dibenzofuran	—	130	220	1,000	950	7.3	RSL
Fluoranthene	10,000	5,000	8,300	10,000	10,000	240	RSL
Fluorene	120	5,000	8,300	10,000	10,000	240	RSL
Hexachlorobenzene	—	6.8	11	18	190	0.21	RSL
Indeno(1,2,3-cd)pyrene	10,000	2.6	4.4	35	430	0.16	RSL
Naphthalene	1.7	2,500	4,200	10,000	10,000	3.8	RSL
Phenanthrene	97	3,700	6,200	10,000	8,900	1,800	RSL [i]
Pyrene	10,000	3,700	6,200	10,000	10,000	180	RSL
VOCs (mg/kg)							
1,1,1-Trichloroethane	520	550	910	1,800	9,300	810	RSL
1,1-Dichloroethane	1	2,500	4,200	8,400	10,000	3.6	RSL
1,2,4-Trichlorobenzene	8.6	490	820	1,600	430	5.8	RSL
1,2-Dichlorobenzene	11	5,100	8,500	10,000	10,000	180	RSL
1,2-Dichloroethene, Total	—	—	—	—	—	—	—
1,3-Dichlorobenzene	0.075	34	57	340	6,200	2.6	RSL [j]
1,4-Dichlorobenzene	4.3	2,600	4,400	8,800	10,000	2.6	RSL
2-Butanone	—	10,000	10,000	10,000	10,000	2,700	RSL
Acetone	10,000	10,000	10,000	10,000	10,000	6,100	RSL
Benzene	0.51	85	140	850	150	1.2	RSL
Bromoform	—	1,400	2,300	3,600	10,000	19	RSL
Carbon Disulfide	—	10,000	10,000	10,000	10,000	77	RSL
Chloroform	—	460	760	1,500	10,000	0.32	RSL

Table 2-1:
MEDEP RAGs and PSLs for Soil

Analyte	2016 MEDEP Soil RAGs					Human Health	
	Leaching to Groundwater	Residential	Park User	Commercial Worker	Construction Worker	PSL	Reference
Chloromethane	—	10,000	10,000	10,000	10,000	11	RSL
Cis-1,2-dichloroethene	0.14	340	570	3,400	6,200	16	RSL
Dichlorodifluoromethane	—	10,000	10,000	10,000	10,000	8.7	RSL
Ethylbenzene	0.81	1,300	2,200	4,300	10,000	5.8	RSL
Isopropylbenzene	—	—	—	—	—	190	RSL
Methyl acetate	—	—	—	—	—	7,800	RSL
M- and P-Xylene	—	—	—	—	—	55	RSL [k]
Methyl Cyclohexane	—	—	—	—	—	490	RSL [l]
O-Xylene	—	—	—	—	—	65	RSL
Toluene	8.1	10,000	10,000	10,000	10,000	490	RSL
Trans-1,2-Dichloroethene	2.4	3,400	5,700	10,000	10,000	160	RSL
TCE	0.23	85	140	850	140	0.41	RSL

Table 2-1:
MEDEP RAGs and PSLs for Soil

Analyte	2016 MEDEP Soil RAGs					Human Health	
	Leaching to Groundwater	Residential	Park User	Commercial Worker	Construction Worker	PSL	Reference
Vinyl Chloride	0.013	0.48	0.49	66	600	0.059	RSL
Xylenes, total	26	10,000	10,000	10,000	10,000	58	RSL

Notes:
— = not applicable/no data
RSL = regional screening level
TCE = trichloroethene
[a] The value for PCB Aroclor-1254 was used.
[b] The value for cadmium in the diet was used.
[c] The value for manganese non-diet was used.
[d] The value for mercuric chloride was used.
[e] The value for endosulfan was used.
[f] The value for endrin was used.
[g] The value for pyrene was used.
[h] The value for fluorene was used.
[i] The value for anthracene was used.
[j] The value for 1,4-dichlorobenzene was used.
[k] The value for m-xylene was used.
[l] The value for toluene was used.

Table 2-2: MEDEP RAGs and PSLs for Groundwater				
	2016 MEDEP Groundwater RAGs		Human Health	
Analyte	**Residential**	**Construction Worker**	**PSL**	**Reference**
Total Metals (µg/L)				
Aluminum	7,000	9,200,000	**2,000**	RSL
Antimony	3	3,700	**0.78**	RSL
Arsenic	10	1,400	**0.052**	RSL
Barium	1,000	1,800,000	**380**	RSL
Beryllium	10	18,000	**2.5**	RSL
Cadmium	1	650	**0.92**	RSL
Calcium	—	—	—	—
Chromium (VI)	20	78,000	**0.035**	RSL
Chromium (III)	10,000	14,000,000	**100**	MCL
Cobalt	10	29,000	**0.6**	RSL
Copper	500	130,000	**80**	RSL
Iron	5,000	6,500,000	**1,400**	RSL
Lead	**10**	1,600,000	15	RSL
Magnesium	—	—	—	—
Manganese	500	220,000	**43**	RSL
Mercury	2	28,000	**0.57**	RSL
Nickel	**20**	28,000	39	RSL
Potassium	—	—	—	—
Selenium	40	46,000	**10**	RSL
Silver	40	47,000	**9.4**	RSL
Sodium	—	—	—	—
Thallium	0.6	92	**0.02**	RSL
Vanadium	200	65,000	**8.6**	RSL
Zinc	2,000	2,800,000	**600**	RSL
PFASs (µg/L)				
PFOS	0.56	5.3	**0.04**	RSL Calculator
PFOA	0.13	0.22	**0.04**	RSL Calculator
VOCs (µg/L)				
1,1,1-Trichloroethane	10,000	15,000	**200**	MCL
1,1-Dichloroethane	60	2,200	**2.8**	RSL

Table 2-2: MEDEP RAGs and PSLs for Groundwater				
	2016 MEDEP Groundwater RAGs		Human Health	
Analyte	**Residential**	**Construction Worker**	**PSL**	**Reference**
1,2-dichloroethene, total	—	—	**3.6**	RSL
Acetone	6,000	160,000	**1,400**	RSL
Cis-1,2-dichloroethene	10	2,000	**3.6**	RSL
Chloromethane	20	—	**19**	RSL
PCE	40	880	**4.1**	RSL
TCE	4	5.8	**0.28**	RSL
Toluene	600	12,000	**110**	RSL
Vinyl chloride	0.2	160	**0.019**	RSL
SVOCs (µg/L)				
1,1-Biphenyl	400	1.5	**0.083**	RSL
Atrazine	2	17,000	**0.3**	RSL
Bis(2-ethylhexyl)phthalate	30	2,200	**5.6**	RSL
Dibenzofuran	—	3,700	**0.79**	RSL
Hexachlorocyclopentadiene	40	—	**0.019**	VISL
Naphthalene	10	9.7	**0.17**	RSL
Phenanthrene	—	**23**	180	RSL
Pyrene	200	120,000	**12**	RSL

Notes:
µg/L = microgram per liter
MCL = maximum contaminant level
PCE = tetrachloroethene
VISL = Vapor Intrusion Screening Level

Table 4-1
Summary of Surface Soil Detections

Analyte	Frequency of Detection	Range of Detection	Location of Maximum Concentration	Human Health PSL	Quantity Exceeding PSL
PCBs (mg/kg)					
AROCLOR-1254	2 / 107	2.6 - 5.8	FTA-SB-211 (0 - 2 ft)	0.12	2
AROCLOR-1260	103 / 107	0.015 - 610	PCBAREA1-013 (1 - 1 ft)	0.24	87
TOTAL AROCLORS	103 / 107	0.015 - 610	PCBAREA1-013 (1 - 1 ft)	0.12 (a)	91
Metals (mg/kg)					
ALUMINUM	37 / 37	4320 - 19700	FTA-ANOM1E-SO-SURF (0 - 2 ft)	7,700	35
ANTIMONY	36 / 37	0.052 - 0.72	FTA-SB-201 (0 - 2 ft)	3.1	0
ARSENIC	37 / 37	3.6 - 12	FTA-SB-205 (0 - 2 ft)	0.68	37
BARIUM	37 / 37	11.7 - 114	FTA-SB-200 (0 - 2 ft)	1,500	0
BERYLLIUM	37 / 37	0.26 - 0.89	FTA-SB-201 (0 - 2 ft)	16	0
CADMIUM	37 / 37	0.04 - 1.3	FTA-SB-201 (0 - 2 ft)	7.1 (b)	0
CALCIUM	37 / 37	1470 - 22700	FTA-SB-201 (0 - 2 ft)	--	--
CHROMIUM, TOTAL	47 / 48	13.9 - 42.3	FTA-AREAA-02 (0 - 2 ft)	12,000 (c)	0
COBALT	37 / 37	6.8 - 24.2	FTA-SB-201 (0 - 2 ft)	2.3	37
COPPER	37 / 37	6.3 - 32.1	FTA-SB-216 (0 - 2 ft)	310	0
IRON	37 / 37	6840 - 32000	FTA-SB-210 (0 - 2 ft)	5,500	37
LEAD	37 / 37	5.2 - 47.5	FTA-AREAA-02 (0 - 2 ft)	400	0
MAGNESIUM	37 / 37	2760 - 9690	FTA-SB-209 (0 - 2 ft)	--	--
MANGANESE	37 / 37	315 - 8600	FTA-SB-201 (0 - 2 ft)	180 (d)	37
MERCURY	29 / 37	0.0043 - 0.21	FTA-SB-200 (0 - 2 ft)	2.3 (e)	0
NICKEL	36 / 37	7.1 - 32.2	FTA-AREAI-01 (0 - 2 ft)	150	0
POTASSIUM	36 / 37	436 - 2790	FTA-ANOM1E-SO-SURF (0 - 2 ft)	--	--
SELENIUM	25 / 37	0.056 - 6.4	FTA-SB-201 (0 - 2 ft)	39	0
SILVER	37 / 37	0.02 - 0.22	FTA-SB-216 (0 - 2 ft)	39	0
SODIUM	31 / 37	87 - 417	FTA-SB-210 (0 - 2 ft)	--	--
THALLIUM	37 / 37	0.05 - 0.14	FTA-ANOM1E-SO-SURF (0 - 2 ft)	0.078	18
VANADIUM	37 / 37	17.8 - 47	FTA-SB-210 (0 - 2 ft)	39	7
ZINC	37 / 37	34.5 - 72	FTA-SB-210 (0 - 2 ft)	2,300	0
Pesticides (mg/kg)					
4,4-DDD	1 / 30	0.0092 - 0.0092	FTA-AREAH-01 (0 - 2 ft)	2.3	0
4,4-DDT	10 / 30	0.0032 - 0.76	FTA-AREAG-03 (0 - 2 ft)	1.9	0
ALDRIN	1 / 30	0.00016 - 0.00016	FTA-AREAF-01 (0 - 2 ft)	0.039	0
DIELDRIN	11 / 30	0.0018 - 0.48	FTA-AREAG-03 (0 - 2 ft)	0.034	3
ENDOSULFAN I	2 / 30	0.00026 - 0.00044	FTA-AREAG-02 (0 - 2 ft)	47 (f)	0
ENDOSULFAN II	2 / 30	0.0058 - 0.02	FTA-AREAA-02 (0 - 2 ft)	47 (f)	0
ENDOSULFAN SULFATE	7 / 30	0.0025 - 0.22	FTA-AREAB-02 (0 - 2 ft)	47 (f)	0
ENDRIN	5 / 30	0.0005 - 0.13	FTA-AREAG-03 (0 - 2 ft)	1.9	0
ENDRIN ALDEHYDE	1 / 30	0.017 - 0.017	FTA-AREAF-01 (0 - 2 ft)	1.9 (g)	0
ENDRIN KETONE	25 / 30	0.0011 - 3	FTA-SB-211 (0 - 2 ft)	1.9 (g)	2
HEPTACHLOR EPOXIDE	3 / 30	0.0031 - 0.087	FTA-AREAG-03 (0 - 2 ft)	0.07	1
METHOXYCHLOR	6 / 30	0.012 - 1.6	FTA-AREAB-02 (0 - 2 ft)	32	0
SVOCs (mg/kg)					
1,1-BIPHENYL	9 / 41	0.0014 - 0.64	FTA-SB-203 (0 - 2 ft)	4.7	0
2,3,4,6-TETRACHLOROPHENOL	2 / 37	0.0032 - 0.0041	FTA-SB-218 (0 - 2 ft)	190	0
2,4,6-TRICHLOROPHENOL	1 / 41	0.0035 - 0.0035	FTA-AREAG-02 (0 - 2 ft)	6.3	0
2-METHYLNAPHTHALENE	2 / 37	0.21 - 2.1	FTA-SB-203 (0 - 2 ft)	24	0
ACENAPHTHENE	6 / 37	0.0046 - 1.7	FTA-SB-216 (0 - 2 ft)	360	0
ANTHRACENE	2 / 37	0.087 - 2.8	FTA-SB-216 (0 - 2 ft)	1,800	0
ATRAZINE	5 / 41	0.001 - 0.0021	FTA-AREAG-01 (0 - 2 ft)	2.4	0
BENZO[A]ANTHRACENE	23 / 37	0.002 - 6.6	FTA-SB-216 (0 - 2 ft)	0.16	2
BENZO[A]PYRENE	15 / 37	0.0042 - 4.3	FTA-SB-216 (0 - 2 ft)	0.016	10
BENZO[B]FLUORANTHENE	19 / 37	0.0028 - 6.1	FTA-SB-216 (0 - 2 ft)	0.16	2
BENZO[G,H,I]PERYLENE	1 / 37	1.5 - 1.5	FTA-SB-216 (0 - 2 ft)	180 (h)	0
BENZO[K]FLUORANTHENE	3 / 37	0.087 - 2.3	FTA-SB-216 (0 - 2 ft)	1.6	1
BIS(2-ETHYLHEXYL)PHTHALATE	3 / 41	0.15 - 0.61	FTA-SB-220 (0 - 2 ft)	39	0
BUTYLBENZYLPHTHALATE	4 / 41	0.0044 - 0.031	FTA-SB-201 (0 - 2 ft)	290	0
CARBAZOLE	1 / 41	0.76 - 0.76	FTA-SB-216 (0 - 2 ft)	240 (i)	0
CHRYSENE	4 / 37	0.11 - 6	FTA-SB-216 (0 - 2 ft)	16	0
DIBENZ[A,H]ANTHRACENE	9 / 37	0.0031 - 0.92	FTA-SB-216 (0 - 2 ft)	0.016	3
DIBENZOFURAN	1 / 41	0.62 - 0.62	FTA-SB-216 (0 - 2 ft)	7.3	0
FLUORANTHENE	5 / 37	0.1 - 14	FTA-SB-216 (0 - 2 ft)	240	0
FLUORENE	2 / 37	0.77 - 1.3	FTA-SB-216 (0 - 2 ft)	240	0
HEXACHLOROBENZENE	5 / 41	0.0025 - 0.013	FTA-SB-211 (0 - 2 ft)	0.21	0
INDENO[1,2,3-CD]PYRENE	23 / 37	0.0021 - 4.7	FTA-SB-216 (0 - 2 ft)	0.16	1
NAPHTHALENE	8 / 37	0.0027 - 0.16	FTA-SB-216 (0 - 2 ft)	3.8	0
PHENANTHRENE	5 / 37	0.13 - 9.3	FTA-SB-216 (0 - 2 ft)	1,800 (j)	0
PYRENE	6 / 37	0.13 - 11	FTA-SB-216 (0 - 2 ft)	180	0

Table 4-1
Summary of Surface Soil Detections

Analyte	Frequency of Detection	Range of Detection	Location of Maximum Concentration	Human Health PSL	Quantity Exceeding PSL
VOCs (mg/kg)					
1,1,1-TRICHLOROETHANE	1 / 42	0.00085 - 0.00085	FTA-ANOM1E-SO-SURF (0 - 2 ft)	810	0
1,2,4-TRICHLOROBENZENE	9 / 42	0.00072 - 0.004	A31-SB01 (0 - 2 ft)	5.8	0
1,2-DICHLOROBENZENE	1 / 42	0.0033 - 0.0033	FTA-SB-211 (0 - 2 ft)	180	0
1,2-DICHLOROETHENE, TOTAL	1 / 20	0.014 - 0.014	FTA-SB-201 (0 - 2 ft)	--	--
1,3-DICHLOROBENZENE	1 / 42	0.0042 - 0.0042	FTA-SB-211 (0 - 2 ft)	2.6 (k)	0
1,4-DICHLOROBENZENE	2 / 42	0.00085 - 0.0015	FTA-SB-211 (0 - 2 ft)	2.6	0
2-BUTANONE	2 / 4	0.012 - 0.023	A31-SB01 (0 - 2 ft)	2,700	0
ACETONE	25 / 41	0.037 - 2	FTA-SB-201 (0 - 2 ft)	6,100	0
BENZENE	1 / 41	0.0014 - 0.0014	FTA-SB-204 (0 - 2 ft)	1.2	0
CARBON DISULFIDE	2 / 4	0.008 - 0.038	A31-SB01 (0 - 2 ft)	77	0
CIS-1,2-DICHLOROETHENE	2 / 42	0.0019 - 0.014	FTA-SB-201 (0 - 2 ft)	16	0
DICHLORODIFLUOROMETHANE	1 / 5	0.001 - 0.001	A31-SB03 (0 - 2 ft)	8.7	0
ETHYLBENZENE	2 / 41	0.002 - 0.008	FTA-SB-204 (0 - 2 ft)	5.8	0
ISOPROPYLBENZENE	1 / 41	0.011 - 0.011	FTA-SB-219 (0 - 2 ft)	190	0
METHYL ACETATE	1 / 4	0.037 - 0.037	A31-SB03 (0 - 2 ft)	7,800	0
TOLUENE	4 / 41	0.0029 - 0.016	FTA-SB-204 (0 - 2 ft)	490	0
TRICHLOROETHENE	1 / 42	0.0078 - 0.0078	FTA-ANOM4-SO-SURF (0 - 2 ft)	0.41	0

Notes:

ft - feet.

mg/kg - milligrams per kilogram.

PCB - Polychlorinated biphenyl.

PSL - Project specific screening level. USEPA Regional Screening Level (RSL) for residential soil based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens (May 2016).

SVOC - Semivolatile organic compound.

VOC - Volatile organic compound.

(a) The value for Aroclor 1254 was used.

(b) The value for cadmium in the diet was used.

(c) The value for trivalent chromium was used.

(d) The value for manganese non-diet was used.

(e) The value for mercuric chloride was used.

(f) The value for endosulfan was used.

(g) The value for endrin was used.

(h) The value for pyrene was used.

(i) The value for fluorene was used.

(j) The value for anthracene was used.

(k) The value for 1,4-dichlorobenzene was used.

Table 4-2
Summary of Subsurface Soil Detections

Analyte	Frequency of Detection	Range of Detection	Location of Maximum Concentration	Human Health PSL	Quantity Exceeding PSL
PCBs (mg/kg)					
AROCLOR-1254	1 / 114	0.21 - 0.21	FTA-SB-211 (2 - 6 ft)	0.12	1
AROCLOR-1260	64 / 114	0.012 - 83	PCBAREA1-202 (3 - 3 ft)	0.24	30
TOTAL PCBs	64 / 114	0.012 - 83	PCBAREA1-202 (3 - 3 ft)	0.12 (a)	38
Metals (mg/kg)					
ALUMINUM	54 / 54	3550 - 26200	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	7,700	53
ANTIMONY	54 / 54	0.04 - 0.39	FTA-SB-200 (2 - 6 ft)	3.1	0
ARSENIC	54 / 54	3.4 - 25.1	FTA-SB-214 (2 - 6 ft)	0.68	54
BARIUM	54 / 54	17.6 - 88	FTA-SB-214 (2 - 6 ft)	1,500	0
BERYLLIUM	54 / 54	0.26 - 1.2	FTA-SB-214 (2 - 6 ft)	16	0
CADMIUM	52 / 54	0.05 - 0.67	FTA-SB-200 (2 - 6 ft)	7.1 (b)	0
CALCIUM	54 / 54	1600 - 16600	FTA-SB-200 (2 - 6 ft)	--	--
CHROMIUM, TOTAL	53 / 54	18.2 - 56.4	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	12,000 (c)	0
COBALT	54 / 54	2.2 - 20.8	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	2.3	53
COPPER	54 / 54	15.9 - 48.8	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	310	0
IRON	54 / 54	2490 - 43800	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	5,500	53
LEAD	53 / 54	5.7 - 22.4	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	400	0
MAGNESIUM	54 / 54	2270 - 13000	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	--	--
MANGANESE	54 / 54	249 - 1530	FTA-SB-214 (2 - 6 ft)	180 (d)	54
MERCURY	35 / 53	0.0042 - 0.13	FTA-SB-201 (2 - 6 ft)	2.3 (e)	0
NICKEL	53 / 54	14.1 - 45.9	FTA-SB-214 (2 - 6 ft)	150	0
POTASSIUM	53 / 54	585 - 5640	FTA-SB-214 (2 - 6 ft)	--	--
SELENIUM	35 / 54	0.13 - 5.7	FTA-SB-201 (2 - 6 ft)	39	0
SILVER	51 / 54	0.02 - 0.09	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	39	0
SODIUM	50 / 54	89 - 335	FTA-SB-214 (2 - 6 ft)	--	--
THALLIUM	52 / 54	0.044 - 0.26	FTA-SB-214 (2 - 6 ft)	0.078	35
VANADIUM	54 / 54	11.6 - 64.4	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	39	17
ZINC	54 / 54	11.2 - 98.8	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	2,300	0
Pesticides (mg/kg)					
4,4-DDD	2 / 47	0.0015 - 0.002	FTA-AREAC-01 (2 - 6 ft)	2.3	0
4,4-DDE	2 / 47	0.000082 - 0.00058	FTA-AREAH-01 (2 - 6 ft)	2	0
4,4-DDT	9 / 47	0.00074 - 0.043	FTA-SB-211 (2 - 6 ft)	1.9	0
BETA-BHC	2 / 47	0.000086 - 0.00074	FTA-AREAB-01 (2 - 6 ft)	0.3	0
DIELDRIN	9 / 47	0.00023 - 0.02	FTA-AREAG-03 (2 - 6 ft)	0.034	0
ENDOSULFAN II	2 / 47	0.00032 - 0.00044	FTA-AREAG-02 (2 - 6 ft)	47 (f)	0
ENDOSULFAN SULFATE	6 / 47	0.00068 - 0.034	FTA-AREAG-03 (2 - 6 ft)	47 (f)	0
ENDRIN	4 / 47	0.00025 - 0.0065	FTA-AREAG-03 (2 - 6 ft)	1.9	0
ENDRIN ALDEHYDE	1 / 47	0.001 - 0.001	FTA-AREAC-01 (2 - 6 ft)	1.9 (g)	0
ENDRIN KETONE	17 / 47	0.00013 - 0.27	FTA-SB-209 (2 - 6 ft)	1.9 (g)	0
HEPTACHLOR EPOXIDE	4 / 47	0.00012 - 0.0043	FTA-AREAG-03 (2 - 6 ft)	0.07	0
LINDANE	2 / 47	0.00018 - 0.00094	FTA-AREAC-01 (2 - 6 ft)	0.57	0
METHOXYCHLOR	1 / 47	0.032 - 0.032	FTA-AREAB-01 (2 - 6 ft)	32	0
SVOCs (mg/kg)					
1,1-BIPHENYL	7 / 57	0.0013 - 0.32	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	4.7	0
1,2,4,5-TETRACHLOROBENZENE	1 / 53	0.022 - 0.022	FTA-ANOM2-SO-INT (2 - 4 ft)	2.3	0
2,3,4,6-TETRACHLOROPHENOL	3 / 53	0.0033 - 0.016	FTA-SB-204 (6 - 10 ft)	190	0
2,4,6-TRICHLOROPHENOL	2 / 57	0.004 - 0.0066	FTA-SB-204 (6 - 10 ft)	6.3	0
2,4-DINITROTOLUENE	2 / 57	0.16 - 0.29	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	1.7	0
2-METHYLNAPHTHALENE	1 / 53	0.7 - 0.7	FTA-SB-203 (2 - 6 ft)	24	0
ACENAPHTHENE	3 / 53	0.068 - 0.18	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	360	0
ATRAZINE	5 / 57	0.0014 - 0.0037	FTA-SB-204 (6 - 10 ft)	2.4	0
BENZALDEHYDE	4 / 57	0.21 - 0.93	FTA-SB-200 (2 - 6 ft)	780	0
BENZO[A]ANTHRACENE	12 / 53	0.0022 - 0.14	FTA-SB-216 (2 - 6 ft)	0.16	0
BENZO[A]PYRENE	6 / 53	0.0046 - 0.1	FTA-SB-216 (2 - 6 ft)	0.016	1
BENZO[B]FLUORANTHENE	8 / 53	0.0026 - 0.16	FTA-SB-216 (2 - 6 ft)	0.16	0
BIS(2-ETHYLHEXYL)PHTHALATE	9 / 57	0.12 - 0.68	FTA-SB-214 (2 - 6 ft)	39	0
BUTYLBENZYLPHTHALATE	2 / 57	0.0049 - 0.0059	FTA-SB-219 (2 - 6 ft)	290	0
CHRYSENE	1 / 53	0.14 - 0.14	FTA-SB-216 (2 - 6 ft)	16	0
DIBENZ[A,H]ANTHRACENE	7 / 53	0.0025 - 0.021	FTA-SB-216 (2 - 6 ft)	0.016	1
DIBENZOFURAN	1 / 57	0.086 - 0.086	FTA-SB-203 (2 - 6 ft)	7.3	0
DI-N-BUTYLPHTHALATE	1 / 57	0.035 - 0.035	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	630	0
FLUORANTHENE	1 / 53	0.29 - 0.29	FTA-SB-216 (2 - 6 ft)	240	0
FLUORENE	2 / 53	0.089 - 0.3	FTA-SB-203 (2 - 6 ft)	240	0
HEXACHLOROBENZENE	2 / 57	0.0029 - 0.0074	FTA-ANOM2-SO-INT (2 - 4 ft)	0.21	0
INDENO[1,2,3-CD]PYRENE	19 / 53	0.0032 - 0.1	FTA-SB-216 (2 - 6 ft)	0.16	0
NAPHTHALENE	4 / 53	0.0066 - 0.041	FTA-SB-203 (2 - 6 ft)	3.8	0
PHENANTHRENE	3 / 53	0.2 - 0.7	FTA-SB-203 (2 - 6 ft)	1,800 (h)	0
PYRENE	2 / 53	0.17 - 0.18	FTA-SB-216 (2 - 6 ft)	180	0

Table 4-2
Summary of Subsurface Soil Detections

Analyte	Frequency of Detection	Range of Detection	Location of Maximum Concentration	Human Health PSL	Quantity Exceeding PSL
TPH Method SVOCs (mg/kg)					
ACENAPHTHENE	2 / 11	0.24 - 0.45	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	360	0
FLUORENE	2 / 11	0.24 - 0.27	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	240	0
PHENANTHRENE	2 / 11	0.7 - 1	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	1,800	0
PYRENE	1 / 11	0.39 - 0.39	FTA-ANOM2-SO-INT (2 - 4 ft)	180	0
VOCs (mg/kg)					
1,1,1-TRICHLOROETHANE	4 / 63	0.0013 - 0.0045	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	810	0
1,1-DICHLOROETHANE	2 / 63	0.0051 - 0.019	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	3.6	0
1,2,4-TRICHLOROBENZENE	10 / 61	0.0002 - 0.11	FTA-ANOM2-SO-INT (2 - 4 ft)	5.8	0
1,2-DICHLOROBENZENE	3 / 61	0.0018 - 0.01	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	180	0
1,2-DICHLOROETHENE, TOTAL	1 / 27	0.0565 - 0.0565	FTA-SB-201 (4 - 6 ft)	--	--
1,3-DICHLOROBENZENE	3 / 61	0.0017 - 0.029	FTA-ANOM2-SO-INT (2 - 4 ft)	2.6 (i)	0
1,4-DICHLOROBENZENE	3 / 61	0.0024 - 0.024	FTA-ANOM2-SO-INT (2 - 4 ft)	2.6	0
2-BUTANONE	1 / 6	0.005 - 0.005	A31-SB01 (4 - 6 ft)	2,700	0
ACETONE	29 / 59	0.0067 - 2.4	FTA-SB-201 (4 - 6 ft)	6,100	0
BENZENE	1 / 59	0.0021 - 0.0021	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	1.2	0
BROMOFORM	1 / 6	0.002 - 0.002	FTA-SS-23 (1 - 3 ft)	19	0
CARBON DISULFIDE	1 / 6	0.003 - 0.003	A31-SB01 (4 - 6 ft)	77	0
CHLOROFORM	2 / 63	0.0006 - 0.0006	FTA-SS-23 (1 - 3 ft) FTA-SS-25 (3 - 5 ft)	0.32	0
CHLOROMETHANE	2 / 63	0.004 - 0.004	FTA-SS-23 (1 - 3 ft) FTA-SS-25 (3 - 5 ft)	11	0
CIS-1,2-DICHLOROETHENE	3 / 61	0.0013 - 0.049	FTA-SB-201 (4 - 6 ft)	16	0
ETHYLBENZENE	2 / 59	0.0056 - 0.023	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	5.8	0
ISOPROPYLBENZENE	3 / 57	0.0027 - 0.021	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	190	0
M- AND P-XYLENE	2 / 57	0.0054 - 0.046	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	55 (j)	0
METHYL CYCLOHEXANE	2 / 57	0.0015 - 0.0073	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	490 (k)	0
O-XYLENE	2 / 57	0.0074 - 0.042	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	65	0
TOLUENE	4 / 59	0.0015 - 0.022	FTA-SB-201 (4 - 6 ft)	490	0
TRANS-1,2-DICHLOROETHENE	1 / 61	0.0075 - 0.0075	FTA-SB-201 (4 - 6 ft)	160	0
TRICHLOROETHENE	5 / 63	0.0006 - 0.007	FTA-ANOM4-SO-INT (2 - 4 ft)	0.41	0
VINYL CHLORIDE	1 / 63	0.083 - 0.083	FTA-SB-201 (4 - 6 ft)	0.059	1
XYLENES, TOTAL CALC	2 / 57	0.013 - 0.088	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	58	0

Notes:

ft - feet.

mg/kg - milligrams per kilogram.

PCB - Polychlorinated biphenyl.

PSL - Project specific screening level. USEPA Regional Screening Level (RSL) for residential soil based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens (May 2016).

SVOC - Semivolatile organic compound.

TPH - Total petroleum hydrocarbon.

VOC - Volatile organic compound.

(a) The value for Aroclor-1254 was used.

(b) The value for cadmium in the diet was used.

(c) The value for trivalent chromium was used.

(d) The value for manganese non-diet was used.

(e) The value for mercuric chloride was used.

(f) The value for endosulfan was used.

(g) The value for endrin was used.

(h) The value for anthracene was used.

(i) The value for 1,4-dichlorobenzene was used.

(j) The value for m-xylene was used.

(k) The value for toluene was used.

Table 4-3
Summary of Groundwater Detections in Permanent Wells, 2012-2016

Analyte	CAS	Frequency of Detection	Range of Detection	Location of Maximum Concentration	Human Health PSL	PSL Source	Quantity Exceeding PSL
Total Metals (ug/L)							
ALUMINUM	7429-90-5	29 / 36	24 - 13,400	FTA-MW-208 (15 - 25 ft)	2000	RSL	2
ANTIMONY	7440-36-0	15 / 36	0.13 - 0.59	FTA-MW-210 (4 - 9 ft)	0.78	RSL	0
ARSENIC	7440-38-2	19 / 36	2.5 - 16	FTA-MW-5 (3 - 8 ft)	0.052	RSL	19
BARIUM	7440-39-3	33 / 36	1.4 - 74.8	FTA-MW-208 (15 - 25 ft)	380	RSL	0
BERYLLIUM	7440-41-7	15 / 36	0.036 - 0.71	FTA-MW-208 (15 - 25 ft)	2.5	RSL	0
CADMIUM	7440-43-9	15 / 36	0.04 - 1.6	FTA-MW-12 (1.5 - 6.5 ft)	0.92 (a)	RSL	2
CALCIUM	7440-70-2	36 / 36	479 - 45,200	FTA-MW-206 (6 - 11 ft)	--	--	--
CHROMIUM VI	18540-29-9	1 / 1	4.8 - 4.8	FTA-MW-208	0.035	RSL	1
CHROMIUM, TOTAL	7440-47-3	21 / 37	1.4 - 26.6	FTA-MW-208 (15 - 25 ft)	100 (b)	MCL	0
COBALT	7440-48-4	35 / 36	0.087 - 9	FTA-MW-208 (15 - 25 ft)	0.6	RSL	21
COPPER	7440-50-8	21 / 36	0.55 - 22.5	FTA-MW-208 (15 - 25 ft)	80	RSL	0
IRON	7439-89-6	32 / 36	9.2 - 16,100	FTA-MW-208 (15 - 25 ft)	1400	RSL	12
LEAD	7439-92-1	27 / 36	0.078 - 12.8	FTA-MW-1 (4 - 14 ft)	15	MCL	0
MAGNESIUM	7439-95-4	36 / 36	412 - 8,780	FTA-MW-206 (6 - 11 ft)	--	EN	--
MANGANESE	7439-96-5	36 / 36	10 - 3,850	FTA-MW-9 (1.5 - 6.5 ft)	43 (c)	RSL	31
MERCURY	7439-97-6	1 / 36	0.017 - 0.017	FTA-MW-10 (1.5 - 6.5 ft)	0.57	RSL	0
NICKEL	7440-02-0	35 / 36	0.46 - 30	FTA-MW-10 (1.5 - 6.5 ft)	39	RSL	0
POTASSIUM	7440-09-7	32 / 36	130 - 3,330	FTA-MW-208 (15 - 25 ft)	--	--	--
SELENIUM	7782-49-2	12 / 36	0.21 - 0.78	FTA-MW-9 (1.5 - 6.5 ft)	10	RSL	0
SILVER	7440-22-4	1 / 36	0.45 - 0.45	FTA-MW-10 (1.5 - 6.5 ft)	9.4	RSL	0
SODIUM	7440-23-5	36 / 36	3,200 - 18,800	FTA-MW-208 (15 - 25 ft)	--	--	--
THALLIUM	7440-28-0	3 / 36	0.05 - 0.14	FTA-MW-14 (1.5 - 6.5 ft)	0.02	RSL	3
VANADIUM	7440-62-2	28 / 36	0.6 - 19.5	FTA-MW-208 (15 - 25 ft)	8.6	RSL	1
ZINC	7440-66-6	24 / 36	1.3 - 46.6	FTA-MW-208 (15 - 25 ft)	600	RSL	0
PFASs (ug/L)							
PFOS	1763-23-1	13 / 27	0.0013 - 0.25	FTA-MW-11 (1.5 - 6.5 ft)	0.04	RSL	5
PFOA	335-67-1	21 / 27	0.0013 - 0.45	FTA-MW-14 (1.5 - 6.5 ft)	0.04	RSL	6
VOCs (ug/L)							
1,1,1-TRICHLOROETHANE	71-55-6	2 / 38	1 - 1.5	FTA-MW-210 (4 - 9 ft)	200	MCL	0
1,1-DICHLOROETHANE	75-34-3	4 / 38	0.8 - 1.5	FTA-MW-210 (4 - 9 ft)	2.8	RSL	0
1,2-DICHLOROETHENE, TOTAL	540-59-0	5 / 12	0.34 - 18	FTA-MW-206 (6 - 11 ft)	3.6 (e)	RSL	1
ACETONE	67-64-1	10 / 38	2.3 - 5.1	FTA-MW-11 (1.5 - 6.5 ft)	1400	RSL	0
CHLOROMETHANE	74-87-3	6 / 38	0.4 - 1.1	FTA-MW-14 (1.5 - 6.5 ft)	19	RSL	0
CIS-1,2-DICHLOROETHENE	156-59-2	13 / 38	0.24 - 26	FTA-MW-206 (6 - 11 ft)	3.6	RSL	4
TETRACHLOROETHENE	127-18-4	4 / 38	0.011 - 0.024	FTA-MW-10 (1.5 - 6.5 ft)	4.1	RSL	0
TOLUENE	108-88-3	1 / 38	0.3 - 0.3	FTA-MW-14 (1.5 - 6.5 ft)	110	RSL	0
TRICHLOROETHENE	79-01-6	4 / 38	6.9 - 10	FTA-MW-206 (6 - 11 ft)	0.28	RSL	4
VINYL CHLORIDE	75-01-4	7 / 26	0.053 - 0.84	FTA-MW-9 (1.5 - 6.5 ft)	0.019	RSL	7
SVOCs (ug/L)							
1,1-BIPHENYL	92-52-4	4 / 24	0.11 - 0.21	FTA-MW-10 (1.5 - 6.5 ft)	0.083	RSL	4
ATRAZINE	1912-24-9	2 / 24	0.055 - 0.07	FTA-MW-9 (1.5 - 6.5 ft)	0.3	RSL	0
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	4 / 24	0.5 - 0.97	FTA-MW-14 (1.5 - 6.5 ft)	5.6	RSL	0
DIBENZOFURAN	132-64-9	2 / 24	0.074 - 0.086	FTA-MW-10 (1.5 - 6.5 ft)	0.79	RSL	0
HEXACHLOROCYCLOPENTADIENE	77-47-4	1 / 24	0.11 - 0.11	FTA-MW-5 (3 - 8 ft)	0.019	VISL	1
NAPHTHALENE	91-20-3	1 / 26	0.081 - 0.081	FTA-MW-9 (1.5 - 6.5 ft)	0.17	RSL	0
PHENANTHRENE	85-01-8	1 / 26	0.14 - 0.14	FTA-MW-5 (3 - 8 ft)	180 (d)	RSL	0
PYRENE	129-00-0	1 / 26	0.069 - 0.069	FTA-MW-5 (3 - 8 ft)	12	RSL	0
TPH (ug/L)							
TPH-C11-C22 AROMATICS	--	2 / 38	49 - 470	FTA-MW-5 (3 - 8 ft)	--	--	--

Notes:
CAS - Chemical Abstracts Service.
ft - feet.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOS = Perfluorooctanesulfonic acid or Perfluorooctane sulfonate
PFOA = Perfluorooctanoic acid.
PSL - Project specific screening level. PSL is the lowest of the following:
(1) USEPA Maximum Contaminant Levels (MCLs) for drinking water. Accessed October 2016.
https://www.epa.gov/ground-water-and-drinking-water/table-regulated-drinking-water-contaminants.
(2) USEPA Regional Screening Level (RSL) for tapwater based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens. Values calculated for PFOA and PFOS using the USEPA RSL Calculator (5/16). Default RSL exposure assumptions were used unless noted otherwise. Target cancer risk of 1x10-6 and a target hazard quotient of 0.1 used to account for cumulative effects on the same target organ. RfD for PFOS and PFOA (2x10-5 mg/kg-day) published in the following documents in May 2016: "Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS)" and "Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA)". [EPA 822-R-16-004] were used.
(3) USEPA Vapor Intrusion Screening Level (VISL) for groundwater based on a residential exposure scenario, a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens (5/16).
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbons.
ug/L - microgram per liter.
VOC - Volatile organic compound.
(a) The value for cadmium in water was used.
(b) The value for trivalent chromium was used.
(c) The value for manganese non-diet was used.
(d) The value for anthracene was used.
(e) The value for cis-1,2-dichloroethene is uesd for 1,2-dichloroethene, total.

Table 4-4: Summary of Surface Water Detections						
Analyte	**Frequency of Detection**	**Range of Detection**	**Location of Maximum Detection**	**Human Health PSL**	**PSL Source**	**Quantity Exceeding PSL**
PCBs (µg/L)						
Aroclor-1254	1 / 6	0.38 - 0.38	FTA-SW-06	0.000035	MEDEP	1
Total PCBs	1 / 6	0.38 - 0.38	FTA-SW-06	0.000035	MEDEP	1
Metals (µg/L)						
Aluminum	11 / 14	44.2 – 1,590	FTA-SW-02	51500	RSL	0
Antimony	5 / 14	0.096 - 0.19	FTA-SW-07	5.5	MEDEP	0
Arsenic	9 / 14	3.3 - 7.9	FTA-SW-06 FTA-SW-07	0.018	NRWQC	9
Barium	14 / 14	0.99 - 20.6	FTA-SW-04	1000	NRWQC	0
Beryllium	1 / 14	0.04 - 0.04	FTA-SW-03	13.9	RSL	0
Cadmium	6 / 14	0.03 - 2.14	FTA-SW-02	13.9	RSL (a)	0
Calcium	14 / 14	4,630 – 87,800	FTA-SW-05	--	--	--
Cobalt	14 / 14	0.49 - 5.29	FTA-SW-06	15.9	RSL	0
Copper	12 / 14	1.3 - 9.42	FTA-SW-02	1300	NRWQC/MEDEP	0
Iron	14 / 14	291 – 6,480	FTA-SW-06	36100	RSL	0
Lead	8 / 14	0.07 - 2.1	FTA-SW-03	15	(b)	0
Magnesium	14 / 14	1,360 – 7,340	FTA-SW-05	--	--	--
Manganese	14 / 14	28.3 – 1,190	FTA-SW-04	50	NRWQC	11
Nickel	12 / 14	0.93 - 8.09	FTA-SW-02	400	MEDEP	0
Potassium	14 / 14	810 – 4,180	FTA-SW-06			
Silver	3 / 14	0.07 - 0.11	FTA-SW-04	158	RSL	0
Selenium	5 / 14	0.35 - 0.82	FTA-SW-01	162	MEDEP	0
Sodium	14 / 14	2,730 – 6,540	FTA-SW-06	--	--	--
Thallium	1 / 14	0.32 - 0.32	FTA-SW-02	0.17	MEDEP	1
Zinc	9 / 14	2.2 - 23	FTA-SW-04	6000	MEDEP	0
SVOCs (µg/L)						
1,1-Biphenyl	1 / 14	0.082 - 0.082	FTA-SW-06	42	RSL	0
1,2,4,5-Tetrachlorobenzene	1 / 14	0.11 - 0.11	FTA-SW-06	0.03	NRWQC	1
2,4,6-Trichlorophenol	1 / 14	0.22 - 0.22	FTA-SW-06	1.5	NRWQC	0
Atrazine	2 / 14	0.047 - 0.06	FTA-SW-06	10.7	RSL	0
Benzo(a)anthracene	1 / 14	0.065 - 0.065	FTA-SW-06	0.0012	NRWQC	1
Benzo(a)pyrene	1 / 14	0.076 - 0.076	FTA-SW-06	0.00012	NRWQC	1
Benzo(k)fluoranthene	1 / 14	0.052 - 0.052	FTA-SW-06	0.003	MEDEP	1
Bis(2-chloroethyl)ether	1 / 14	0.044 - 0.044	FTA-SW-06	0.029	MEDEP	1
Dibenzofuran	1 / 14	0.087 - 0.087	FTA-SW-06	6.13	RSL	0
Indeno(1,2,3-cd)pyrene	4 / 14	0.12 - 0.16	FTA-SW-06	0.0012	NRWQC	4
Naphthalene	1 / 14	0.1 - 0.1	FTA-SW-06	273	RSL	0
Phenanthrene	1 / 14	0.095 - 0.095	FTA-SW-06	300	NRWQC	0
VOCs (µg/L)						
Acetone	6 / 14	2.3 - 9.3	FTA-SW-06	47300	RSL	0
Toluene	5 / 14	0.35 - 5.1	FTA-SW-07	57	NRWQC	0

Notes:

PCB - Polychlorinated biphenyl.

PSL - Project specific screening level. Lowest of the following:

- USEPA National Recommended Water Quality Criteria for Priority Pollutants (NRWQC). Value for Human Health for the consumption of water and organisms.
- MEDEP Surface Water Quality Criteria for human health consumption of water and organisms. 2012.
- Risk-based screening levels for surface water calculated using the USEPA Regional Screening Level (RSL) Calculator (May 2016) for a recreator adult/child scenario, based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens,

SVOC - Semivolatile organic compound.

ug/L - microgram per liter.

VOC - Volatile organic compound.

(a) Value for cadmium in water.

(b) USEPA Action Level for lead in water. http://water.epa.gov/drink/contaminants/index.cfm.

Table 4-5
Summary of Sediment Detections

Analyte	Frequency of Detection	Range of Detection	Location of Maximum Detection	Human Health PSL	Quantity Exceeding PSL
PCBs (mg/kg)					
Aroclor-1260	15 / 16	0.028 - 2.1	FTA-SED-04 (0 - 0.5 ft)	0.777	5
Total PCBs	15 / 16	0.028 - 2.1	FTA-SED-04 (0 - 0.5 ft)	0.84 (a)	5
Metals (mg/kg)					
Aluminum	16 / 16	4,690 – 20,400	FTA-SED-04 (0 - 0.5 ft)	35,100	0
Antimony	16 / 16	0.086 - 0.73	FTA-SED-06 (0 - 0.5 ft)	14	0
Arsenic	16 / 16	1.6 - 19	FTA-SED-04 (0 - 0.5 ft)	2.65	15
Barium	16 / 16	15.2 - 89.1	FTA-SED-06 (0 - 0.5 ft)	7,020	0
Beryllium	16 / 16	0.24 - 0.84	FTA-SED-07 (0 - 0.5 ft)	70.2	0
Cadmium	16 / 16	0.061 - 0.673	FTA-SED-07 (0 - 0.5 ft)	32.1 (b)	0
Calcium	16 / 16	1,510 – 33,700	FTA-SED-06 (0 - 0.5 ft)	—	—
Chromium, total	17 / 17	11.3 - 33.7	FTA-SED-07 (0 - 0.5 ft)	52600 (c)	0
Cobalt	16 / 16	3.56 - 19	FTA-SED-04 (0 - 0.5 ft)	10.5	3
Copper	16 / 16	5.59 - 108	FTA-SED-06 (0 - 0.5 ft)	1,400	0
Iron	16 / 16	8,100 – 25,600	FTA-SED-04 (0 - 0.5 ft)	24,600	1
Lead	16 / 16	5.2 - 25.6	FTA-SED-04 (0 - 0.5 ft)	400	0
Magnesium	16 / 16	2,570 – 7,580	FTA-SED-07 (0 - 0.5 ft)	—	—
Manganese	16 / 16	116 - 714	FTA-SED-04 (0 - 0.5 ft)	842 (d)	0
Mercury	16 / 16	0.01 - 0.32	FTA-SED-06 (0 - 0.5 ft)	10.5 (e)	0
Nickel	16 / 16	7.55 - 34.5	FTA-SED-04 (0 - 0.5 ft)	702	0
Potassium	16 / 16	372 – 2,500	FTA-SED-07 (0 - 0.5 ft)	—	—
Selenium	8 / 16	0.33 - 5.5	FTA-SED-07 (0 - 0.5 ft)	175	0
Silver	14 / 16	0.06 - 2.34	FTA-SED-05 (0 - 0.5 ft)	175	0
Sodium	16 / 16	44.4 - 284	FTA-SED-05 (0 - 0.5 ft)	—	—
Thallium	15 / 16	0.06 - 0.3	FTA-SED-03 (0 - 0.5 ft)	0.351	0
Vanadium	16 / 16	14.5 - 46.2	FTA-SED-04 (0 - 0.5 ft)	177	0
Zinc	16 / 16	25.7 - 198	FTA-SED-06 (0 - 0.5 ft)	10,500	0
Pesticides (mg/kg)					
4,4-DDD	6 / 16	0.0016 - 0.043	FTA-SED-04 (0 - 0.5 ft)	8.07	0
4,4-DDE	7 / 16	0.00086 - 0.0061	FTA-SED-08 (0 - 0.5 ft)	9.18	0
4,4-DDT	7 / 16	0.0031 - 0.043	FTA-SED-04 (0 - 0.5 ft)	7.75	0
Dieldrin	2 / 16	0.0071 - 0.0078	FTA-SED-06 (0 - 0.5 ft)	0.121	0
Endrin ketone	10 / 16	0.014 - 0.29	FTA-SED-04 (0 - 0.5 ft)	8.51	0
Endosulfan I	1 / 16	0.00073 - 0.00073	FTA-SED-04 (0 - 0.5 ft)	211 (f)	0
Endosulfan II	1 / 16	0.013 - 0.013	FTA-SED-05 (0 - 0.5 ft)	211 (f)	0
Endosulfan Sulfate	2 / 16	0.007 - 0.035	FTA-SED-06 (0 - 0.5 ft)	211 (f)	0
Endrin Aldehyde	1 / 16	0.0072 - 0.0072	FTA-SED-03 (0 - 0.5 ft)	8.51 (g)	0
Endrin Ketone	10 / 16	0.014 - 0.29	FTA-SED-04 (0 - 0.5 ft)	8.51 (g)	0
SVOCs (mg/kg)					
1,1-Biphenyl	2 / 16	0.0089 - 0.013	FTA-SED-06 (0 - 0.5 ft)	390	0
1,4-Dioxane	1 / 16	0.013 - 0.013	FTA-SED-06 (0 - 0.5 ft)	31.2	0
2,3,4,6-tetrachlorophenol	5 / 16	0.006 - 0.045	FTA-SED-05 (0 - 0.5 ft)	851	0
2,4,6-trichlorophenol	5 / 16	0.0079 - 0.02	FTA-SED-05 (0 - 0.5 ft) FTA-SED-01 (0 - 0.5 ft) FTA-SED-02 (0 - 0.5 ft)	28.4	0
2,4-Dichlorophenol	1 / 16	0.0055 - 0.0055	FTA-SED-07 (0 - 0.5 ft)	85.1	0
2,4-Dinitrotoluene	3 / 16	0.018 - 0.15	FTA-SED-04 (0 - 0.5 ft)	6.2	0
2-methylnaphthalene	5 / 16	0.022 - 0.33	FTA-SED-04 (0 - 0.5 ft)	107	0
3- and 4-Methylphenol	4 / 16	0.029 - 0.35	FTA-SED-06 (0 - 0.5 ft)	8510 (k)	0
Acenaphthene	12 / 16	0.0028 - 1.5	FTA-SED-01 (0 - 0.5 ft)	1,610	0
Anthracene	8 / 16	0.0049 - 1.7	FTA-SED-01 (0 - 0.5 ft)	8,050	0
Atrazine	1 / 16	0.0059 - 0.0059	FTA-SED-07 (0 - 0.5 ft)	8.42	0
Benzo(a)anthracene	14 / 16	0.0078 - 3.6	FTA-SED-01 (0 - 0.5 ft)	0.618	1
Benzo(a)pyrene	15 / 16	0.0072 - 2.4	FTA-SED-01 (0 - 0.5 ft)	0.0618	8
Benzo(b)fluoranthene	13 / 16	0.013 - 3.2	FTA-SED-01 (0 - 0.5 ft)	0.618	1
Benzo(g,h,i)perylene	6 / 16	0.017 - 1.2	FTA-SED-01 (0 - 0.5 ft)	805 (h)	0

Table 4-5 Summary of Sediment Detections					
Analyte	**Frequency of Detection**	**Range of Detection**	**Location of Maximum Detection**	**Human Health PSL**	**Quantity Exceeding PSL**
Benzo(k)fluoranthene	7 / 16	0.011 - 1.4	FTA-SED-01 (0 - 0.5 ft)	6.18	0
Bis(2-ethylhexyl)phthalate	5 / 16	0.48 - 2.9	FTA-SED-05 (0 - 0.5 ft)	138	0
Butylbenzylphthalate	1 / 16	0.059 - 0.059	FTA-SED-07 (0 - 0.5 ft)	1,020	0
Carbazole	1 / 16	1.2 - 1.2	FTA-SED-01 (0 - 0.5 ft)	1,070	0
Chrysene	9 / 16	0.0045 - 3.2	FTA-SED-01 (0 - 0.5 ft)	61.8	0
Dibenz(a,h)anthracene	7 / 16	0.0058 - 0.51	FTA-SED-01 (0 - 0.5 ft)	0.0618	1
Dibenzofuran	1 / 16	0.79 - 0.79	FTA-SED-01 (0 - 0.5 ft)	32.8	0
Di-N-butylphthalate	1 / 16	0.11 - 0.11	FTA-SED-07 (0 - 0.5 ft)	2,840	0
Fluoranthene	6 / 16	0.28 - 7.3	FTA-SED-01 (0 - 0.5 ft)	1070 (i)	0
Fluorene	6 / 16	0.026 - 1.3	FTA-SED-01 (0 - 0.5 ft)	1,070	0
Hexachloroethane	1 / 16	0.015 - 0.015	FTA-SED-06 (0 - 0.5 ft)	24.6	0
Indeno(1,2,3-cd)pyrene	13 / 16	0.012 - 2.4	FTA-SED-01 (0 - 0.5 ft)	0.618	1
Naphthalene	7 / 16	0.0066 - 0.57	FTA-SED-01 (0 - 0.5 ft)	536	0
Pentachlorophenol	2 / 16	0.028 - 0.078	FTA-SED-05 (0 - 0.5 ft)	3.08	0
Phenanthrene	10 / 16	0.012 - 7	FTA-SED-01 (0 - 0.5 ft)	8050 (j)	0
Pyrene	9 / 16	0.13 - 5.1	FTA-SED-01 (0 - 0.5 ft)	805	0
VOCs (mg/kg)					
Acetone	14 / 16	0.026 - 3	FTA-SED-05 (0 - 0.5 ft)	31,600	0
Cis-1,2-Dichloroethene	1 / 16	0.006 - 0.006	FTA-SED-07 (0 - 0.5 ft)	70.2	0
Ethylbenzene	3 / 16	0.00093 - 0.011	FTA-SED-05 (0 - 0.5 ft)	284	0
Isopropylbenzene	3 / 16	0.0016 - 0.0039	FTA-SED-04 (0 - 0.5 ft)	3,510	0
Methyl Cyclohexane	1 / 16	0.0028 - 0.0028	FTA-SED-04 (0 - 0.5 ft)	2810 (l)	0
Toluene	14 / 16	0.0029 - 0.31	FTA-SED-05 (0 - 0.5 ft)	2,810	0

Notes:
mg/kg - milligrams per kilogram.
PCB - Polychlorinated biphenyl.
PSL - Project specific screening level. Calculated using the USEPA Regional Screening Level (RSL) Calculator (May 2016) for a recreator adult/child scenario, based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens
SVOC - Semivolatile organic compound.
VOC - Volatile organic compound.
(a) The value for Aroclor 1254 was used.
(b) The value for cadmium in the diet was used.
(c) The value for trivalent chromium was used.
(d) The value for manganese non-diet was used.
(e) The value for mercuric chloride was used.
(f) The value for endosulfan was used.
(g) The value for endrin was used.
(h) The value for pyrene was used.
(i) The value for fluorene was used.
(j) The value for anthracene was used.
(k) The value for phenol was used for 3- and 4-methylphenol.
(l) The value for toluene was used for methylcyclohexane.

APPENDIX A

PREVIOUS INVESTIGATIONS AND HISTORICAL REFERENCE FIGURES

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1.0 FTA – 1991 Site Investigation (HMM 1994)

The Site 1 FTA was initially investigated in 1991 as part of a Site Inspection (SI), which included field radiation screening, a geophysical survey, soil borings, and the installation of four monitoring wells. The details of the SI results can be referenced in the 1994 SI Report (HMM 1994). A soil gas survey was initially proposed; however, it was determined that the groundwater table was too shallow to obtain accurate data.

The results of field radiation screening indicated radiation levels were generally comparable to background and below established action levels. The geophysical survey indicated the presence of two anomalies. Anomaly A indicated presence of contrasting subsurface materials (potentially fill), while anomaly B coincided with the approximate location of an oil stain.

Soil samples were collected from nine borings advanced to 10 feet (ft) below the water table. Based on field screening and visual inspection, select soil samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), target analyte list (TAL) metals and total petroleum hydrocarbons (TPH).

Monitoring wells were installed in seven of the nine borings and groundwater samples were analyzed for the same analyte list as the soil samples.

TPH was detected in soil samples at concentrations between 12 and 120,000 parts per million (ppm). Methylene chloride was detected at a concentration of 14 ppm in one soil sample (SB-2). However, methylene chloride was detected in the laboratory blank, and appears the analyte is not indigenous to the site. The soil sample taken at MW-3A contained ethylbenzene at 0.05 ppm and total xylenes at 0.24 ppm. MW-3A also had aluminum at a concentration of 13,600 ppm. The soil samples collected at MW-3A had concentrations of SVOCs as high as 85,000 ppm.

Groundwater samples were collected at four monitoring wells: MW-1, MW-2A, MW-3A and MW-4A. There were detectable concentrations of TPH found in MW-2A (4.8 ppm), MW-3A (110 ppm, duplicate sample from MW-3A) and MW-4A (1.1 ppm). Monitoring well MW-3A had detectable concentrations of VOCs of 64 ppm. There were no detectable concentrations of PCBs in any of the groundwater samples. There were concentrations found at MW-3A in groundwater for SVOCs at concentrations as high as 100 ppm for naphthalene. The 1991 soil boring and well locations are illustrated on **Figure A-1**.

2.0 FTA – 1999 Investigation: Direct-Push Installation/Sampling and Test Pit Excavation (EA 2002)

In May 1999, 14 direct-push points (DP-2, DP-4 through DP-16) were installed and groundwater samples were collected at each location. No soil samples were submitted for laboratory analysis.

Each groundwater sample was analyzed for VOCs, SVOCs, gasoline range organics (GRO) and diesel range organics (DRO).

The analytical results for all but six samples contained a middleweight petroleum distillate(s) that was severely weathered. The four exceptions (DP-5-49, DP-6-38, DP-12-32, DP-15-16, and DP-16-17) exhibited no evidence of petroleum contamination. Vinyl chloride was detected at a level above the established MCL of 2 µg/L at DP-7 (3 µg/L) at a depth of 6 ft. There were other VOC detections at each soil boring; however, the concentrations were below the applicable MCLs. Naphthalene was detected in samples DP-7, DP-10, DP-11 and DP-14 at a depth of 6 ft. No other SVOCs were detected at each sample location. The 1999 soil boring and well locations are illustrated on **Figure A-2**.

During EA Engineering, Science, and Technology, Inc.'s (EA) 1999 investigation, 32 test pits were excavated in addition to the direct-push point samples taken at the FTA. The tests pits were generally 5 to 7 ft deep, with a few other test pits several ft deeper. Soils were screened in the field for vapor headspace using a photoionization detector (PID). Screening results with the PID ranged from 0 to 435 ppm, with the highest detection from the southwest corner of the FTA. No samples were submitted for laboratory analysis. The 1999 test pit excavation areas are illustrated on **Figure A-3**.

3.0 FTA – 1999 Contaminated Soil Excavation (Foster Wheeler 2001)

During October 1999, 4,700 tons of visually-impacted soils were excavated by Foster Wheeler as part of site restoration activities. The excavation was initiated at the center of the visually-impacted soil and was expanded using visual and flame-ionization detector screening. The 1999 soil excavation area is illustrated on **Figure A-2**. Foster Wheeler excavated approximately 0.25 acres of soil to approximately 4 ft below the ground surface to where groundwater was encountered.

Twenty-six confirmatory soil samples, including 18 sidewall and eight bottom samples, were collected on the perimeter and bottom of the excavation area. The confirmatory samples were analyzed for VOCs, SVOCs, TPH-GRO, TPH-DRO, and lead. The analytical results indicate that residual petroleum-contaminated soils remain above MEDEP action levels. The results range from values between 1,110 to 25,000 ppm. There were no exceedances for VOCs, SVOCs, or metals.

4.0 FTA – 2001 Remedial Investigation (EA 2002)

In August 2001, 14 shallow well points (DP-17, DP-18, DP-20 through DP-24 and DP-26 through DP-32) were installed by direct-push drilling methods at the FTA to further characterize the site. No soil samples were sent to a lab for analysis. Within the direct-push samples, groundwater samples were collected from well points DP-28 through DP-32 and each groundwater sample was analyzed for VOCs, vinyl chloride, GRO and DRO. Notable results of the direct-push groundwater sampling include vinyl chloride detections from well points DP-28, DP-29, DP-30 and DP-32 at concentrations

ranging from 2 to 26 µg/L which equals or exceeds the established MCL limit of 2 µg/L. Additionally, three chlorinated VOCs, 1,1-dichlororethene, cis-1,2-dichloroethene and tetrachloroethene (PCE), were detected at well points DP-28, DP-29, DP-30, and DP-31 at concentrations ranging from 0.6 to 20 µg/L. However, the concentrations were below the established MCLs. No other VOCs were detected in the direct-push groundwater samples. GRO was detected only at DP-30, at a concentration of 93 ppm, above the MEDEP Stringent Cleanup Goal of 50 ppm. DRO was detected from well points DP-17 and DP-26 through DP-32 at concentrations ranging from 64 to 1,800 ppm, above the MEDEP Stringent Cleanup Goal of 50 ppm.

An additional four surface soil samples were collected adjacent to the perimeter of the Foster Wheeler excavation (SSS-1 through SSS-4) and analyzed for dioxins. Toxicity Equivalent (TEQ) values of the dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) for these four samples ranged from 1.07 nanograms per kilogram (ng/kg) at SSS-3 to 3.49 ng/kg at SSS-4. The TEQ was derived from assigning individual toxicity equivalency factors to the chlorinated dibenzodioxin and chlorinated dibenzofurans congeners. The dioxin 2,3,7,8-TCDD is assigned a toxicity equivalency factor of 1.0. All other congeners have lower toxicity equivalency factors ranging from 0.5 to 0.001 ng/kg.

In October 2001, 12 monitoring wells (MW-5 through MW-14, MW-16 and MW-17) were installed at the FTA. Each one of these monitoring well locations was based upon the analytical results of the August 2001 direct-push groundwater samples. The wells were installed hydraulically downgradient of the FTA, focusing on the areas of elevated groundwater contamination concentrations. The 12 monitoring wells were sampled and the groundwater was analyzed for VOCs including vinyl chloride, SVOCs, TAL metals, PCBs, GRO, and DRO. Vinyl chloride was detected in samples collected from monitoring wells MW-7, MW-8, MW-9, MW-10, and MW-14 at concentrations ranging from 0.2 to 2 ppm, above the established MCL. No other VOCs were detected within the samples. Three SVOCs were detected in samples collected at MW-6 and MW-7, ranging in concentrations from 8 to 41 µg/L. No other SVOCs were detected. GRO was detected in samples collected at MW-5, MW-6, MW-7 and MW-10 at concentrations ranging from 57 to 310 ppm whereas DRO were detected in samples collected from MW-5 through MW-14, and MW-17 ranging in concentrations from 62 to 2,600 ppm. Arsenic was detected at MW-6, MW-7 and MW-10 at concentrations ranging between 15 and 23.8 ppm. Aluminum was detected in MW-17 at a concentration of 6,600 ppm, 10 times higher than the next highest aluminum concentrations. No other TAL metals were detected in the monitoring well locations.

An additional six subsurface soil samples (BSS-01 through BSS-06) were collected at the FTA during the October 2001 sampling event. Soil samples BSS-01 through BSS-3 were collected from visibly oil-stained surface soils southwest of the Foster Wheeler excavation in 1999. The additional three soil samples (BSS-04 through BSS-06), were collected as background samples. The location of these soil samples are illustrated on **Figure A-2**.

Additionally, the five monitoring wells that were installed in 1994 were abandoned during the 2001 field investigation. These wells include MW-2, MW-2A, MW-3, MW-3A and MW-4A.

5.0 FTA – 2002 Field Investigation (EA 2003)

In May 2002, 25 direct-push soil borings were installed to assess the current conditions and the nature and extent of the petroleum contamination surrounding the 1999 remedial excavation area and if the FTA was serving as a source for the vinyl chloride detections in groundwater samples previously collected downgradient from the FTA. The total depth of each boring was between 7 and 9 ft below ground surface (bgs). A total of 13 of the 25 soil samples were submitted for VOC analysis. All 25 soil samples collected at FTA in May 2002 were analyzed for both GRO and DRO.

Two chlorinated VOCs (PCE and trichloroethene [TCE]) were detected in soil sample FTA-SS-18-3-5 at concentrations of 0.0009 to 0.22 ppm, respectively. GRO was detected in 17 of the 25 samples (and one duplicate) in concentrations exceeding the MEDEP Stringent Cleanup Goal of 5 ppm. The GRO concentrations ranged from 8.9 at FTA-SS-20-3-5 to 1,300 ppm at FTA-SS-18-3-5. DRO was detected in 22 of the 25 samples at concentrations exceeding the MEDEP Stringent Cleanup Goal of 10 ppm. The DRO concentrations ranged from 55 ppm at FTA-SS-20-3-5 to 21,000 ppm at FTA-SS-18-3-5. The location of these soil samples are illustrated on **Figure A-2**.

6.0 FTA – 2003 Field Investigation (EA 2004)

In November 2003, an additional field investigation was conducted at the FTA which included:

- Installation of 27 direct-push soil borings and the collection of 59 soil samples for analyses
- Installation and groundwater sampling of 11 shallow direct-push wells (DP-33 through DP-40 and DP-44 through DP-46)
- Installation of three intermediate-depth direct-push wells (DP-41 through DP-43)
- Installation of one deep permanent monitoring well (MW-18)

A total of 59 direct-push soil samples were analyzed for DRO/GRO. A subset of eight soil samples were selected from depths exhibiting visual staining and additionally analyzed for VOCs.

Direct-push monitoring wells were installed in the shallow groundwater table to further delineate the extent of the shallow groundwater contamination. The three intermediate depth (DP-41 through DP-43) direct-push monitoring wells were installed for assessment of GRO/DRO groundwater contamination at the clay interface observed at well MW-6. Additionally, one deep permanent monitoring well was installed to assess DRO/GRO contamination at that depth. A total of 29 groundwater samples were collected from the 14 newly installed direct-push wells, the 14 existing permanent wells and the newly installed deep monitoring well. Each well location was sampled for GRO/DRO and VOCs. Twelve samples of groundwater from the direct-push wells were

also analyzed for vinyl chloride. The locations of these soil samples, monitoring wells and previous activities are illustrated on **Figure A-2**.

Within the eight of the 59 soil samples analyzed for VOCs, vinyl chloride was not detected. Vinyl chloride was detected at 51 of the 59 soil samples. PCE was also detected at SS-30-3-5, SS-51-2-3 and SS-52-5-6 at concentrations below the screening criteria of MEDEP Remedial Action Guidelines.

GRO was detected at soil sample locations SS-26, SS-30 through SS-33, SS-36 through SS-38, SS-42, SS-45 through SS-47 and SS-49 through SS-52 at concentrations ranging from 6.8 ppm to 1,800 ppm. DRO was detected in soil samples collected from SS-26, SS-28, SS-30 through SS-39, SS-42 through SS-47, SS-51 and SS-52 at concentrations ranging from 11 ppm to 52,000 ppm.

Vinyl chloride was detected at six groundwater sample locations (DP-37, DP-38, DP-43, MW-4, MW-7, MW-9, and MW-10) at concentrations ranging from 0.3 to 3 µg/L, with the highest concentrations found at MW-4 and MW-9. Five chlorinated VOCs were detected, but were below the MEDEP Maximum Exposure Guidelines and Federal MCL screening criteria. TCE was detected at DP-37 at a concentration of 2 µg/L. Additionally, GRO was detected at 10 groundwater sample locations (DP-37, DP-41, DP-42, DP-43, DP-46, MW-5, MW-6, MW-7, MW-10, and MW-13) at concentrations ranging from 68 to 660 ppm. DRO was detected in groundwater samples collected from DP-33, DP-37 through DP-46, MW-1, MW-5 through MW-14 and MW-18 ranging in concentrations from 53 to 3,200 ppm.

7.0 FTA – 2004 Wetland Excavation and Restoration (Tetra Tech 2005)

In 2004, Tetra Tech was contracted by the Department of the Navy, Engineering Field Activity, Northeast to perform a remedial action at the FTA site, including excavation activities and wetland restoration. Based upon the previous Remedial Investigations and site history, hydrocarbon-impacted soils were deposited into the wetland adjacent to the FTA. Previous investigations performed by EA in 2002 and 2003 concluded that the area north of the former FTA was impacted by petroleum-contaminated soils. This area was designated as the Sand Wedge Excavation Area. The location of the Sand Wedge Excavation Area is illustrated on **Figure A-4**.

In August 2004, Tetra Tech performed a visual delineation of the horizontal and vertical limits of the fill to be removed from the Sand Wedge Excavation Area, by collecting 4-to-6-ft-long geoprobe cores. Each geoprobe core was analyzed for DRO and visually examined to determine the depth of the native material and other soil characteristics.

Tetra Tech excavated approximately 4,332 tons of DRO-contaminated soils (classified non-hazardous waste) and miscellaneous debris from the Sand Wedge Excavation Area. The area of the excavation was approximately 18,841 square ft in size. After the soil was removed, the wetland was

restored by placing a layer of organic enriched soil and seeding with a wetland plant mix and planting native saplings and other plants.

8.0 FTA – 2006 Soil Removal and Thermal Treatment (UNITEC 2009)

Starting in August 2006, Universe Technologies, Inc. (UNITEC) conducted Part 1 of a non-time critical removal action (NTCRA) to remove impacted soil at the FTA with TPH concentrations greater than the 400 milligrams per kilogram (mg/kg). The limits of the NTCRA excavation boundaries were initially flagged and marked based upon the Maine East Coordinate Grid line system. The areas to be excavated were then established and broken into four quadrants (Quadrants I through IV), beginning in the northwest corner and continuing in a clockwise direction. UNITEC conducted the NTCRA in Quadrants I and II. UNITEC excavated approximately 10,088 tons (7,760 cubic yards [CY]) of TPH impacted soils associated with the previous firefighting activities. The NTCRA was conducted it the central area of the FTA and the TPH contaminated soil was treated in an on-site thermal asphalt batch plant (ABP).

After the thermal treatment was initiated, it was determined that the ABP was not able to treat the soils to below the cleanup goal for the 2006 removal action nor was it able to achieve the air emission standards for VOCs. Excavation and treatment activities ceased until 2008 when UNITEC returned to the site and completed the excavation and landfilled the contaminated soil (**Section 11.0**). The location of the UNITEC excavation area is illustrated on **Figure A-4**.

During the NTCRA excavation activities, a buried drum was discovered to the south of the excavation area. The drum was removed in 2006, but subsequent investigations at the site including a geophysical study and test pitting identified additional surficial debris to the east of the excavation area and additional buried drums located south of the excavation area. This area was addressed separately as AOC 31, DDA until it was renamed as Site 5, DDA in 2006. In 2012, the DDA was re-incorporated back into the FTA and Site 5 was designated for no further action. Activities associated with the DDA are described in **Sections 14.0** through **21.0**.

9.0 FTA – 2008 Soil Removal and Thermal Treatment (UNITEC 2009)

As described previously, in 2006, the proposed ABP thermal treatment of the soil in 2006 was unsuccessful and the remediation approach was changed from thermal treatment with an ABP to off-site transport and disposal. In July 2008, UNITEC excavated an additional 9,412 tons (approximately 7,240 CY) of TPH-contaminated soils and disposed of both the previously stockpiled soil from the August 2006 NTCRA and the 2008 contaminated soils.

In accordance with the project work plan, excavated soils were segregated into 1,500 CY stockpiles for sampling/waste characterization for landfill acceptance. Ten (10) soil samples were collected for disposal characterization and analyzed for toxicity characteristic leaching procedure (TCLP) metals, TCLP VOCs and TCLP SVOCs. Based on the analytical results, the soils were characterized as

non-hazardous and disposed of at Juniper Ridge Landfill. The location of the UNITEC excavation area is illustrated on **Figure A-4**.

10.0 FTA – 2007 Tetra Tech Drum Discovery Investigation (Tetra Tech 2009)

On October 27, 2007, one soil boring was advanced at a buried drum location at the FTA where stained soil was observed during 2006 excavation activities. From this boring, one soil sample (A32-SO-SB01-0002) was collected and analyzed for the presence of VOCs, SVOCs, PCBs, TAL metals, DRO, and GRO. The soil sample was collected from within 2 ft of the ground surface after removal of the top four inches of soil. The soil boring was advanced to a total depth of 15 ft bgs and completed as a monitoring well. The monitoring well was subsequently sampled on June 19, 2008 for VOCs, SVOCs, polycyclic aromatic hydrocarbons (PAHs), TAL metals, DRO, and GRO.

In soil, project action levels (PALs) were not exceeded for VOCs, SVOCs, PCBs, and GRO. Aluminum, arsenic, chromium, cobalt, iron, manganese, thallium, and vanadium were detected at concentrations that exceeded soil PALs at that time. Additionally, DRO was detected at a concentration (48 mg/kg) above the soil MEDEP Stringent Criterion for DRO of 10 mg/kg.

The groundwater MEDEP Stringent Criterion of 50 µg/L for DRO was also exceeded in this monitoring well (57 µg/L). Total arsenic and manganese were detected at concentrations that exceeded groundwater PALs at that time. PALs were not exceeded for VOCs, SVOCs, PAHs, and GRO. The location of this soil boring is illustrated on **Figure A-5**.

11.0 FTA – 2009 Soil Removal (Tetra Tech 2009)

In May 2009, Tetra Tech conducted Part 2 of a NTCRA at the former FTA site. This work involved additional soil removal at the southwestern portion of the site and the berms separating previously excavated Quadrants I through IV (**Figure A-4**). Tetra Tech conducted this soil removal due to the previous contractor reaching their contractual limit of soil excavation volume. Tetra Tech excavated approximately 10,364 tons of soil. During the 2009 soil removal action at the FTA, an area in the central portion of the site was created as wetlands to supplement the wetland area to the north (known as the Sand Wedge Excavation Area) as well as to provide additional habitat for wildlife.

Five waste characterization samples were collected from the soil stockpile and were analyzed for TCLP VOCs, TCLP SVOCs, and TCLP metals. Based on the analytical results, the soils were characterized as non-hazardous and disposed of at Casella Pinetree Landfill, located in Hamden, Maine.

12.0 FTA – 2012 Supplemental Remedial Investigation (Tetra Tech 2013)

In late 2012, a Supplemental Remedial Investigation was conducted at the Former FTA by Tetra Tech. The objectives of this investigation were to assess the current concentrations in soil,

groundwater, surface water and sediment in areas that surrounded the previous excavations. Due to the PCBs found within the vicinity of the DDA, PCBs were added to the list of analytes to further delineate the extent of PCB contamination.

Soil borings were completed in late October to early November 2012 and five new groundwater monitoring wells (MW-203, MW-206, MW-208, MW-210 and MW-218), one stream gauge and one piezometer (P-4) were installed at the site. Five new and seven existing groundwater monitoring wells were developed and sampled. Eight additional surface water and sediment samples were collected from areas throughout the enhanced wetland.

A total of 26 soil borings were advanced using either direct-push technology or hand drilling techniques around the wetlands. The locations of these soil and groundwater samples are illustrated on **Figure A-6**.

Soil samples were analyzed for VOCs, SVOCs, PCBs pesticides, and metals. Groundwater samples were analyzed for VOCs, SVOCs, PCBs, PFCs (per- and polyfluoroalkyl substances [PFAS]), volatile petroleum hydrocarbons (VPH), extractable petroleum hydrocarbons (EPH), and metals. Surface water and sediment samples were analyzed for VOCs, SVOCs, VPH, EPH, and metals. In addition, sediment samples were also analyzed for PCBs and pesticides.

The analytical data were compared to the project screening levels (PSLs), which represented the lowest applicable human health and ecological-risk based screening levels.

The following analytes were detected at concentrations that exceed the PALs for this investigation:

- *Soil:* VOC (vinyl chloride), PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, indeno[1,2,3-cd]pyrene, and pyrene), pesticides (as 4,4-dichlorodiphenyltrichloroethane [DDT], endrin ketone), PCBs (PCB Aroclor-1254 and 1260), and metals
- *Groundwater:* VOCs (cis-1,2-dichloroethene, TCE, vinyl chloride), SVOCs (1,1-biphenyl), metals, and PFAS. EPH was detected as C11-C22 aromatics
- *Surface Water:* PAH (indeno[1,2,3-cd]pyrene) and metals
- *Sediment:* VOCs (acetone), SVOCs (2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-dinitrophenol, 2-methylnaphthalene, acenaphthene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, indeno[1,2,3-cd)pyrene, naphthalene, pentachlorophenol, phenanthrene, and pyrene), pesticides (4,41-DDT,

4,4'-dichlorodiphenyldichloroethylene [DDE], 4,4'-dichlorodiphenyldichloroethane [DDD] and endrin ketone), PCBs (PCB Aroclor-1260) and metals

13.0 FTA – 2014 Field Sampling Investigation (Tetra Tech 2014)

In June 2014, Tetra Tech performed an investigation of the FTA, consisting of groundwater, surface and subsurface soil, surface water and sediment sampling. Soil samples were analyzed for VOCs, SVOCs, VPH, PCBs, pesticides, and metals. Groundwater samples were analyzed for VOCs, SVOCs, PCBs, perfluorooctanesulfonic acid (also known as perfluorooctane sulfonate) (PFOS)/perfluorooctanoic acid (PFOA), VPH, EPH, and metals. Surface water and sediment samples were analyzed for VOCs, SVOCs, TPH, PCBs, and metals. The locations of these soil and groundwater samples are illustrated on **Figure A-7**.

The following analytes were detected at concentrations that exceed the PALs for this investigation:

- *Soil:* PAHs (benzo(a)pyrene), pesticides (4,4-DDT, dieldrin, endrin aldehyde, endrin ketone and methylchlor epoxide), PCBs (as PCB Aroclor- 1260), and metals
- *Groundwater:* VOCs (cis-1,2-dichloroethene, TCE, vinyl chloride), SVOCs (as 1,1-biphenyl), total and dissolved metals, and PFOS and PFOA. TPH was detected as C11-C22 aromatics
- *Surface Water:* PAH as indeno(1,2,3-cd)pyrene and metals
- *Sediment:* VOCs (acetone), SVOCs (bis[2-ethyhexyl]Phthalate, chrysene, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene), pesticides (4,41-DDT, 4,4'-DDE, 4,4'-DDD, endosulfan sulfate, endrin aldehyde, endrin ketone and dieldrin), PCBs (PCB Aroclor-1260), PAHs (2,4,6-trichlorophenol, 2,4-dinitrotoluene, acenaphthene, benzo(a)pyrene, benzo(a)anthracene, indeno[1,2,3-cd]pyrene and pentachlorophenol), and metals

14.0 DDA – Site Discovery (Tetra Tech 2007)

As described in **Section 7.0**, debris and one drum were uncovered during the 2006 NTCRA. The buried drum was encountered outside of the Site 1 NTCRA soil removal area. The drum and soils surrounding the drum were removed by Clean Harbor Environmental Services in 2006 and transported to their Rumery Road oil recovery facility in South Portland, Maine.

A sample of the material collected in 2006 from the drum contained DRO at a concentration of 46,000 mg/kg. VOCs, SVOCs, and PAHs were not detected in this sample. Metals were detected below hazardous levels according to TCLP results. The sample was not analyzed for the presence of PCBs (Tetra Tech 2007).

A limited removal, referred to as the Eastern DDA Removal Action, was performed in the summer of 2006 during which one crushed drum and impacted soil adjacent to the drum, were excavated by

hand and containerized into 55-gallon drums. In total, seven 55-gallon drums and three 85-gallon over-pack drums containing soil and the crushed drum were removed from the site and transported to the Clean Harbors Rumery Road oil recovery facility in South Portland, Maine.

15.0 DDA – 2007 Preliminary Site Assessment (Tetra Tech 2008)

The DDA was investigated as part of a 2007 PSA and recommendations included excavation and removal of buried drums present in the immediate vicinity of the existing drum removal area, removal of impacted soil, and collection and analysis of soil samples for VOCs and DRO to verify that all of the impacted soil is removed from the AOC. A surface geophysical survey was also recommended to identify subsurface anomalies that might indicate the presence of additional buried containers (Tetra Tech 2007).

16.0 DDA – 2007 Site Investigation (Tetra Tech 2009)

As recommended from the 2007 PSA, geophysical surveys were conducted at the DDA and test pits were excavated between 2007 and 2009. Two geophysical anomalies were identified during the geophysical surveys: one area, identified as the northern asphalt debris area, was an area to the northwest of the FTA excavation, and is not within the DDA boundary. The second anomaly, referred to as the Western DDA Anomaly, was located south of the FTA and east of the drum described above that was discovered in 2006. Due to site access and equipment limitations, only EM-31 was utilized to conduct surveys in the extreme southern portion of the survey area. It was suggested that the EM-31 methodology might have been impacted by interference from grounding wires located in the southwestern portion of the survey area and anomaly areas could not be investigated.

On October 26, 2007, four soil borings were advanced to depths of 7 to 15 ft bgs in the vicinity of the 2006 eastern DDA removal (**Figure A-8**). A total of eight soil samples (two from each boring) were collected from these soil borings, and all samples were analyzed for VOCs, SVOCs, DRO and GRO. Soil borings SB01 and SB03 were advanced until refusal (7 and 9.5 ft bgs, respectively), whereas SB02 and SB04 were advanced to 10 and 15 ft bgs, respectively. Each of these soil borings were utilized as a temporary monitoring well from which groundwater samples were collected. All groundwater samples were analyzed for VOCs, DRO, and GRO.

Soil: VOCs, SVOCs, and GRO were not detected above the MEDEP Stringent Criteria. The MEDEP Stringent Criteria for DRO (10 mg/kg) was exceeded in three of the eight soil samples, all of which were collected from the 0 to 2 ft depth.

Groundwater: PALs for groundwater were exceeded by only two VOCs (1,4-dichlorobenzene and TCE) and in all four samples analyzed for DRO. PALs for GRO were not exceeded.

17.0 DDA – 2009 Western DDA Drum Removal (Shaw 2012)

In July–September 2009, Shaw conducted Part 3 of a NTCRA at the Western DDA Anomaly to remove remaining petroleum-impacted soils, drums, and debris resulting from the historical use of waste fuel oil to conduct firefighting training activities. A total of 34 drums were excavated from the anomaly area. The approximate limits of the excavation are illustrated on **Figure A-8**.

Samples collected from the stockpiled, excavated soils, were analyzed for PCBs. PCBs were detected at concentrations of 91.4 mg/kg, which exceeded Toxic Substances Control Act (TSCA)-regulated levels (> 50 mg/kg), which triggered a requirement to dispose of the material as TSCA-regulated waste. Additionally, TPH DRO/GRO were analyzed at eight confirmation sample locations (bottom and sidewall composite samples) and the results shown that the site remedial goal of 400 ppm had been achieved and that no additional excavation was required to address petroleum. A total of 1,127 tons of petroleum contaminated soil were transported and disposed off-site as hazardous waste. Confirmation samples that were collected from the excavation indicated that the extent of DRO-contaminated soils had been delineated; however, elevated levels of PCBs remained in the site soils. Upon completion of all removal activities, the site was restored by backfilling with appropriate fill and grading to act as a wetland to match the surrounding terrain. All disturbed areas were subsequently seeded and planted to compliment the surrounding area.

At the time of Shaw's mobilization, the open excavation resulting from prior remedial activities at the site was completely filled with groundwater. The resulting pond covered approximately 1.8 acres and was up to 9 ft deep. Dewatering was performed to allow backfilling and restoration activities. Samples collected from the ponded water in the open excavation exhibited low levels of petroleum contamination. However, these concentrations were low enough to be compatible with remedial goals and therefore allow discharge within site boundaries. An on-site water treatment system was constructed to dewater the pond.

The water treatment system consisted of two parallel treatment trains which reduced turbidity and treated for petroleum contamination. The system had a total operating capacity of 500 gpm, but was normally operated at approximately 250 gpm. Treated water was discharged to a location south of the site. A total of 1.8 million gallons of water was treated by the system.

18.0 DDA – Removal Site Evaluation (Tetra Tech 2011)

In 2010, the DDA was elevated from an AOC to an Installation Restoration Site by MEDEP. In an effort to delineate the extent of PCB-contaminated soils at the DDA, a soil investigation was implemented in August 2010. A grid of soil borings was used to refine the horizontal and vertical extent of remaining soils with PCBs at concentrations exceeding 1.0 mg/kg. The sampling grid extended beyond the footprint of the 2009 excavation in the directions of highest detected contaminant levels. The previous excavation samples collected along the southern grid line were

below 1.0 mg/kg, therefore, soil sampling activities focused on the areas to the north, west, and east of the excavation area. A higher density of samples was planned along the western side of the grid pattern since the highest concentrations of PCBs were previously detected in the northwest quadrant of the former excavation. Sample density and sample depths were refined in the field based on real-time analysis of screening results to optimize the use of resources. Field screening utilized the Dexsil™ L-2000 method, which provided real-time screening PCB measurements.

This field effort included the advancement of 44 soil borings at both pre-selected and field-selected grid locations, field-screening of soil samples and laboratory analysis of a select group of samples for PCBs. Results obtained from the 2010 field investigation were reported in the Removal Site Evaluation (RSE) Report (Tetra Tech 2011a). The RSE recommended additional soil borings in the northwestern and southwestern quadrants to further assess the lateral extent of elevated PCBs in soil to the west and southwest. Furthermore, elevated field screening results from soil samples collected from the southeast area of the sampling grid did not correlate well with laboratory results, suggesting a potential source of chloride other than PCBs. Additional soil investigation was recommended in the southeast quadrant to further delineate the nature and extent of elevated screening levels measured in soil. No further assessment was recommended to delineate the extent of PCBs in soil in the northeast or southeast quadrants of the DDA (Tetra Tech 2011a). Soil boring locations are illustrated on **Figure A-8**.

In comments on the RSE (February 24, 2011), MEDEP requested additional assessment northeast of DDA-NE-6D and DDA-NE-5D. The Navy responded (June 10, 2011–Tetra Tech 2011b) and agreed to advance additional borings in the northeastern quadrant.

19.0 DDA – PCB Soil Investigation (Tetra Tech 2012a)

The July 2011 field investigation utilized the same sampling grid that had been used during the 2010 investigation, with the center of the grid located in the approximate center of the former drum removal area. The grid was extended beyond the 2010 area to cover areas that required further investigation as recommended by Tetra Tech (2011a) and MEDEP (2011). A total of 27 borings were pre-selected as step-out locations for the 2011 investigation, and 14 additional boring locations were selected during the field investigation based on the results of soil sample field screening data.

The highest concentration was detected in a southwest quadrant surface soil sample (0 to 2 ft bgs) from soil boring DDA-SW-3N (260 mg/kg). Concentrations of PCBs detected in off-site laboratory samples collected from remaining borings advanced in the southwest quadrant were below 1.0 mg/kg with the exception of the surface soil sample collected from DDA-SW-2I (1.11 mg/kg). The second highest PCB concentration was detected in the surface soil sample collected from soil boring DDA-NE-7D (68.1 mg/kg). PCB concentrations exceeding 1.0 mg/kg were detected in the

surface soil samples collected from soil boring DDA-NE-10D (7.4 and 10.6 mg/kg [blind duplicate]) located approximately 30 ft to the north of DDA-NE-7D, in the surface soil sample collected from soil boring DDA-NE-7I (2.24 mg/kg) located approximately 50 ft to the east of NE-7D, in the surface soil sample from DDA-NE-3E (2.67 mg/kg) and in the surface soil sample DDA-E-1E (3.45 mg/kg). Soil boring locations are illustrated on **Figure A-8**.

20.0 DDA – Test Pit Investigation (Tetra Tech 2012b)

In May 2012, a geophysical survey of the DDA area was conducted using EM-31 and EM-61 instrumentation after the area was cleared of vegetation. Four EM geophysical anomalies (Anomalies 1 through 4) were identified south of the FTA excavation. Six test pits were excavated in late August 2012 to assess the four geophysical anomalies discovered in May 2012. Drums were identified in three test pit locations (TP-1A and TP-1B, TP-2 and TP-4) and a drum top was identified in one excavation (TP- 3). **Figure A-8** presents the relation of the test pits and the anomalies. Details of the identified drums are as follows:

- Two drums were discovered in TP-1A; one drum was punctured during the excavation and contained an oily material. None of the contents were released to the environment, and PCBs were not detected in the sample collected from the crushed drum. A fingerprint analysis indicated that the drum contents were similar to motor oil. Plastic sheeting was placed inside the punctured drum and the drum was wrapped in plastic sheeting prior to being covered with the excavated soil and left in place until removal activities could occur as described hereafter.
- Two drums were discovered in TP-1B.
- Three drums were discovered in TP-2, and these drums were located beneath the previous excavation area conducted in November 2009.
- Two drums and one crushed drum were discovered in TP-4.

Identified drums were left in place and excavated soils were used to cover the drums prior to completing the investigation. In addition, five surface soil and two subsurface soil samples were collected from the test pits and two surface trenches. VOC and SVOC concentrations did not exceed PSLs in subsurface or surface soil samples with the exception of one surface soil sample (FTATP1BS- 0.501). Five oil-related parameters and SVOCs were detected above their respective PSLs in the surface soil sample collected from TP-1B. PCBs and metals exceeded their respective PSLs in surface soil samples collected from test pits TP-1A, TP-1B and the two trenches. PCBs and metals concentrations exceeded PSLs in subsurface soil samples collected from test pits TP-2 and TP-4. Concentrations of EPH exceeded PSLs in the subsurface soil samples collected from test pit TP-2. Pesticides exceeded their respective PSLs in each of the surface soil samples and one of the subsurface soil samples collected from test pit TP-2 (**Figure A-8**).

21.0 DDA – 2012 Time Critical Removal Action (Tetra Tech 2012c)

A Time Critical Removal Action was performed in November 2012 to remove the contents of the drum that was punctured during test pit activities in August 2012. Additional investigation activities in the DDA were completed in late 2012 to characterize contaminants in soil, groundwater, surface water and sediments emanating from the DDA (**Figure A-8**). This investigation included:

- *Soil borings:* Installation and sampling of soil borings in and around the DDA to evaluate the nature and extent of contaminants from the DDA. Samples were analyzed for VOCs, SVOCs, PCBs, pH, TAL metals and pesticides at several locations.
- *Groundwater:* Installation and sampling of monitoring wells and piezometer to evaluate migration of contaminants from the DDA to groundwater, and to evaluate groundwater elevations. Samples were analyzed for VOCs, VPH, EPH, SVOCs, total and dissolved metals and PCBs.
- *Surface Water/Sediment:* Samples collected in the enhanced wetland downgradient of the DDA to evaluate migration of contaminants from the DDA. Surface water samples were analyzed for VOCs, VPH/EPH, SVOCs and total and dissolved metals. Sediment samples were analyzed for VOCs, SVOC, PCBs, pesticides, total organic carbon, pH, metals and VPH/EPH.

22.0 FTA – 2013 Removal Action (AGVIQ 2015)

The objective of the removal action performed by AGVIQ was to remove the buried drums and associated soil from three areas and the removal of the PCB-contaminated soil from two areas within the former DDA portion of the FTA. The location of the AGVIQ removal activities is illustrated on **Figure A-9**.

The removal of 35 buried 55-gallon drums was performed in August and September 2013. The drum removal activities were performed at Anomalies 1, 2 and 4. During drum removal operations, efforts were made to keep intact drums whole and any liquids contained in the drum were removed and containerized in overpack containers. There were a total of 25 intact drums removed from Anomaly 1. During the excavation at Anomaly 1, an additional 10 drum carcasses were removed and placed in a roll-off container for offsite disposal as TSCA waste. Anomaly 2 contained 10 intact drums that were removed and one drum carcass that was placed in the roll-off container for disposal.

Intact drums were not found in Anomaly 4; however, four drum carcasses and scrap metal were excavated and placed in a roll-off container.

PCB-contaminated soil was excavated from two areas (PCB Area 1 and PCB Area 2) to a depth of 2 ft. Confirmation soil samples were collected to verify that the PCBs removal action goals were

met. The confirmation sampling began on September 18, 2013. The PCB concentrations were less than the 100 mg/kg cleanup level in PCB Area 2 and the eastern side of PCB Area 1. The PCB concentration was greater than the cleanup levels at six locations on the western region of PCB Area 1. One ft of soil was excavated from the areas where the PCB concentrations had exceeded the action level and then resampled for PCBs. A review of the soil sample analytical results showed that the PCB concentrations at three locations exceeded the PCB cleanup level. Due to funding limitations, further excavation was discontinued and the portion of the excavation containing PCBs greater than the cleanup level was marked with plastic sheeting. A cumulative total of 202 CY of excavated material were managed and disposed of as waste.

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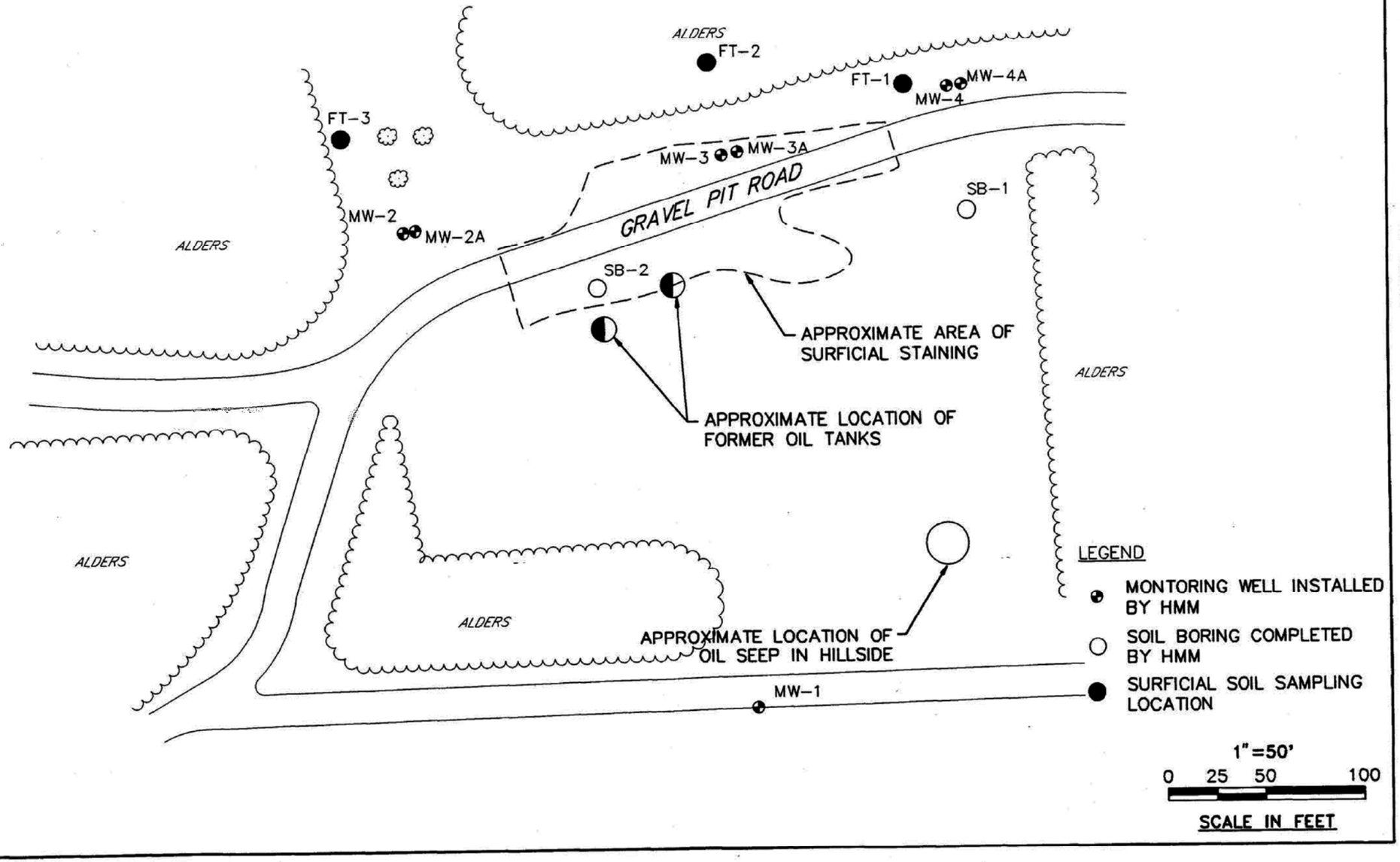


FIGURE 20
MONITORING WELL, SOIL BORING, AND SURFICIAL SOIL SAMPLING LOCATIONS
NCTS CUTLER

HMM Associates, Inc.
A Stantec Company

Drawn:	AC 07/17/2017
Approved:	TC 07/17/2017
Project #:	60282029

Approximate Map Location

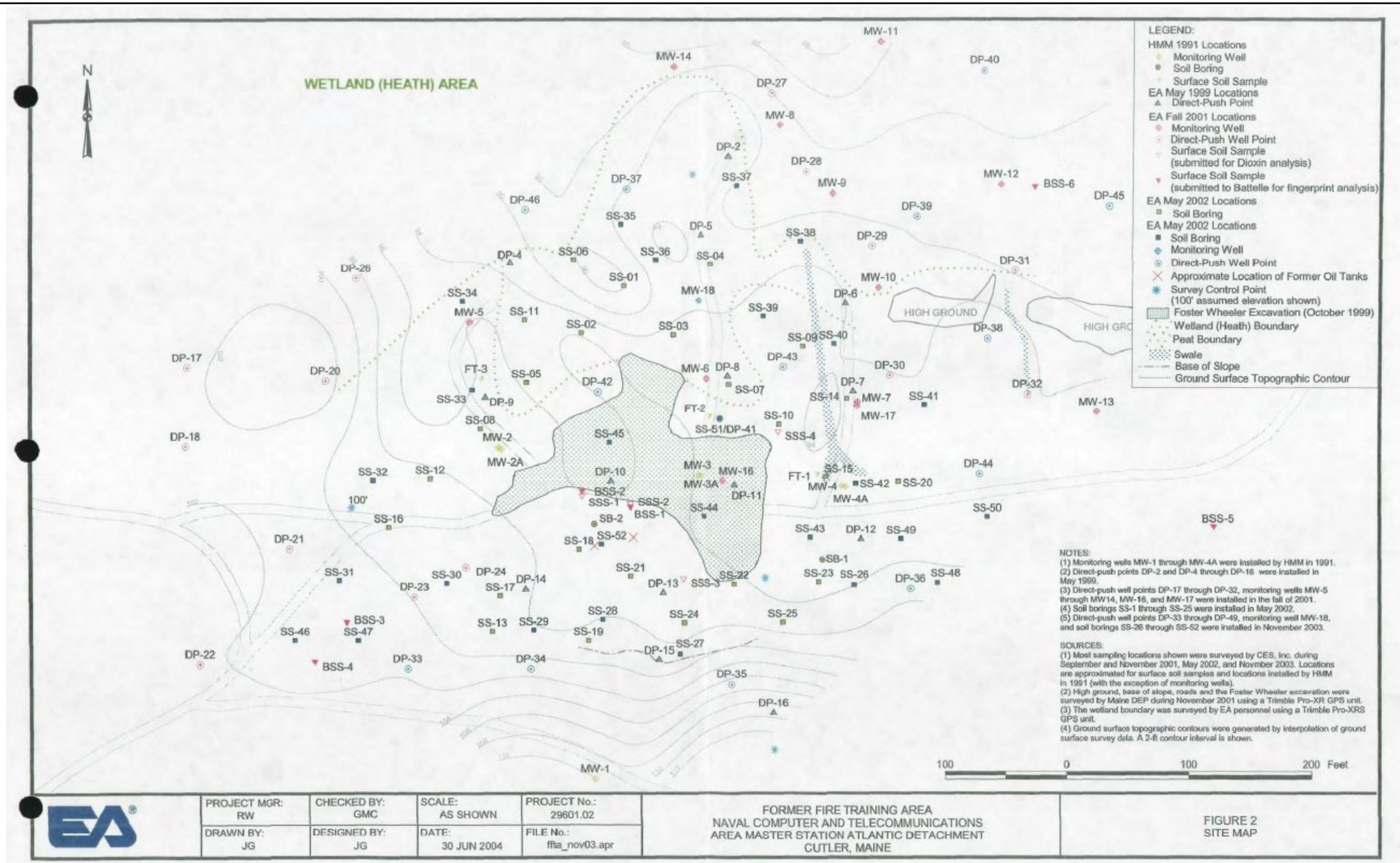
N

Scale: See Map

Figure A-1
Site Investigation, HMM Associates, Inc. 1994
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\FTA_RI\Figure 3-1_Site Investigation.mxd

Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\FTA_RI\October 2016 Updates\Figure A-2 Soil Borings.mxd



NAVFAC

Drawn: AC 07/17/2017

Approved: TC 07/17/2017

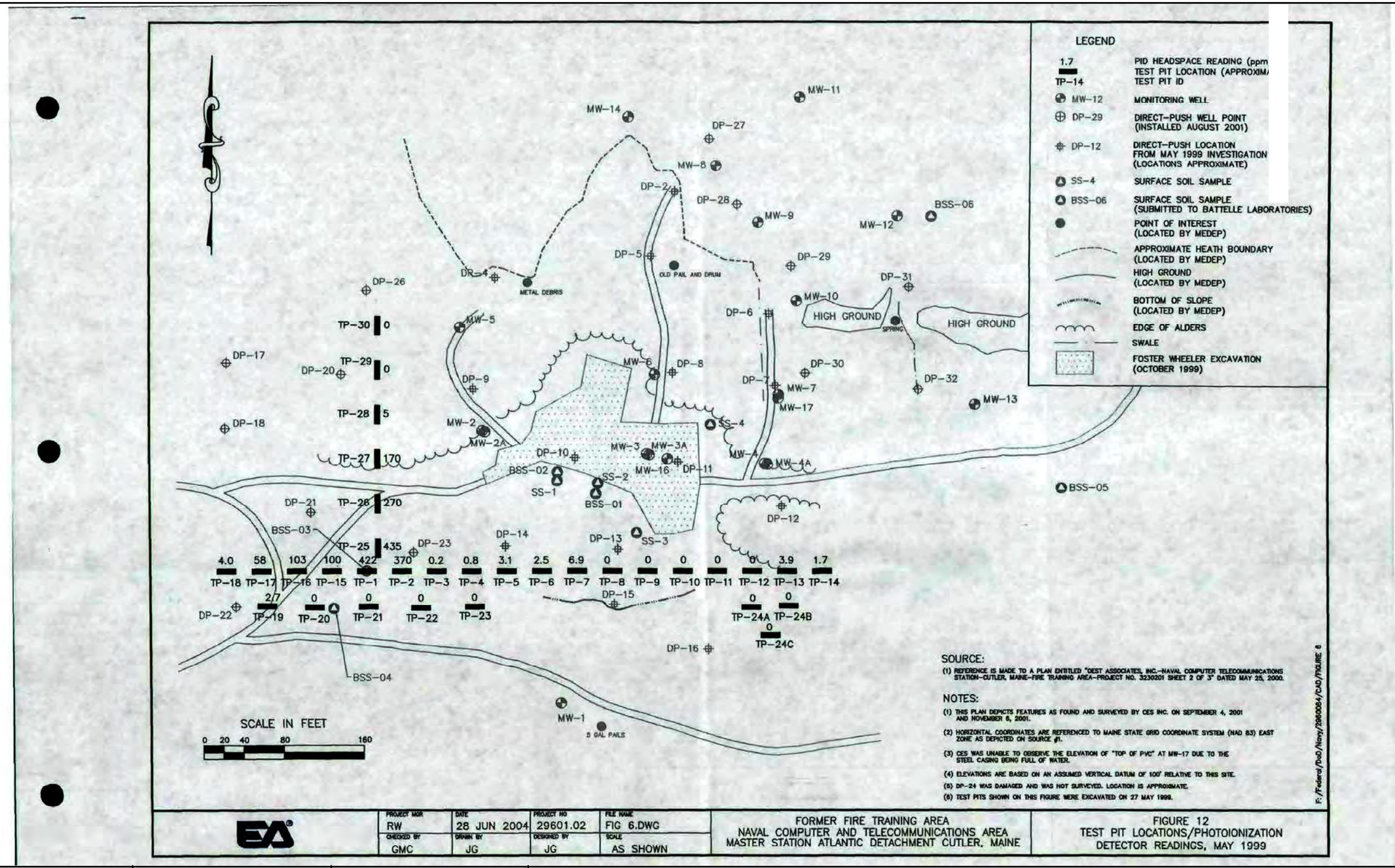
Project #: 60282029

Approximate Map Location

N

Scale: See Map

Figure A-2
Soil Boring Locations RI Report, Tetra Tech 1999-2003
Site 1, Fire Training
Area Remedial Investigation
NCTAMS LANT Det
Cutler, Maine



NAVFAC

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Approved:	TC	07/17/2017
Project #:	60282029	

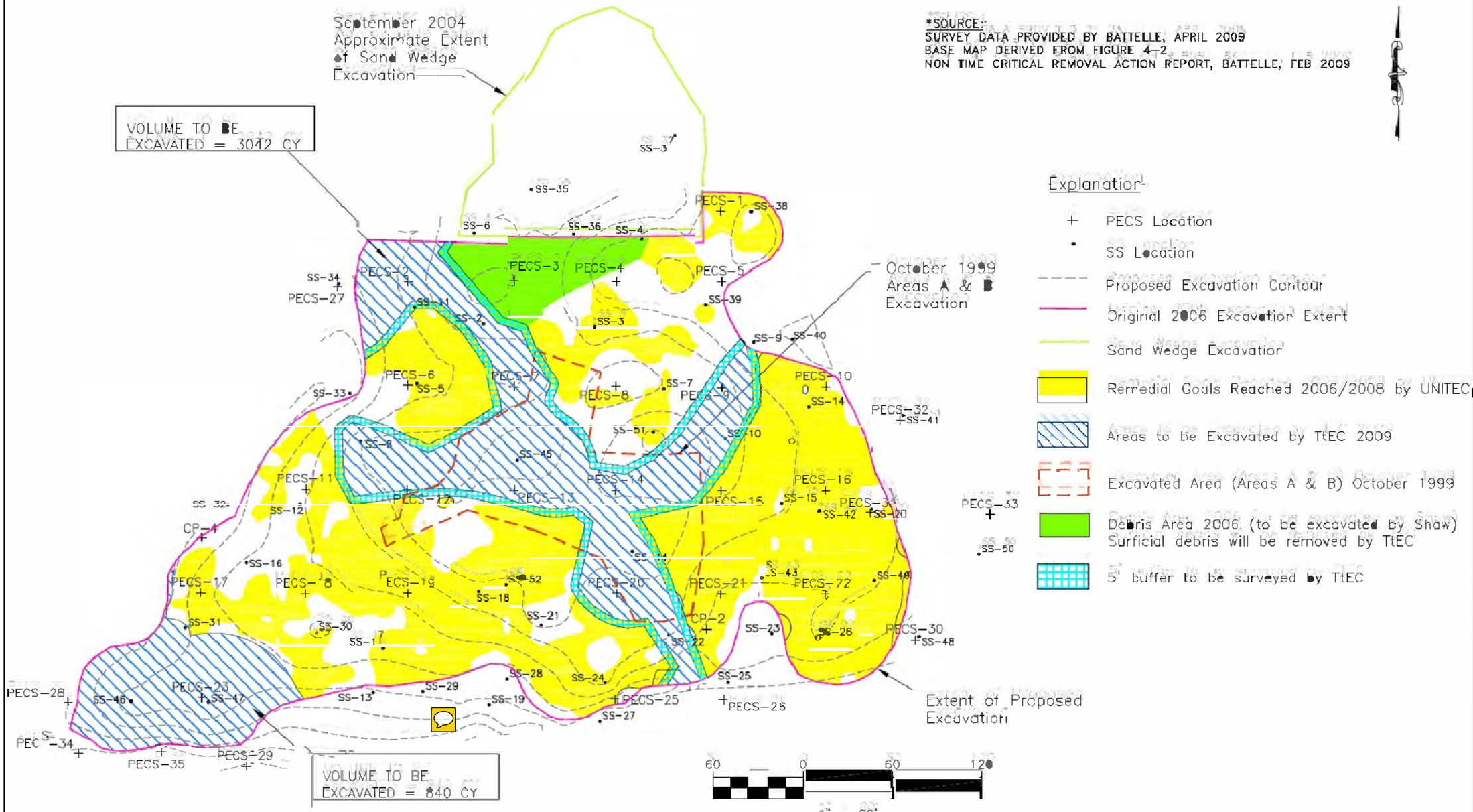
Approximate Map Location

N

Scale: See Map

Figure A-3
Test Pit Locations, EA 1999
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\FTA_RI\October 2016 Updates\Figure A-3 Test Pit Locaitons.mxd



Source: Tetra Tech. Final Completion Report For Excavation At Former Fire Fighting Training Area, Naval Computer And Telecommunications Area Master Station, Atlantic Detachment, Cutler, Maine. July 2009.

N

Scale: See Map

Figure A-4
Final Completion Report
Tetra Tech 2009
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Approximate Map Location

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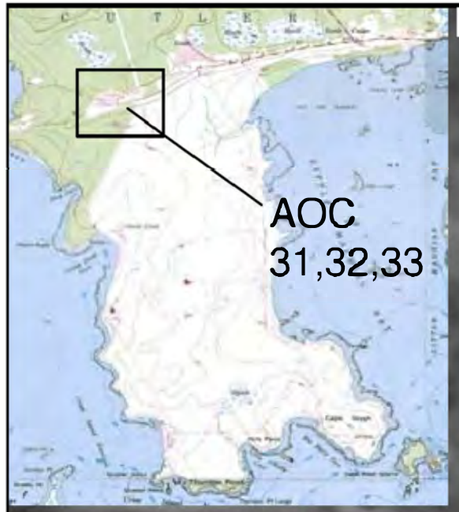
Project #:	60282029	

Source: Tetra Tech. Final Results/Recommendations for Areas of Concern (AOC) Site Inspection Naval Computer and Telecommunications Area Master Station Atlantic (NCTAMSLANT) Cutler, Maine. May 2009.



AOC 33 - OIL AND GREASE DISPOSAL AREA

A32-SB01	
METALS (MG/KG)	
ALUMINUM	18850
ARSENIC	7.8
CHROMIUM	26.3 J
COBALT	5.7
IRON	27200
MANGANESE	379
THALLIUM	1.055 J
VANADIUM	50.7 J
PETROLEUM HYDROCARBONS (MG/KG)	
DIESEL RANGE ORGANICS	45 J

AOC 32 - OLD FTA ACCESS ROAD

A33-SB02
A33-SB01
A33-SB04
A33-SB03
A31-SB02
A31-SB04
A31-SB01
A31-SB03
A32-SBMW01

RIDGE ROAD

LEGEND
- A31-SB01 SOIL BORING LOCATION
- A31-SB01 SOIL BORING/MONITORING WELL LOCATION

J = ESTIMATED

0 100 250 500 1000

Scale in Feet

AOC 31 - FTA DRUM DISPOSAL AREA

N

Scale: See Map

Figure A-5
Final Results/Recommendations for AOC Site Inspection, Tetra Tech 2009
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Approximate Map Location

NAVFAC

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60282029	

Source: Tetra Tech. Final Supplemental Remedial Investigation Summary for Fire Training Area Installation Site 1, NCTAMS, Cutler, ME. October 2013.

Legend

- Soil Sample Location (August 2012)
- Soil Sample (Shaw, 2009)
- Drums (Observed 05/12)
- Asphalt Pile (Observed 05/12)
- Surficial Soil Sample Location (EA, 2002)
- Surficial Soil Sample Location (Battelle, 2002)
- Pre-Excavation Confirmation Soil Sample, 2005 (Battelle, 2006)
- Proposed Soil Boring (EPH/VPH carbon chain analysis only)
- Piezometer Location (November 2012)
- Soil Boring Location (November 2012)
- Monitoring Well Location (November 2012)
- Staff Gauge Location (November 2012)
- Surface Water/Sediment Location (November 2012)
- 2002 Soil Boring Locations (EA, 2004)
- 2002 Soil Boring Locations (EA, 2004)
- 2003 Soil Boring Locations (Excavated) (EA, 2004)
- 2003 Soil Boring Locations (EA, 2004)
- Pre-Excavation Confirmation Soil Sample (Excavated), 2005 (Battelle, 2006)
- PCB Investigative Sample Locations, Drum Disposal Area 2009 Excavation Activities (Shaw, 2010)
- Visible Metal Debris At Ground Surface (Approximate) Geophysical Survey, 2007 (Tt, May 2008) Removed by Shaw in 2009 (Shaw, 2010)
- Approximate Location Of Former Oil Tanks (HMM, 1992)
- Drum Disposal Area Soil Sample, 2010/2011 (Tt, 2011)
- AOC31 Soil Boring/Groundwater Location, 2007 (Tt, 2009)
- Surficial Soil Sampling Location By HMM (1991) (Approximate)
- Soil Boring Completed By HMM (1991) (Approximate)
- Monitoring Well Installed in 1991 by HMM Associates
- Monitoring Well Installed in 1991 by HMM Associates
- Direct Push Sampling Location Advanced in 1999 by EA Engineering
- Monitoring Well Installed in 2001 by EAAssociates
- Monitoring Well Installed in 2001 by EAAssociates
- Direct Push Sampling Location Advanced in 2001 by EA Associates
- Direct Push Sampling Location Advanced in 2001 by EA Associates
- Monitoring Well Location Installed in 2003 by EA Engineering
- Monitoring Well Location Installed in 2003 by EA Engineering
- Direct Push Sample Location Installed in 2003 by EA Engineering
- Direct Push Sample Location Installed in 2003 by EA Engineering
- Piezometer Location Installed in 2009 by Shaw Group
- Piezometer Location Installed in 2009 by Shaw Group
- Recovery Well
- Existing Well To Be Sampled
- Observed Borders (05/12)
- Grounding Grid Wires
- Tree Line
- Approximate Extent Of 1999 Soil Excavation (Foster Wheeler, 2001)
- Approximate Extent Of 2009 Drum Disposal Area Excavation (Shaw, 2010)
- Stone Rip-Rap
- Completed 2007 Geophysical Survey Area (Tt, May 2008)
- General Location Of EM Anomaly - Geophysical Survey, 2007 (Possible Buried Metal Location) (Tt, May 2008)
- Area Of Stained Soil - Geophysical Survey, 2007 (Tt, May 2008)
- Location of Buried Metal Debris - Removed During Fall 2008 Investigation (Tt, Sept. 2008)
- Approximate Location Of Oil Seep In Hillside (HMM, 1992)
- Site 5 Drum Area (DDA Drum Locations GPS'd by MEDEP, 2006)
- Approximate Area Of Surficial Staining (HMM, 1992)
- September 2004 Approximate Extent of Sand Wedge Excavation (aka Restored Wetland Area)
- Approximate Extent of 2006-2009 Excavation UNITEC, 2008/TtEC, 2009/Shaw, 2010)
- Test Pit Location (August 2012)
- Site 1 Boundary
- Created Wetland Area, 2009 (Shaw, 2010)
- Surface Debris Area (Observed 05/12)
- Approximate Location Where Silt-Clay Layer Is At Least 15-Feet Below Ground Surface
- Approximate Geophysical Survey Area 2012
- Northern Asphalt and Debris Area 2009 Excavation (Shaw, 2010)

* - Location to be determined based on field observations

May 2012 Geophysical Survey Results
EXPLANATION
EM61 Metal Detector Readings
Differential Metallic Response in Millivolts

- -2000 mv to -30 mv
- -30 mv to 30 mv
- 30 mv to 60 mv
- 60 mv to 120 mv
- 120 mv to 240 mv
- 240 mv to 12000 mv

N

Scale: See Map

Figure A-6
Final Remedial Investigation Summary,
Tetra Tech 2013
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Approximate Map Location

NAVFAC

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Approved:	TC	07/17/2017
Project #:	60282029	

FTA-SB-200
FTA-MW-11
FTA-SB-303
FTA-MW-14
FTA-SW-08
FTA-SED-08
OU01-DP-02
FTA-SB-302
FTA-MW-12
FTA-SB-201
FTA-MW-9
FTA-SB-219
FTA-SB-301
OU01-DP-05
FTA-SED-07
FTA-SW-07
OU01-DP-04
FTA-SED-06
FTA-SW-06
OU01-DP-06
FTA-MW-10
FTA-MW-5
FTA-SB-305
FTA-SB-202
FTA-MW-218
FTA-SB-218
FTA-SED-05
OU01-DP-08
FTA-SW-05
OU01-DP-07
FTA-MW-203
FTA-SB-203
FTA-SB-217
FTA-SB-300
OU01-DP-09
FTA-SB-304
FTA-SED-04
OU01-DP-10
OU01-DP-11
FTA-SW-03
FTA-SED-03
FTA-SW-04
OU01-DP-12
FTA-SS-23
FTA-SS-25
FTA-SB-204
OU01-DP-16
FTA-SB-214

Legend

Sampled Media

- Groundwater/Soil Boring
- Sediment/Surface Water
- Groundwater
- Soil Boring
- Approximate Soil Confirmation Samples (AGVIQ 2015)
- Approximate Extent of 2009 Drum Disposal Area Excavation (Shaw 2010)
- Approximate Extent of 2006-2009 Excavation (UNITEC 2008; Tetra Tech 2009; Shaw 2010)
- September 2004 Approximate Extent of Sand Wedge Excavation (a.k.a. Restored Wetland Area)
- Approximate Boundary of Site

NAVFAC

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60285299	

Map Location

N

0 50 100

Feet

Figure A-7
FTA Sample Locations
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

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Source: Tetra Tech. Final Supplemental Remedial Investigation Summary for Fire Training Area Installation Site 1, NCTAMS, Cutler, ME. October 2013.

SB-215
Rock Wall
SB-209
SB/MW-206
SB-214 & P4
SB-212
SB/MW-210
Extent of 2009 Drum Area Stockpile
Drum 1 and Pipe
SB-211
Drum Seep Sample
A31-SB04
TP-2
FTA-TP2-2.503
Anomaly 2
Drums (2)
Asphalt Pile
Anomaly 3
TP-3
Anomaly 4
MW-01
SB-213
TP-10
TP-9
FTA-TP1A-DRUMOIL
FTA-TP1BN-000.5 TP-1B
Anomaly 1
TP-1A
FTA-TP1A-011.5
Punctured Drum (1, removed 11/6/12)
Drum (2)
FTA-TP1BS-0.501
TP-1C
FTA-TRENCH01-0002
FTA-TRENCH02-0002
Boulder Pile
Trench 1
Trench 2
Surface Debris Area
Drums 2 and 3
TP-4
Drums (3)
FTA-TP4-0103
SB-220
North-South Ridge
Ridge Bottom
East Slope
Ridge Top
TP-8
TP-6
TP-7
SB/MW-208
A31-SB01
A31-SB02
A31-SB03

0 10 20 40 Feet

Legend

- Piezometer Location (November 2012)
- Monitoring Well Location (November 2012)
- Soil Boring Location (November 2012)
- Shaw Test Pits
- Soil Sample Location (August 2012)
- Trenches (Sheen observed at this location by MEDEP, June 2012)
- Test Pit Location (August 2012)
- Soil Sample (Shaw, 2009)
- Drums (Observed 05/12)
- Asphalt Pile (Observed 05/12)
- Surficial Soil Sample Location (Battelle, 2002)
- PCB Investigative Sample Locations, Drum Disposal Area 2009 Excavation Activities (Shaw, 2010)
- AOC31 Soil Boring/Groundwater Location, 2007 (TI, 2009)
- Monitoring Well Installed in 1991 by HMM Associates
- Direct Push Sampling Location Advanced in 2001 by EA Associates
- Direct Push Sample Location Installed in 2003 by EA Engineering
- Existing Well To Be Sampled
- Observed Borders (05/12)
- Grounding Grid Wires
- Site 1 Boundary
- Surface Debris Area (Observed 05/12)
- Approximate Geophysical Survey Area 2012
- Approximate Extent of 2009 Drum Disposal Area Excavation (Shaw, 2010)
- Stone Rip-Rap
- Completed 2007 Geophysical Survey Area (TI, May 2008)
- Site 5 Drum Area (DDA Drum Locations GPS'd by MEDEP, 2006)
- Approximate Extent of 2006-2009 Excavation UNITEC, 2008/TtEC, 2009/Shaw, 2010)

** - Final location to be determined based on additional test pitting to be conducted by Shaw

May 2012 Geophysical Survey Results
EXPLANATION
EM61 Metal Detector Readings
Differential Metallic Response in Millivolts

- -2000 mv to -30 mv
- -30 mv to 30 mv
- 30 mv to 60 mv
- 60 mv to 120 mv
- 120 mv to 240 mv
- 240 mv to 12000 mv

N

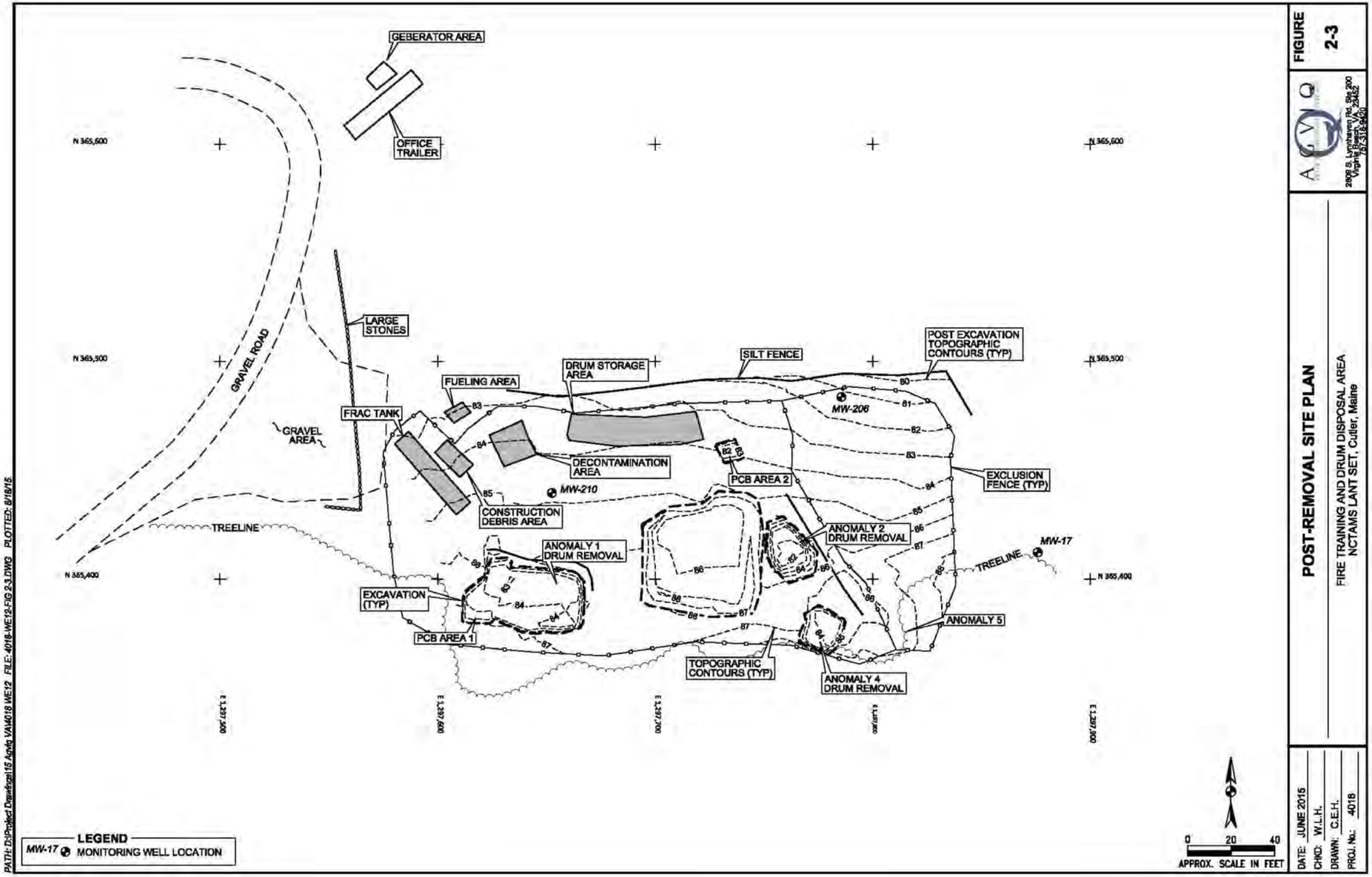
Scale: See Map

Figure A-8
DDA Remedial Investigation, Tetra Tech 2013
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Approximate Map Location

NAVFAC

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60282029	



PATH: D:\Project Drawings\15 Agvig VA\4018 WE12 FILE: 4018-WE12-FIG 2-3.DWG PLOTTED: 8/18/15

FIGURE 2-3

AGVIQ
2808 S. Lynnhaven Rd. Ste 200
Virginia Beach, VA 23452
757-318-3400

POST-REMOVAL SITE PLAN

FIRE TRAINING AND DRUM DISPOSAL AREA
NCTAMS LANT SET, Cutler, Maine

DATE: JUNE 2015
CHKD: W.L.H.
DRAWN: C.E.H.
PROJ. No.: 4018

NAVFAC

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60282029	

Approximate Map Location

N

Scale: See Map

Figure A-9
Location of AGVIQ Removal Activities, 2013
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det Cutler, Maine

Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\FTA_RI\October 2016 Updates\Figure A-10 Location of AGVIQ Removal Activities.mxd

APPENDIX B

ANALYTICAL DATA SUMMARY TABLES

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TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SS-19	FTA-SS-23	FTA-SS-25	FTA-SS-13	A31-SB01	A31-SB01	A31-SB02	A31-SB02	A31-SB03	A31-SB03	A31-SB04
			Sample Date	5/16/2002	5/16/2002	5/16/2002	5/17/2002	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007
			Sample ID	FTA-SS-19-3-5	FTA-SS-23-1-3	FTA-SS-25-3-5	FTA-SS-13-3-5	A31-SO-SB01-0002	A31-SO-SB01-0406	A31-SO-SB02-0002	A31-SO-SB02-0507	A31-SO-SB03-0002	A31-SO-SB03-0507	A31-SO-SB04-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
			Depth Interval	3 - 5 ft	1 - 3 ft	3 - 5 ft	3 - 5 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units											
Metals	ALUMINUM	7429-90-5	mg/kg											
Metals	ANTIMONY	7440-36-0	mg/kg											
Metals	ARSENIC	7440-38-2	mg/kg											
Metals	BARIUM	7440-39-3	mg/kg											
Metals	BERYLLIUM	7440-41-7	mg/kg											
Metals	CADMIUM	7440-43-9	mg/kg											
Metals	CALCIUM	7440-70-2	mg/kg											
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg											
Metals	COBALT	7440-48-4	mg/kg											
Metals	COPPER	7440-50-8	mg/kg											
Metals	IRON	7439-89-6	mg/kg											
Metals	LEAD	7439-92-1	mg/kg											
Metals	MAGNESIUM	7439-95-4	mg/kg											
Metals	MANGANESE	7439-96-5	mg/kg											
Metals	MERCURY	7439-97-6	mg/kg											
Metals	NICKEL	7440-02-0	mg/kg											
Metals	POTASSIUM	7440-09-7	mg/kg											
Metals	SELENIUM	7782-49-2	mg/kg											
Metals	SILVER	7440-22-4	mg/kg											
Metals	SODIUM	7440-23-5	mg/kg											
Metals	THALLIUM	7440-28-0	mg/kg											
Metals	VANADIUM	7440-62-2	mg/kg											
Metals	ZINC	7440-66-6	mg/kg											
Other	PH	-9	SU											
Other	TOTAL SOLIDS	-29	PCT					86	87	94	87	93	91	92
Pest_PCBs	4,4-DDD	72-54-8	mg/kg											
Pest_PCBs	4,4-DDE	72-55-9	mg/kg											
Pest_PCBs	4,4-DDT	50-29-3	mg/kg											
Pest_PCBs	ALDRIN	309-00-2	mg/kg											
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg											
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg											
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg											
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg											
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg											
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg											
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg											
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg											
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg											
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg											
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg											
Pest_PCBs	BETA-BHC	319-85-7	mg/kg											
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg											
Pest_PCBs	DIELDRIN	60-57-1	mg/kg											
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg											
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg											
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg											
Pest_PCBs	ENDRIN	72-20-8	mg/kg											
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg											
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg											
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg											
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg											
Pest_PCBs	LINDANE	58-89-9	mg/kg											
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg											
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg											
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg											
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg											
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg					< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg											
SVOCs	1,4-DIOXANE	123-91-1	mg/kg											
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg					< 0.38 UJ	< 0.38 UJ	< 0.35 UJ	< 0.38 UJ	< 0.36 UJ	< 0.36 UJ	< 0.36 U
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg											
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg					< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg					< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SS-19	FTA-SS-23	FTA-SS-25	FTA-SS-13	A31-SB01	A31-SB01	A31-SB02	A31-SB02	A31-SB03	A31-SB03	A31-SB04
				Sample Date	5/16/2002	5/16/2002	5/16/2002	5/17/2002	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007
				Sample ID	FTA-SS-19-3-5	FTA-SS-23-1-3	FTA-SS-25-3-5	FTA-SS-13-3-5	A31-SO-SB01-0002	A31-SO-SB01-0406	A31-SO-SB02-0002	A31-SO-SB02-0507	A31-SO-SB03-0002	A31-SO-SB03-0507	A31-SO-SB04-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	3 - 5 ft	1 - 3 ft	3 - 5 ft	3 - 5 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units												
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg						< 0.96 UJ	< 0.94 UJ	< 0.88 UJ	< 0.94 UJ	< 0.88 UJ	< 0.9 UJ	< 0.88 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg												
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg						< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg						< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg						< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg						< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg						< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg												
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg												
SVOCs	ACETOPHENONE	98-86-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	ANTHRACENE	120-12-7	mg/kg												
SVOCs	ATRAZINE	1912-24-9	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg						< 0.38 UJ	< 0.38 UJ	< 0.35 UJ	< 0.38 UJ	< 0.36 UJ	< 0.36 UJ	< 0.36 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg												
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg												
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg												
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg												
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg												
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	CARBAZOLE	86-74-8	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	CHRYSENE	218-01-9	mg/kg												
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg												
SVOCs	DIBENZOFURAN	132-64-9	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg												
SVOCs	FLUORENE	86-73-7	mg/kg												
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg												
SVOCs	ISOPHORONE	78-59-1	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg												
SVOCs	NITROBENZENE	98-95-3	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg						< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg												
SVOCs	PHENOL	108-95-2	mg/kg						< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U
SVOCs	PYRENE	129-00-0	mg/kg												
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg												
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg												

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SS-19	FTA-SS-23	FTA-SS-25	FTA-SS-13	A31-SB01	A31-SB01	A31-SB02	A31-SB02	A31-SB03	A31-SB03	A31-SB04
			Sample Date	5/16/2002	5/16/2002	5/16/2002	5/17/2002	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007
			Sample ID	FTA-SS-19-3-5	FTA-SS-23-1-3	FTA-SS-25-3-5	FTA-SS-13-3-5	A31-SO-SB01-0002	A31-SO-SB01-0406	A31-SO-SB02-0002	A31-SO-SB02-0507	A31-SO-SB03-0002	A31-SO-SB03-0507	A31-SO-SB04-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
			Depth Interval	3 - 5 ft	1 - 3 ft	3 - 5 ft	3 - 5 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units											
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg											
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
TPH	ACENAPHTHENE	83-32-9	mg/kg											
TPH	ACENAPHTHYLENE	208-96-8	mg/kg											
TPH	ANTHRACENE	120-12-7	mg/kg											
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
TPH	BENZO[A]PYRENE	50-32-8	mg/kg											
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
TPH	CHRYSENE	218-01-9	mg/kg											
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
TPH	FLUORANTHENE	206-44-0	mg/kg											
TPH	FLUORENE	86-73-7	mg/kg											
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
TPH	NAPHTHALENE	91-20-3	mg/kg											
TPH	PHENANTHRENE	85-01-8	mg/kg											
TPH	PYRENE	129-00-0	mg/kg											
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg											
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg											
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg											
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg											
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg											
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg											
TPH	TPH-DIESEL RANGE	-3527	mg/kg	220	< 5.6 U	< 5.8 U	< 5.9 U	21	< 5.7 UJ	< 5.3 UJ	< 5.7 UJ	65 J	< 5.5 UJ	15 J
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg	4.2	< 2.5 U	< 2.5 U	14	0.36 J	0.47 J	0.33 J	< 2.7 U	0.66 J	0.69 J	0.39 J
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg					0.004 J	0.002 J	0.002 J	0.009	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg		< 0.004 U	< 0.005 U								
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	2-BUTANONE	78-93-3	mg/kg		< 0.008 U	< 0.01 U		0.023 J	0.005 J	< 0.025 UJ	< 0.025 U	< 0.034 UJ	< 0.025 UJ	0.012 J
VOCs	2-HEXANONE	591-78-6	mg/kg		< 0.008 U	< 0.01 U		< 0.035 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.034 U	< 0.025 U	< 0.025 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg		< 0.008 U	< 0.01 U		< 0.035 U	< 0.025 U	< 0.025 UJ	< 0.025 U	< 0.034 UJ	< 0.025 UJ	< 0.025 UJ
VOCs	ACETONE	67-64-1	mg/kg		0.056	0.022		0.18 J	0.066 J	< 0.025 UJ	< 0.025 UJ	< 0.034 UJ	< 0.025 UJ	0.13 J
VOCs	BENZENE	71-43-2	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	BROMOFORM	75-25-2	mg/kg		0.002 JB	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 UJ	< 0.005 U	< 0.007 UJ	< 0.005 UJ	< 0.005 UJ
VOCs	BROMOMETHANE	74-83-9	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CARBON DISULFIDE	75-15-0	mg/kg		< 0.004 U	< 0.005 U		0.038	0.003 J	0.008	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CHLOROETHANE	75-00-3	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CHLOROFORM	67-66-3	mg/kg		0.0006 JB	0.0006 JB		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg		0.004 JB	0.004 JB		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	CYCLOHEXANE	110-82-7	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.001 J	< 0.005 U	< 0.005 U
VOCs	ETHYLBENZENE	100-41-4	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg					< 0.014 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.014 U	< 0.01 U	< 0.01 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SS-19	FTA-SS-23	FTA-SS-25	FTA-SS-13	A31-SB01	A31-SB01	A31-SB02	A31-SB02	A31-SB03	A31-SB03	A31-SB04
			Sample Date	5/16/2002	5/16/2002	5/16/2002	5/17/2002	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007
			Sample ID	FTA-SS-19-3-5	FTA-SS-23-1-3	FTA-SS-25-3-5	FTA-SS-13-3-5	A31-SO-SB01-0002	A31-SO-SB01-0406	A31-SO-SB02-0002	A31-SO-SB02-0507	A31-SO-SB03-0002	A31-SO-SB03-0507	A31-SO-SB04-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
			Depth Interval	3 - 5 ft	1 - 3 ft	3 - 5 ft	3 - 5 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units											
VOCs	METHYL ACETATE	79-20-9	mg/kg					< 0.007 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	0.037 J	< 0.005 UJ	< 0.005 UJ
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg		< 0.004 U	< 0.005 U		< 0.035 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.034 U	< 0.025 U	< 0.025 U
VOCs	O-XYLENE	95-47-6	mg/kg					< 0.007 U	< 0.005 U	< 0.005 UJ	< 0.005 U	< 0.007 UJ	< 0.005 UJ	< 0.005 UJ
VOCs	STYRENE	100-42-5	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	TOLUENE	108-88-3	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	TRICHLOROETHENE	79-01-6	mg/kg		< 0.004 U	< 0.005 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg					< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	VINYL CHLORIDE	75-01-4	mg/kg		< 0.008 U	< 0.01 U		< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg		< 0.004 U	< 0.005 U								
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg					< 0.014 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.014 U	< 0.01 U	< 0.01 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	A31-SB04	DDA-N-2A	DDA-N-3A	DDA-NW-3B	DDA-NW-6D	DDA-NW-6E	DDA-W-1B	DDA-NW-6B	DDA-NW-6B
			Sample Date	10/27/2007	8/16/2010	8/16/2010	8/16/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010
			Sample ID	A31-SO-SB04-0507	DDA-N-2A-SO-0507	DDA-N-3A-SO-0305	DDA-NW-3B-SO-0305	DDA-NW-6D-SO-0001-D	DDA-NW-6E-SO-0001-D	DDA-W-1B-SO-0305	DDA-NW-6B-SO-0001	DDA-NW-6B-SO-0204
			Sample Type Code	N	N	N	N	FD	FD	N	N	N
			Depth Interval	5 - 7 ft	5 - 7 ft	3 - 5 ft	3 - 5 ft	0 - 1 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units									
Metals	ALUMINUM	7429-90-5	mg/kg									
Metals	ANTIMONY	7440-36-0	mg/kg									
Metals	ARSENIC	7440-38-2	mg/kg									
Metals	BARIUM	7440-39-3	mg/kg									
Metals	BERYLLIUM	7440-41-7	mg/kg									
Metals	CADMIUM	7440-43-9	mg/kg									
Metals	CALCIUM	7440-70-2	mg/kg									
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
Metals	COBALT	7440-48-4	mg/kg									
Metals	COPPER	7440-50-8	mg/kg									
Metals	IRON	7439-89-6	mg/kg									
Metals	LEAD	7439-92-1	mg/kg									
Metals	MAGNESIUM	7439-95-4	mg/kg									
Metals	MANGANESE	7439-96-5	mg/kg									
Metals	MERCURY	7439-97-6	mg/kg									
Metals	NICKEL	7440-02-0	mg/kg									
Metals	POTASSIUM	7440-09-7	mg/kg									
Metals	SELENIUM	7782-49-2	mg/kg									
Metals	SILVER	7440-22-4	mg/kg									
Metals	SODIUM	7440-23-5	mg/kg									
Metals	THALLIUM	7440-28-0	mg/kg									
Metals	VANADIUM	7440-62-2	mg/kg									
Metals	ZINC	7440-66-6	mg/kg									
Other	PH	-9	SU									
Other	TOTAL SOLIDS	-29	PCT	85								
Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
Pest_PCBs	ALDRIN	309-00-2	mg/kg									
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg		< 0.02 U	< 0.018 U	< 0.02 U	< 0.165 U	< 0.18 U	< 0.018 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg		< 0.02 U	< 0.018 U	< 0.02 U	< 0.165 U	< 0.18 U	< 0.018 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg		< 0.02 U	< 0.018 U	< 0.02 U	< 0.165 U	< 0.18 U	< 0.018 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg		< 0.02 U	< 0.018 U	< 0.02 U	< 0.165 U	< 0.18 U	< 0.018 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg		< 0.02 U	< 0.018 U	< 0.02 U	< 0.165 U	< 0.18 U	< 0.018 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg		< 0.02 U	< 0.018 U	< 0.02 U	< 0.165 U	< 0.18 U	< 0.018 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg		0.3 J	17.7	0.074	45.4	37.2	1.9	7.52	0.158
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
Pest_PCBs	ENDRIN	72-20-8	mg/kg									
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
Pest_PCBs	LINDANE	58-89-9	mg/kg									
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg		0.3	17.7	0.074	45.4	37.2	1.9	7.52	0.158
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.39 U								
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.39 U								
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.97 U								
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.39 U								

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	A31-SB04	DDA-N-2A	DDA-N-3A	DDA-NW-3B	DDA-NW-6D	DDA-NW-6E	DDA-W-1B	DDA-NW-6B	DDA-NW-6B
				Sample Date	10/27/2007	8/16/2010	8/16/2010	8/16/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010
				Sample ID	A31-SO-SB04-0507	DDA-N-2A-SO-0507	DDA-N-3A-SO-0305	DDA-NW-3B-SO-0305	DDA-NW-6D-SO-0001-D	DDA-NW-6E-SO-0001-D	DDA-W-1B-SO-0305	DDA-NW-6B-SO-0001	DDA-NW-6B-SO-0204
				Sample Type Code	N	N	N	N	FD	FD	N	N	N
				Depth Interval	5 - 7 ft	5 - 7 ft	3 - 5 ft	3 - 5 ft	0 - 1 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.39 U									
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.39 U									
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.97 UJ									
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.39 UJ									
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.39 U									
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.39 U									
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.39 U									
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.39 U									
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.97 UJ									
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.39 UJ									
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.39 U									
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.39 U									
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.97 UJ									
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.97 UJ									
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.39 U									
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.39 U									
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.39 U									
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.39 U									
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.97 U									
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.97 UJ									
SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.39 U									
SVOCs	ANTHRACENE	120-12-7	mg/kg										
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.39 U									
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.39 UJ									
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.39 U									
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.39 U									
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.39 U									
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.39 U									
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.39 U									
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.39 U									
SVOCs	CHRYSENE	218-01-9	mg/kg										
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.39 U									
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.39 U									
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.39 U									
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.39 U									
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.39 U									
SVOCs	FLUORANTHENE	206-44-0	mg/kg										
SVOCs	FLUORENE	86-73-7	mg/kg										
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.39 U									
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.39 U									
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.39 U									
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.39 U									
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.39 U									
SVOCs	NAPHTHALENE	91-20-3	mg/kg										
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.39 U									
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.39 U									
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.39 U									
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.97 UJ									
SVOCs	PHENANTHRENE	85-01-8	mg/kg										
SVOCs	PHENOL	108-95-2	mg/kg	< 0.39 U									
SVOCs	PYRENE	129-00-0	mg/kg										
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	A31-SB04	DDA-N-2A	DDA-N-3A	DDA-NW-3B	DDA-NW-6D	DDA-NW-6E	DDA-W-1B	DDA-NW-6B	DDA-NW-6B
			Sample Date	10/27/2007	8/16/2010	8/16/2010	8/16/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010
			Sample ID	A31-SO-SB04-0507	DDA-N-2A-SO-0507	DDA-N-3A-SO-0305	DDA-NW-3B-SO-0305	DDA-NW-6D-SO-0001-D	DDA-NW-6E-SO-0001-D	DDA-W-1B-SO-0305	DDA-NW-6B-SO-0001	DDA-NW-6B-SO-0204
			Sample Type Code	N	N	N	N	FD	FD	N	N	N
			Depth Interval	5 - 7 ft	5 - 7 ft	3 - 5 ft	3 - 5 ft	0 - 1 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
TPH	TPH-DIESEL RANGE	-3527	mg/kg	< 5.9 UJ								
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.005 U								
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.005 U								
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg	< 0.005 U								
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.005 U								
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.005 U								
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.005 U								
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.005 U								
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg	< 0.005 U								
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg	< 0.005 U								
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.005 U								
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.005 U								
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg	< 0.005 U								
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.005 U								
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.005 U								
VOCs	2-BUTANONE	78-93-3	mg/kg	< 0.025 UJ								
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.025 U								
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg	< 0.025 UJ								
VOCs	ACETONE	67-64-1	mg/kg	< 0.025 UJ								
VOCs	BENZENE	71-43-2	mg/kg	< 0.005 U								
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg	< 0.005 U								
VOCs	BROMOFORM	75-25-2	mg/kg	< 0.005 UJ								
VOCs	BROMOMETHANE	74-83-9	mg/kg	< 0.005 U								
VOCs	CARBON DISULFIDE	75-15-0	mg/kg	< 0.005 U								
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.005 U								
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.005 U								
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.005 U								
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.005 U								
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.005 U								
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.005 U								
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg	< 0.005 U								
VOCs	CYCLOHEXANE	110-82-7	mg/kg	< 0.005 U								
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg	< 0.005 U								
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg	< 0.005 U								
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.005 U								
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.005 U								
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.01 U								

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	A31-SB04	DDA-N-2A	DDA-N-3A	DDA-NW-3B	DDA-NW-6D	DDA-NW-6E	DDA-W-1B	DDA-NW-6B	DDA-NW-6B
				Sample Date	10/27/2007	8/16/2010	8/16/2010	8/16/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010
				Sample ID	A31-SO-SB04-0507	DDA-N-2A-SO-0507	DDA-N-3A-SO-0305	DDA-NW-3B-SO-0305	DDA-NW-6D-SO-0001-D	DDA-NW-6E-SO-0001-D	DDA-W-1B-SO-0305	DDA-NW-6B-SO-0001	DDA-NW-6B-SO-0204
				Sample Type Code	N	N	N	N	FD	FD	N	N	N
				Depth Interval	5 - 7 ft	5 - 7 ft	3 - 5 ft	3 - 5 ft	0 - 1 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg	< 0.005 UJ									
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.005 U									
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.005 U									
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.025 U									
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.005 UJ									
VOCs	STYRENE	100-42-5	mg/kg	< 0.005 U									
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.005 U									
VOCs	TOLUENE	108-88-3	mg/kg	< 0.005 U									
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.005 U									
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg	< 0.005 U									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.005 U									
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg	< 0.005 U									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.005 U									
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg										
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.01 U									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-6C	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-5F	DDA-NW-5F	DDA-NW-4F	DDA-NW-4F
			Sample Date	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/18/2010	8/18/2010
			Sample ID	DDA-NW-6C-SO-0204	DDA-NW-6D-SO-0001	DDA-NW-6D-SO-0204	DDA-NW-6E-SO-0001	DDA-NW-6E-SO-0204	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-4F-SO-0001	DDA-NW-4F-SO-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	0 - 2 ft	0 - 1 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
Metals	ALUMINUM	7429-90-5	mg/kg									
Metals	ANTIMONY	7440-36-0	mg/kg									
Metals	ARSENIC	7440-38-2	mg/kg									
Metals	BARIUM	7440-39-3	mg/kg									
Metals	BERYLLIUM	7440-41-7	mg/kg									
Metals	CADMIUM	7440-43-9	mg/kg									
Metals	CALCIUM	7440-70-2	mg/kg									
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
Metals	COBALT	7440-48-4	mg/kg									
Metals	COPPER	7440-50-8	mg/kg									
Metals	IRON	7439-89-6	mg/kg									
Metals	LEAD	7439-92-1	mg/kg									
Metals	MAGNESIUM	7439-95-4	mg/kg									
Metals	MANGANESE	7439-96-5	mg/kg									
Metals	MERCURY	7439-97-6	mg/kg									
Metals	NICKEL	7440-02-0	mg/kg									
Metals	POTASSIUM	7440-09-7	mg/kg									
Metals	SELENIUM	7782-49-2	mg/kg									
Metals	SILVER	7440-22-4	mg/kg									
Metals	SODIUM	7440-23-5	mg/kg									
Metals	THALLIUM	7440-28-0	mg/kg									
Metals	VANADIUM	7440-62-2	mg/kg									
Metals	ZINC	7440-66-6	mg/kg									
Other	PH	-9	SU									
Other	TOTAL SOLIDS	-29	PCT									
Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
Pest_PCBs	ALDRIN	309-00-2	mg/kg									
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.165 U	< 0.02 U	< 0.085 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.165 U	< 0.02 U	< 0.085 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.165 U	< 0.02 U	< 0.085 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.165 U	< 0.02 U	< 0.085 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.165 U	< 0.02 U	< 0.085 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.165 U	< 0.02 U	< 0.085 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.104	45.6	0.204	29.4	0.154	38.3	7.48	11	1.3
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
Pest_PCBs	ENDRIN	72-20-8	mg/kg									
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
Pest_PCBs	LINDANE	58-89-9	mg/kg									
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.104	45.6	0.204	29.4	0.154	38.3	7.48	11	1.3
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-6C	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-5F	DDA-NW-5F	DDA-NW-4F	DDA-NW-4F
				Sample Date	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/18/2010	8/18/2010
				Sample ID	DDA-NW-6C-SO-0204	DDA-NW-6D-SO-0001	DDA-NW-6D-SO-0204	DDA-NW-6E-SO-0001	DDA-NW-6E-SO-0204	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-4F-SO-0001	DDA-NW-4F-SO-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	0 - 2 ft	0 - 1 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg										
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg										
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg										
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg										
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg										
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg										
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg										
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg										
SVOCs	2-NITROANILINE	88-74-4	mg/kg										
SVOCs	2-NITROPHENOL	88-75-5	mg/kg										
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg										
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg										
SVOCs	3-NITROANILINE	99-09-2	mg/kg										
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg										
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg										
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg										
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg										
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg										
SVOCs	4-NITROANILINE	100-01-6	mg/kg										
SVOCs	4-NITROPHENOL	100-02-7	mg/kg										
SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
SVOCs	ACETOPHENONE	98-86-2	mg/kg										
SVOCs	ANTHRACENE	120-12-7	mg/kg										
SVOCs	ATRAZINE	1912-24-9	mg/kg										
SVOCs	BENZALDEHYDE	100-52-7	mg/kg										
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg										
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg										
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg										
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg										
SVOCs	CAPROLACTAM	105-60-2	mg/kg										
SVOCs	CARBAZOLE	86-74-8	mg/kg										
SVOCs	CHRYSENE	218-01-9	mg/kg										
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
SVOCs	DIBENZOFURAN	132-64-9	mg/kg										
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg										
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg										
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg										
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg										
SVOCs	FLUORANTHENE	206-44-0	mg/kg										
SVOCs	FLUORENE	86-73-7	mg/kg										
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg										
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg										
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg										
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg										
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
SVOCs	ISOPHORONE	78-59-1	mg/kg										
SVOCs	NAPHTHALENE	91-20-3	mg/kg										
SVOCs	NITROBENZENE	98-95-3	mg/kg										
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg										
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg										
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg										
SVOCs	PHENANTHRENE	85-01-8	mg/kg										
SVOCs	PHENOL	108-95-2	mg/kg										
SVOCs	PYRENE	129-00-0	mg/kg										
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-6C	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-5F	DDA-NW-5F	DDA-NW-4F	DDA-NW-4F
				Sample Date	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/18/2010	8/18/2010
				Sample ID	DDA-NW-6C-SO-0204	DDA-NW-6D-SO-0001	DDA-NW-6D-SO-0204	DDA-NW-6E-SO-0001	DDA-NW-6E-SO-0204	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-4F-SO-0001	DDA-NW-4F-SO-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	0 - 2 ft	0 - 1 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg										
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
TPH	ACENAPHTHENE	83-32-9	mg/kg										
TPH	ACENAPHTHYLENE	208-96-8	mg/kg										
TPH	ANTHRACENE	120-12-7	mg/kg										
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
TPH	BENZO[A]PYRENE	50-32-8	mg/kg										
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
TPH	CHRYSENE	218-01-9	mg/kg										
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
TPH	FLUORANTHENE	206-44-0	mg/kg										
TPH	FLUORENE	86-73-7	mg/kg										
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
TPH	NAPHTHALENE	91-20-3	mg/kg										
TPH	PHENANTHRENE	85-01-8	mg/kg										
TPH	PYRENE	129-00-0	mg/kg										
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg										
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg										
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg										
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg										
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg										
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg										
TPH	TPH-DIESEL RANGE	-3527	mg/kg										
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg										
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg										
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg										
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg										
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg										
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg										
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg										
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg										
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg										
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg										
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg										
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg										
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg										
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg										
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg										
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg										
VOCs	2-BUTANONE	78-93-3	mg/kg										
VOCs	2-HEXANONE	591-78-6	mg/kg										
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg										
VOCs	ACETONE	67-64-1	mg/kg										
VOCs	BENZENE	71-43-2	mg/kg										
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg										
VOCs	BROMOFORM	75-25-2	mg/kg										
VOCs	BROMOMETHANE	74-83-9	mg/kg										
VOCs	CARBON DISULFIDE	75-15-0	mg/kg										
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg										
VOCs	CHLOROBENZENE	108-90-7	mg/kg										
VOCs	CHLOROETHANE	75-00-3	mg/kg										
VOCs	CHLOROFORM	67-66-3	mg/kg										
VOCs	CHLOROMETHANE	74-87-3	mg/kg										
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg										
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg										
VOCs	CYCLOHEXANE	110-82-7	mg/kg										
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg										
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg										
VOCs	ETHYLBENZENE	100-41-4	mg/kg										
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg										
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-6C	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-5F	DDA-NW-5F	DDA-NW-4F	DDA-NW-4F
				Sample Date	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/18/2010	8/18/2010
				Sample ID	DDA-NW-6C-SO-0204	DDA-NW-6D-SO-0001	DDA-NW-6D-SO-0204	DDA-NW-6E-SO-0001	DDA-NW-6E-SO-0204	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-4F-SO-0001	DDA-NW-4F-SO-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	2 - 4 ft	0 - 1 ft	0 - 2 ft	0 - 1 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg										
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg										
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg										
VOCs	O-XYLENE	95-47-6	mg/kg										
VOCs	STYRENE	100-42-5	mg/kg										
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg										
VOCs	TOLUENE	108-88-3	mg/kg										
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg										
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg										
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg										
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg										
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg										

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-3F	DDA-NW-3F	DDA-NW-2F	DDA-NW-2F	DDA-W-1F	DDA-W-1F	DDA-NE-5C	DDA-NE-5C	DDA-SE-2C
			Sample Date	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/19/2010	8/19/2010	8/19/2010
			Sample ID	DDA-NW-3F-SO-0002	DDA-NW-3F-SO-0204	DDA-NW-2F-SO-0002	DDA-NW-2F-SO-0204	DDA-W-1F-SO-0002	DDA-W-1F-SO-0204	DDA-NE-5C-SO-0002	DDA-NE-5C-SO-0204	DDA-SE-2C-SO-0608
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units									
Metals	ALUMINUM	7429-90-5	mg/kg									
Metals	ANTIMONY	7440-36-0	mg/kg									
Metals	ARSENIC	7440-38-2	mg/kg									
Metals	BARIUM	7440-39-3	mg/kg									
Metals	BERYLLIUM	7440-41-7	mg/kg									
Metals	CADMIUM	7440-43-9	mg/kg									
Metals	CALCIUM	7440-70-2	mg/kg									
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
Metals	COBALT	7440-48-4	mg/kg									
Metals	COPPER	7440-50-8	mg/kg									
Metals	IRON	7439-89-6	mg/kg									
Metals	LEAD	7439-92-1	mg/kg									
Metals	MAGNESIUM	7439-95-4	mg/kg									
Metals	MANGANESE	7439-96-5	mg/kg									
Metals	MERCURY	7439-97-6	mg/kg									
Metals	NICKEL	7440-02-0	mg/kg									
Metals	POTASSIUM	7440-09-7	mg/kg									
Metals	SELENIUM	7782-49-2	mg/kg									
Metals	SILVER	7440-22-4	mg/kg									
Metals	SODIUM	7440-23-5	mg/kg									
Metals	THALLIUM	7440-28-0	mg/kg									
Metals	VANADIUM	7440-62-2	mg/kg									
Metals	ZINC	7440-66-6	mg/kg									
Other	PH	-9	SU									
Other	TOTAL SOLIDS	-29	PCT									
Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
Pest_PCBs	ALDRIN	309-00-2	mg/kg									
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	3.61	0.145	25.6	0.449	36	0.208	16	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
Pest_PCBs	ENDRIN	72-20-8	mg/kg									
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
Pest_PCBs	LINDANE	58-89-9	mg/kg									
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	3.61	0.145	25.6	0.449	36	0.208	16	< 0.018 U	< 0.0165 U
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-3F	DDA-NW-3F	DDA-NW-2F	DDA-NW-2F	DDA-W-1F	DDA-W-1F	DDA-NE-5C	DDA-NE-5C	DDA-SE-2C
			Sample Date	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/19/2010	8/19/2010	8/19/2010
			Sample ID	DDA-NW-3F-SO-0002	DDA-NW-3F-SO-0204	DDA-NW-2F-SO-0002	DDA-NW-2F-SO-0204	DDA-W-1F-SO-0002	DDA-W-1F-SO-0204	DDA-NE-5C-SO-0002	DDA-NE-5C-SO-0204	DDA-SE-2C-SO-0608
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units									
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg									
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg									
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg									
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg									
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg									
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg									
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg									
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg									
SVOCs	2-NITROANILINE	88-74-4	mg/kg									
SVOCs	2-NITROPHENOL	88-75-5	mg/kg									
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg									
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg									
SVOCs	3-NITROANILINE	99-09-2	mg/kg									
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg									
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg									
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg									
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg									
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg									
SVOCs	4-NITROANILINE	100-01-6	mg/kg									
SVOCs	4-NITROPHENOL	100-02-7	mg/kg									
SVOCs	ACENAPHTHENE	83-32-9	mg/kg									
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg									
SVOCs	ACETOPHENONE	98-86-2	mg/kg									
SVOCs	ANTHRACENE	120-12-7	mg/kg									
SVOCs	ATRAZINE	1912-24-9	mg/kg									
SVOCs	BENZALDEHYDE	100-52-7	mg/kg									
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg									
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg									
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg									
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg									
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg									
SVOCs	CAPROLACTAM	105-60-2	mg/kg									
SVOCs	CARBAZOLE	86-74-8	mg/kg									
SVOCs	CHRYSENE	218-01-9	mg/kg									
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
SVOCs	DIBENZOFURAN	132-64-9	mg/kg									
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg									
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg									
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg									
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg									
SVOCs	FLUORANTHENE	206-44-0	mg/kg									
SVOCs	FLUORENE	86-73-7	mg/kg									
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg									
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg									
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg									
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg									
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
SVOCs	ISOPHORONE	78-59-1	mg/kg									
SVOCs	NAPHTHALENE	91-20-3	mg/kg									
SVOCs	NITROBENZENE	98-95-3	mg/kg									
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg									
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg									
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg									
SVOCs	PHENANTHRENE	85-01-8	mg/kg									
SVOCs	PHENOL	108-95-2	mg/kg									
SVOCs	PYRENE	129-00-0	mg/kg									
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg									
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-3F	DDA-NW-3F	DDA-NW-2F	DDA-NW-2F	DDA-W-1F	DDA-W-1F	DDA-NE-5C	DDA-NE-5C	DDA-SE-2C
			Sample Date	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/19/2010	8/19/2010	8/19/2010
			Sample ID	DDA-NW-3F-SO-0002	DDA-NW-3F-SO-0204	DDA-NW-2F-SO-0002	DDA-NW-2F-SO-0204	DDA-W-1F-SO-0002	DDA-W-1F-SO-0204	DDA-NE-5C-SO-0002	DDA-NE-5C-SO-0204	DDA-SE-2C-SO-0608
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg									
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg									
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg									
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg									
VOCs	BENZENE	71-43-2	mg/kg									
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									
VOCs	CHLOROBENZENE	108-90-7	mg/kg									
VOCs	CHLOROETHANE	75-00-3	mg/kg									
VOCs	CHLOROFORM	67-66-3	mg/kg									
VOCs	CHLOROMETHANE	74-87-3	mg/kg									
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg									
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-3F	DDA-NW-3F	DDA-NW-2F	DDA-NW-2F	DDA-W-1F	DDA-W-1F	DDA-NE-5C	DDA-NE-5C	DDA-SE-2C
			Sample Date	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/18/2010	8/19/2010	8/19/2010	8/19/2010
			Sample ID	DDA-NW-3F-SO-0002	DDA-NW-3F-SO-0204	DDA-NW-2F-SO-0002	DDA-NW-2F-SO-0204	DDA-W-1F-SO-0002	DDA-W-1F-SO-0204	DDA-NE-5C-SO-0002	DDA-NE-5C-SO-0204	DDA-SE-2C-SO-0608
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units									
VOCs	METHYL ACETATE	79-20-9	mg/kg									
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg									
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg									
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg									
VOCs	O-XYLENE	95-47-6	mg/kg									
VOCs	STYRENE	100-42-5	mg/kg									
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg									
VOCs	TOLUENE	108-88-3	mg/kg									
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg									
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg									
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg									
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg									
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de limit within the sample is presented as a non-detect value. Calculated totals have a CAS n beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-SE-4C	DDA-NW-2D	DDA-NW-2D	DDA-NW-4D	DDA-NW-4D	DDA-NW-2G	DDA-NW-7B	DDA-NW-7D	DDA-NW-7E
				Sample Date	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-SE-4C-SO-0608	DDA-NW-2D-SO-0002	DDA-NW-2D-SO-0204	DDA-NW-4D-SO-0002	DDA-NW-4D-SO-0204	DDA-NW-2G-SO-0002-D	DDA-NW-7B-SO-0002	DDA-NW-7D-SO-0204	DDA-NW-7E-SO-0002
				Sample Type Code	N	N	N	N	N	FD	N	N	N
				Depth Interval	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg										
Metals	ANTIMONY	7440-36-0	mg/kg										
Metals	ARSENIC	7440-38-2	mg/kg										
Metals	BARIUM	7440-39-3	mg/kg										
Metals	BERYLLIUM	7440-41-7	mg/kg										
Metals	CADMIUM	7440-43-9	mg/kg										
Metals	CALCIUM	7440-70-2	mg/kg										
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg										
Metals	COBALT	7440-48-4	mg/kg										
Metals	COPPER	7440-50-8	mg/kg										
Metals	IRON	7439-89-6	mg/kg										
Metals	LEAD	7439-92-1	mg/kg										
Metals	MAGNESIUM	7439-95-4	mg/kg										
Metals	MANGANESE	7439-96-5	mg/kg										
Metals	MERCURY	7439-97-6	mg/kg										
Metals	NICKEL	7440-02-0	mg/kg										
Metals	POTASSIUM	7440-09-7	mg/kg										
Metals	SELENIUM	7782-49-2	mg/kg										
Metals	SILVER	7440-22-4	mg/kg										
Metals	SODIUM	7440-23-5	mg/kg										
Metals	THALLIUM	7440-28-0	mg/kg										
Metals	VANADIUM	7440-62-2	mg/kg										
Metals	ZINC	7440-66-6	mg/kg										
Other	PH	-9	SU										
Other	TOTAL SOLIDS	-29	PCT										
Pest_PCBs	4,4-DDD	72-54-8	mg/kg										
Pest_PCBs	4,4-DDE	72-55-9	mg/kg										
Pest_PCBs	4,4-DDT	50-29-3	mg/kg										
Pest_PCBs	ALDRIN	309-00-2	mg/kg										
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg										
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg										
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.33 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	< 0.0165 U	5.65	< 0.018 U	8.47	< 0.02 U	81.7	3.55	0.113	5.21
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg										
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg										
Pest_PCBs	BETA-BHC	319-85-7	mg/kg										
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg										
Pest_PCBs	DIELDRIN	60-57-1	mg/kg										
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg										
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg										
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg										
Pest_PCBs	ENDRIN	72-20-8	mg/kg										
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg										
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg										
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg										
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg										
Pest_PCBs	LINDANE	58-89-9	mg/kg										
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg										
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	< 0.0165 U	5.65	< 0.018 U	8.47	< 0.02 U	81.7	3.55	0.113	5.21
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg										
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg										
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg										
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg										
SVOCs	1,4-DIOXANE	123-91-1	mg/kg										
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg										
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg										
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg										
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-SE-4C	DDA-NW-2D	DDA-NW-2D	DDA-NW-4D	DDA-NW-4D	DDA-NW-2G	DDA-NW-7B	DDA-NW-7D	DDA-NW-7E
				Sample Date	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-SE-4C-SO-0608	DDA-NW-2D-SO-0002	DDA-NW-2D-SO-0204	DDA-NW-4D-SO-0002	DDA-NW-4D-SO-0204	DDA-NW-2G-SO-0002-D	DDA-NW-7B-SO-0002	DDA-NW-7D-SO-0204	DDA-NW-7E-SO-0002
				Sample Type Code	N	N	N	N	N	FD	N	N	N
				Depth Interval	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg										
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg										
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg										
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg										
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg										
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg										
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg										
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg										
SVOCs	2-NITROANILINE	88-74-4	mg/kg										
SVOCs	2-NITROPHENOL	88-75-5	mg/kg										
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg										
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg										
SVOCs	3-NITROANILINE	99-09-2	mg/kg										
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg										
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg										
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg										
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg										
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg										
SVOCs	4-NITROANILINE	100-01-6	mg/kg										
SVOCs	4-NITROPHENOL	100-02-7	mg/kg										
SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
SVOCs	ACETOPHENONE	98-86-2	mg/kg										
SVOCs	ANTHRACENE	120-12-7	mg/kg										
SVOCs	ATRAZINE	1912-24-9	mg/kg										
SVOCs	BENZALDEHYDE	100-52-7	mg/kg										
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg										
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg										
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg										
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg										
SVOCs	CAPROLACTAM	105-60-2	mg/kg										
SVOCs	CARBAZOLE	86-74-8	mg/kg										
SVOCs	CHRYSENE	218-01-9	mg/kg										
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
SVOCs	DIBENZOFURAN	132-64-9	mg/kg										
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg										
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg										
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg										
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg										
SVOCs	FLUORANTHENE	206-44-0	mg/kg										
SVOCs	FLUORENE	86-73-7	mg/kg										
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg										
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg										
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg										
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg										
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
SVOCs	ISOPHORONE	78-59-1	mg/kg										
SVOCs	NAPHTHALENE	91-20-3	mg/kg										
SVOCs	NITROBENZENE	98-95-3	mg/kg										
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg										
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg										
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg										
SVOCs	PHENANTHRENE	85-01-8	mg/kg										
SVOCs	PHENOL	108-95-2	mg/kg										
SVOCs	PYRENE	129-00-0	mg/kg										
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SE-4C	DDA-NW-2D	DDA-NW-2D	DDA-NW-4D	DDA-NW-4D	DDA-NW-2G	DDA-NW-7B	DDA-NW-7D	DDA-NW-7E
			Sample Date	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
			Sample ID	DDA-SE-4C-SO-0608	DDA-NW-2D-SO-0002	DDA-NW-2D-SO-0204	DDA-NW-4D-SO-0002	DDA-NW-4D-SO-0204	DDA-NW-2G-SO-0002-D	DDA-NW-7B-SO-0002	DDA-NW-7D-SO-0204	DDA-NW-7E-SO-0002
			Sample Type Code	N	N	N	N	N	FD	N	N	N
			Depth Interval	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg									
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg									
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg									
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg									
VOCs	BENZENE	71-43-2	mg/kg									
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									
VOCs	CHLOROBENZENE	108-90-7	mg/kg									
VOCs	CHLOROETHANE	75-00-3	mg/kg									
VOCs	CHLOROFORM	67-66-3	mg/kg									
VOCs	CHLOROMETHANE	74-87-3	mg/kg									
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg									
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-SE-4C	DDA-NW-2D	DDA-NW-2D	DDA-NW-4D	DDA-NW-4D	DDA-NW-2G	DDA-NW-7B	DDA-NW-7D	DDA-NW-7E
				Sample Date	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/19/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-SE-4C-SO-0608	DDA-NW-2D-SO-0002	DDA-NW-2D-SO-0204	DDA-NW-4D-SO-0002	DDA-NW-4D-SO-0204	DDA-NW-2G-SO-0002-D	DDA-NW-7B-SO-0002	DDA-NW-7D-SO-0204	DDA-NW-7E-SO-0002
				Sample Type Code	N	N	N	N	N	FD	N	N	N
				Depth Interval	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg										
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg										
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg										
VOCs	O-XYLENE	95-47-6	mg/kg										
VOCs	STYRENE	100-42-5	mg/kg										
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg										
VOCs	TOLUENE	108-88-3	mg/kg										
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg										
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg										
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg										
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg										
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg										

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-6F	DDA-NW-6F	DDA-NW-5G	DDA-NW-5G	DDA-NW-2G	DDA-NW-2G	DDA-W-1G	DDA-W-1G	DDA-SE-5C
				Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-NW-6F-SO-0002	DDA-NW-6F-SO-0204	DDA-NW-5G-SO-0002	DDA-NW-5G-SO-0204	DDA-NW-2G-SO-0002	DDA-NW-2G-SO-0204	DDA-W-1G-SO-0002	DDA-W-1G-SO-0204	DDA-SE-5C-0204
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg										
Metals	ANTIMONY	7440-36-0	mg/kg										
Metals	ARSENIC	7440-38-2	mg/kg										
Metals	BARIUM	7440-39-3	mg/kg										
Metals	BERYLLIUM	7440-41-7	mg/kg										
Metals	CADMIUM	7440-43-9	mg/kg										
Metals	CALCIUM	7440-70-2	mg/kg										
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg										
Metals	COBALT	7440-48-4	mg/kg										
Metals	COPPER	7440-50-8	mg/kg										
Metals	IRON	7439-89-6	mg/kg										
Metals	LEAD	7439-92-1	mg/kg										
Metals	MAGNESIUM	7439-95-4	mg/kg										
Metals	MANGANESE	7439-96-5	mg/kg										
Metals	MERCURY	7439-97-6	mg/kg										
Metals	NICKEL	7440-02-0	mg/kg										
Metals	POTASSIUM	7440-09-7	mg/kg										
Metals	SELENIUM	7782-49-2	mg/kg										
Metals	SILVER	7440-22-4	mg/kg										
Metals	SODIUM	7440-23-5	mg/kg										
Metals	THALLIUM	7440-28-0	mg/kg										
Metals	VANADIUM	7440-62-2	mg/kg										
Metals	ZINC	7440-66-6	mg/kg										
Other	PH	-9	SU										
Other	TOTAL SOLIDS	-29	PCT										
Pest_PCBs	4,4-DDD	72-54-8	mg/kg										
Pest_PCBs	4,4-DDE	72-55-9	mg/kg										
Pest_PCBs	4,4-DDT	50-29-3	mg/kg										
Pest_PCBs	ALDRIN	309-00-2	mg/kg										
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg										
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg										
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.018 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.018 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.018 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.018 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.018 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.018 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	18.1	1.62	24.7	2.02	78.9	13.5	15.2	1.11	< 0.0165 U
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
Pest_PCBs	ENDRIN	72-20-8	mg/kg									
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
Pest_PCBs	LINDANE	58-89-9	mg/kg									
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	18.1	1.62	24.7	2.02	78.9	13.5	15.2	1.11	< 0.0165 U
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-6F	DDA-NW-6F	DDA-NW-5G	DDA-NW-5G	DDA-NW-2G	DDA-NW-2G	DDA-W-1G	DDA-W-1G	DDA-SE-5C
				Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-NW-6F-SO-0002	DDA-NW-6F-SO-0204	DDA-NW-5G-SO-0002	DDA-NW-5G-SO-0204	DDA-NW-2G-SO-0002	DDA-NW-2G-SO-0204	DDA-W-1G-SO-0002	DDA-W-1G-SO-0204	DDA-SE-5C-0204
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg										
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg										
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg										
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg										
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg										
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg										
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg										
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg										
SVOCs	2-NITROANILINE	88-74-4	mg/kg										
SVOCs	2-NITROPHENOL	88-75-5	mg/kg										
SVOCs	3- AND 4-METHYLPHENOL	)8-39-4/106-44	mg/kg										
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg										
SVOCs	3-NITROANILINE	99-09-2	mg/kg										
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg										
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg										
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg										
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg										
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg										
SVOCs	4-NITROANILINE	100-01-6	mg/kg										
SVOCs	4-NITROPHENOL	100-02-7	mg/kg										
SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
SVOCs	ACETOPHENONE	98-86-2	mg/kg										
SVOCs	ANTHRACENE	120-12-7	mg/kg										
SVOCs	ATRAZINE	1912-24-9	mg/kg										
SVOCs	BENZALDEHYDE	100-52-7	mg/kg										
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg										
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg										
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg										
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg										
SVOCs	CAPROLACTAM	105-60-2	mg/kg										
SVOCs	CARBAZOLE	86-74-8	mg/kg										
SVOCs	CHRYSENE	218-01-9	mg/kg										
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
SVOCs	DIBENZOFURAN	132-64-9	mg/kg										
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg										
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg										
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg										
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg										
SVOCs	FLUORANTHENE	206-44-0	mg/kg										
SVOCs	FLUORENE	86-73-7	mg/kg										
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg										
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg										
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg										
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg										
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
SVOCs	ISOPHORONE	78-59-1	mg/kg										
SVOCs	NAPHTHALENE	91-20-3	mg/kg										
SVOCs	NITROBENZENE	98-95-3	mg/kg										
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg										
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg										
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg										
SVOCs	PHENANTHRENE	85-01-8	mg/kg										
SVOCs	PHENOL	108-95-2	mg/kg										
SVOCs	PYRENE	129-00-0	mg/kg										
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-6F	DDA-NW-6F	DDA-NW-5G	DDA-NW-5G	DDA-NW-2G	DDA-NW-2G	DDA-W-1G	DDA-W-1G	DDA-SE-5C
				Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-NW-6F-SO-0002	DDA-NW-6F-SO-0204	DDA-NW-5G-SO-0002	DDA-NW-5G-SO-0204	DDA-NW-2G-SO-0002	DDA-NW-2G-SO-0204	DDA-W-1G-SO-0002	DDA-W-1G-SO-0204	DDA-SE-5C-0204
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg										
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
TPH	ACENAPHTHENE	83-32-9	mg/kg										
TPH	ACENAPHTHYLENE	208-96-8	mg/kg										
TPH	ANTHRACENE	120-12-7	mg/kg										
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
TPH	BENZO[A]PYRENE	50-32-8	mg/kg										
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
TPH	CHRYSENE	218-01-9	mg/kg										
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
TPH	FLUORANTHENE	206-44-0	mg/kg										
TPH	FLUORENE	86-73-7	mg/kg										
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
TPH	NAPHTHALENE	91-20-3	mg/kg										
TPH	PHENANTHRENE	85-01-8	mg/kg										
TPH	PYRENE	129-00-0	mg/kg										
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg										
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg										
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg										
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg										
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg										
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg										
TPH	TPH-DIESEL RANGE	-3527	mg/kg										
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg										
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg										
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg										
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg										
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg										
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg										
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg										
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg										
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg										
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg										
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg										
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg										
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg										
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg										
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg										
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg										
VOCs	2-BUTANONE	78-93-3	mg/kg										
VOCs	2-HEXANONE	591-78-6	mg/kg										
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg										
VOCs	ACETONE	67-64-1	mg/kg										
VOCs	BENZENE	71-43-2	mg/kg										
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg										
VOCs	BROMOFORM	75-25-2	mg/kg										
VOCs	BROMOMETHANE	74-83-9	mg/kg										
VOCs	CARBON DISULFIDE	75-15-0	mg/kg										
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg										
VOCs	CHLOROBENZENE	108-90-7	mg/kg										
VOCs	CHLOROETHANE	75-00-3	mg/kg										
VOCs	CHLOROFORM	67-66-3	mg/kg										
VOCs	CHLOROMETHANE	74-87-3	mg/kg										
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg										
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg										
VOCs	CYCLOHEXANE	110-82-7	mg/kg										
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg										
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg										
VOCs	ETHYLBENZENE	100-41-4	mg/kg										
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg										
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-6F	DDA-NW-6F	DDA-NW-5G	DDA-NW-5G	DDA-NW-2G	DDA-NW-2G	DDA-W-1G	DDA-W-1G	DDA-SE-5C
				Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-NW-6F-SO-0002	DDA-NW-6F-SO-0204	DDA-NW-5G-SO-0002	DDA-NW-5G-SO-0204	DDA-NW-2G-SO-0002	DDA-NW-2G-SO-0204	DDA-W-1G-SO-0002	DDA-W-1G-SO-0204	DDA-SE-5C-0204
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg										
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg										
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg										
VOCs	O-XYLENE	95-47-6	mg/kg										
VOCs	STYRENE	100-42-5	mg/kg										
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg										
VOCs	TOLUENE	108-88-3	mg/kg										
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg										
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg										
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg										
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg										
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg										

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SE-5C	DDA-N-3A	DDA-SE-3D	DDA-SE-4D	DDA-SE-2D	DDA-N-5A	DDA-N-5A	DDA-N-5A	DDA-NE-6C	DDA-NE-6C	DDA-NE-5D
			Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
			Sample ID	DDA-SE-5C-SO-0810	DDA-N-3A-SO-0709	DDA-SE-3D-SO-0810	DDA-SE-4D-SO-0810	DDA-SE-2D-SO-0608	DDA-N-5A-SO-0002	DDA-N-5A-SO-0406	DDA-N-5A-SO-0608	DDA-NE-6C-SO-0002	DDA-NE-6C-SO-0204	DDA-NE-5D-SO-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
			Depth Interval	8 - 10 ft	7 - 9 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	0 - 2 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units											
Metals	ALUMINUM	7429-90-5	mg/kg											
Metals	ANTIMONY	7440-36-0	mg/kg											
Metals	ARSENIC	7440-38-2	mg/kg											
Metals	BARIUM	7440-39-3	mg/kg											
Metals	BERYLLIUM	7440-41-7	mg/kg											
Metals	CADMIUM	7440-43-9	mg/kg											
Metals	CALCIUM	7440-70-2	mg/kg											
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg											
Metals	COBALT	7440-48-4	mg/kg											
Metals	COPPER	7440-50-8	mg/kg											
Metals	IRON	7439-89-6	mg/kg											
Metals	LEAD	7439-92-1	mg/kg											
Metals	MAGNESIUM	7439-95-4	mg/kg											
Metals	MANGANESE	7439-96-5	mg/kg											
Metals	MERCURY	7439-97-6	mg/kg											
Metals	NICKEL	7440-02-0	mg/kg											
Metals	POTASSIUM	7440-09-7	mg/kg											
Metals	SELENIUM	7782-49-2	mg/kg											
Metals	SILVER	7440-22-4	mg/kg											
Metals	SODIUM	7440-23-5	mg/kg											
Metals	THALLIUM	7440-28-0	mg/kg											
Metals	VANADIUM	7440-62-2	mg/kg											
Metals	ZINC	7440-66-6	mg/kg											
Other	PH	-9	SU											
Other	TOTAL SOLIDS	-29	PCT											
Pest_PCBs	4,4-DDD	72-54-8	mg/kg											
Pest_PCBs	4,4-DDE	72-55-9	mg/kg											
Pest_PCBs	4,4-DDT	50-29-3	mg/kg											
Pest_PCBs	ALDRIN	309-00-2	mg/kg											
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg											
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg											
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	0.599	< 0.0165 U	< 0.0165 U	0.303	< 0.018 U	1.83
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg											
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg											
Pest_PCBs	BETA-BHC	319-85-7	mg/kg											
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg											
Pest_PCBs	DIELDRIN	60-57-1	mg/kg											
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg											
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg											
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg											
Pest_PCBs	ENDRIN	72-20-8	mg/kg											
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg											
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg											
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg											
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg											
Pest_PCBs	LINDANE	58-89-9	mg/kg											
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg											
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	0.599	< 0.0165 U	< 0.0165 U	0.303	< 0.018 U	1.83
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg											
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg											
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg											
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg											
SVOCs	1,4-DIOXANE	123-91-1	mg/kg											
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg											
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg											
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg											
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SE-5C	DDA-N-3A	DDA-SE-3D	DDA-SE-4D	DDA-SE-2D	DDA-N-5A	DDA-N-5A	DDA-N-5A	DDA-NE-6C	DDA-NE-6C	DDA-NE-5D
			Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
			Sample ID	DDA-SE-5C-SO-0810	DDA-N-3A-SO-0709	DDA-SE-3D-SO-0810	DDA-SE-4D-SO-0810	DDA-SE-2D-SO-0608	DDA-N-5A-SO-0002	DDA-N-5A-SO-0406	DDA-N-5A-SO-0608	DDA-NE-6C-SO-0002	DDA-NE-6C-SO-0204	DDA-NE-5D-SO-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
			Depth Interval	8 - 10 ft	7 - 9 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	0 - 2 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units											
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg											
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg											
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg											
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg											
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg											
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg											
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg											
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg											
SVOCs	2-NITROANILINE	88-74-4	mg/kg											
SVOCs	2-NITROPHENOL	88-75-5	mg/kg											
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg											
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg											
SVOCs	3-NITROANILINE	99-09-2	mg/kg											
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg											
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg											
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg											
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg											
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg											
SVOCs	4-NITROANILINE	100-01-6	mg/kg											
SVOCs	4-NITROPHENOL	100-02-7	mg/kg											
SVOCs	ACENAPHTHENE	83-32-9	mg/kg											
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg											
SVOCs	ACETOPHENONE	98-86-2	mg/kg											
SVOCs	ANTHRACENE	120-12-7	mg/kg											
SVOCs	ATRAZINE	1912-24-9	mg/kg											
SVOCs	BENZALDEHYDE	100-52-7	mg/kg											
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg											
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg											
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg											
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg											
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg											
SVOCs	CAPROLACTAM	105-60-2	mg/kg											
SVOCs	CARBAZOLE	86-74-8	mg/kg											
SVOCs	CHRYSENE	218-01-9	mg/kg											
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
SVOCs	DIBENZOFURAN	132-64-9	mg/kg											
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg											
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg											
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg											
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg											
SVOCs	FLUORANTHENE	206-44-0	mg/kg											
SVOCs	FLUORENE	86-73-7	mg/kg											
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg											
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg											
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg											
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg											
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
SVOCs	ISOPHORONE	78-59-1	mg/kg											
SVOCs	NAPHTHALENE	91-20-3	mg/kg											
SVOCs	NITROBENZENE	98-95-3	mg/kg											
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg											
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg											
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg											
SVOCs	PHENANTHRENE	85-01-8	mg/kg											
SVOCs	PHENOL	108-95-2	mg/kg											
SVOCs	PYRENE	129-00-0	mg/kg											
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg											
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SE-5C	DDA-N-3A	DDA-SE-3D	DDA-SE-4D	DDA-SE-2D	DDA-N-5A	DDA-N-5A	DDA-N-5A	DDA-NE-6C	DDA-NE-6C	DDA-NE-5D
			Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
			Sample ID	DDA-SE-5C-SO-0810	DDA-N-3A-SO-0709	DDA-SE-3D-SO-0810	DDA-SE-4D-SO-0810	DDA-SE-2D-SO-0608	DDA-N-5A-SO-0002	DDA-N-5A-SO-0406	DDA-N-5A-SO-0608	DDA-NE-6C-SO-0002	DDA-NE-6C-SO-0204	DDA-NE-5D-SO-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
			Depth Interval	8 - 10 ft	7 - 9 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	0 - 2 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units											
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg											
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
TPH	ACENAPHTHENE	83-32-9	mg/kg											
TPH	ACENAPHTHYLENE	208-96-8	mg/kg											
TPH	ANTHRACENE	120-12-7	mg/kg											
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
TPH	BENZO[A]PYRENE	50-32-8	mg/kg											
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
TPH	CHRYSENE	218-01-9	mg/kg											
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
TPH	FLUORANTHENE	206-44-0	mg/kg											
TPH	FLUORENE	86-73-7	mg/kg											
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
TPH	NAPHTHALENE	91-20-3	mg/kg											
TPH	PHENANTHRENE	85-01-8	mg/kg											
TPH	PYRENE	129-00-0	mg/kg											
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg											
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg											
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg											
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg											
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg											
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg											
TPH	TPH-DIESEL RANGE	-3527	mg/kg											
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg											
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg											
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg											
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg											
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg											
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg											
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg											
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg											
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg											
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg											
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg											
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg											
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg											
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg											
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg											
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg											
VOCs	2-BUTANONE	78-93-3	mg/kg											
VOCs	2-HEXANONE	591-78-6	mg/kg											
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg											
VOCs	ACETONE	67-64-1	mg/kg											
VOCs	BENZENE	71-43-2	mg/kg											
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg											
VOCs	BROMOFORM	75-25-2	mg/kg											
VOCs	BROMOMETHANE	74-83-9	mg/kg											
VOCs	CARBON DISULFIDE	75-15-0	mg/kg											
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg											
VOCs	CHLOROBENZENE	108-90-7	mg/kg											
VOCs	CHLOROETHANE	75-00-3	mg/kg											
VOCs	CHLOROFORM	67-66-3	mg/kg											
VOCs	CHLOROMETHANE	74-87-3	mg/kg											
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg											
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg											
VOCs	CYCLOHEXANE	110-82-7	mg/kg											
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg											
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg											
VOCs	ETHYLBENZENE	100-41-4	mg/kg											
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg											
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-SE-5C	DDA-N-3A	DDA-SE-3D	DDA-SE-4D	DDA-SE-2D	DDA-N-5A	DDA-N-5A	DDA-N-5A	DDA-NE-6C	DDA-NE-6C	DDA-NE-5D
				Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010
				Sample ID	DDA-SE-5C-SO-0810	DDA-N-3A-SO-0709	DDA-SE-3D-SO-0810	DDA-SE-4D-SO-0810	DDA-SE-2D-SO-0608	DDA-N-5A-SO-0002	DDA-N-5A-SO-0406	DDA-N-5A-SO-0608	DDA-NE-6C-SO-0002	DDA-NE-6C-SO-0204	DDA-NE-5D-SO-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N	N	N
				Depth Interval	8 - 10 ft	7 - 9 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	0 - 2 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units												
VOCs	METHYL ACETATE	79-20-9	mg/kg												
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg												
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg												
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg												
VOCs	O-XYLENE	95-47-6	mg/kg												
VOCs	STYRENE	100-42-5	mg/kg												
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg												
VOCs	TOLUENE	108-88-3	mg/kg												
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg												
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg												
VOCs	TRICHLOROETHENE	79-01-6	mg/kg												
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg												
VOCs	VINYL CHLORIDE	75-01-4	mg/kg												
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg												
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg												

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NE-5D	DDA-NE-6D	DDA-SW-2F	DDA-SW-2F	DDA-NW-3E	DDA-NW-3E	DDA-NW-5C	DDA-SE-4D	DDA-SE-5D	DDA-SE-5B	DDA-SE-5D
			Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	7/11/2011	7/12/2011	7/12/2011	7/12/2011
			Sample ID	DDA-NE-5D-SO-0204	DDA-NE-6D-SO-0002	DDA-SW-2F-SO-0002	DDA-SW-2F-SO-0204	DDA-NW-3E-SO-0002	DDA-NW-3E-SO-0204	DDA-NW-5C-SO-0000	DDA-SE-04D-SO-081	DDA-SE-05D-SO-0204	DDA-SE-05B-SO-0000	DDA-SE-05D-SO-020
			Sample Type Code	N	N	N	N	N	N	N	N	FD	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	8 - 10 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units											
Metals	ALUMINUM	7429-90-5	mg/kg											
Metals	ANTIMONY	7440-36-0	mg/kg											
Metals	ARSENIC	7440-38-2	mg/kg											
Metals	BARIUM	7440-39-3	mg/kg											
Metals	BERYLLIUM	7440-41-7	mg/kg											
Metals	CADMIUM	7440-43-9	mg/kg											
Metals	CALCIUM	7440-70-2	mg/kg											
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg											
Metals	COBALT	7440-48-4	mg/kg											
Metals	COPPER	7440-50-8	mg/kg											
Metals	IRON	7439-89-6	mg/kg											
Metals	LEAD	7439-92-1	mg/kg											
Metals	MAGNESIUM	7439-95-4	mg/kg											
Metals	MANGANESE	7439-96-5	mg/kg											
Metals	MERCURY	7439-97-6	mg/kg											
Metals	NICKEL	7440-02-0	mg/kg											
Metals	POTASSIUM	7440-09-7	mg/kg											
Metals	SELENIUM	7782-49-2	mg/kg											
Metals	SILVER	7440-22-4	mg/kg											
Metals	SODIUM	7440-23-5	mg/kg											
Metals	THALLIUM	7440-28-0	mg/kg											
Metals	VANADIUM	7440-62-2	mg/kg											
Metals	ZINC	7440-66-6	mg/kg											
Other	PH	-9	SU											
Other	TOTAL SOLIDS	-29	PCT											
Pest_PCBs	4,4-DDD	72-54-8	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	4,4-DDE	72-55-9	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	4,4-DDT	50-29-3	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	ALDRIN	309-00-2	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.02 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.02 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.02 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.02 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.02 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.02 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.46 J	1.64	8.48	0.569	22.2	1.48	4.35	< 0.0165 U	< 0.0165 U	21.5	< 0.02 U
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg											
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg											
Pest_PCBs	BETA-BHC	319-85-7	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	DIELDRIN	60-57-1	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	ENDRIN	72-20-8	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									< 0.0017 U	< 0.935 U	< 0.002 U
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	LINDANE	58-89-9	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									< 0.009 U	< 4.95 U	< 0.011 U
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.46	1.64	8.48	0.569	22.2	1.48	4.35	< 0.0165 U	< 0.0165 U	21.5	< 0.02 U
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									< 0.09 U	< 49.5 U	< 0.108 U
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									< 0.0009 U	< 0.495 U	< 0.0011 U
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg											
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg											
SVOCs	1,4-DIOXANE	123-91-1	mg/kg											
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg											
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg											
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg											
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NE-5D	DDA-NE-6D	DDA-SW-2F	DDA-SW-2F	DDA-NW-3E	DDA-NW-3E	DDA-NW-5C	DDA-SE-4D	DDA-SE-5D	DDA-SE-5B	DDA-SE-5D
			Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	7/11/2011	7/12/2011	7/12/2011	7/12/2011
			Sample ID	DDA-NE-5D-SO-0204	DDA-NE-6D-SO-0002	DDA-SW-2F-SO-0002	DDA-SW-2F-SO-0204	DDA-NW-3E-SO-0002	DDA-NW-3E-SO-0204	DDA-NW-5C-SO-0000	DDA-SE-04D-SO-081	DDA-SE-05D-SO-0204	DDA-SE-05B-SO-0000	DDA-SE-05D-SO-020
			Sample Type Code	N	N	N	N	N	N	N	N	FD	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	8 - 10 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units											
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg											
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg											
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg											
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg											
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg											
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg											
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg											
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg											
SVOCs	2-NITROANILINE	88-74-4	mg/kg											
SVOCs	2-NITROPHENOL	88-75-5	mg/kg											
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg											
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg											
SVOCs	3-NITROANILINE	99-09-2	mg/kg											
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg											
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg											
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg											
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg											
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg											
SVOCs	4-NITROANILINE	100-01-6	mg/kg											
SVOCs	4-NITROPHENOL	100-02-7	mg/kg											
SVOCs	ACENAPHTHENE	83-32-9	mg/kg											
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg											
SVOCs	ACETOPHENONE	98-86-2	mg/kg											
SVOCs	ANTHRACENE	120-12-7	mg/kg											
SVOCs	ATRAZINE	1912-24-9	mg/kg											
SVOCs	BENZALDEHYDE	100-52-7	mg/kg											
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg											
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg											
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg											
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg											
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg											
SVOCs	CAPROLACTAM	105-60-2	mg/kg											
SVOCs	CARBAZOLE	86-74-8	mg/kg											
SVOCs	CHRYSENE	218-01-9	mg/kg											
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
SVOCs	DIBENZOFURAN	132-64-9	mg/kg											
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg											
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg											
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg											
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg											
SVOCs	FLUORANTHENE	206-44-0	mg/kg											
SVOCs	FLUORENE	86-73-7	mg/kg											
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg											
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg											
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg											
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg											
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
SVOCs	ISOPHORONE	78-59-1	mg/kg											
SVOCs	NAPHTHALENE	91-20-3	mg/kg											
SVOCs	NITROBENZENE	98-95-3	mg/kg											
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg											
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg											
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg											
SVOCs	PHENANTHRENE	85-01-8	mg/kg											
SVOCs	PHENOL	108-95-2	mg/kg											
SVOCs	PYRENE	129-00-0	mg/kg											
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg											
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NE-5D	DDA-NE-6D	DDA-SW-2F	DDA-SW-2F	DDA-NW-3E	DDA-NW-3E	DDA-NW-5C	DDA-SE-4D	DDA-SE-5D	DDA-SE-5B	DDA-SE-5D
			Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	7/11/2011	7/12/2011	7/12/2011	7/12/2011
			Sample ID	DDA-NE-5D-SO-0204	DDA-NE-6D-SO-0002	DDA-SW-2F-SO-0002	DDA-SW-2F-SO-0204	DDA-NW-3E-SO-0002	DDA-NW-3E-SO-0204	DDA-NW-5C-SO-0000	DDA-SE-04D-SO-081	DDA-SE-05D-SO-0204	DDA-SE-05B-SO-0000	DDA-SE-05D-SO-020
			Sample Type Code	N	N	N	N	N	N	N	N	FD	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	8 - 10 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units											
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg											
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
TPH	ACENAPHTHENE	83-32-9	mg/kg											
TPH	ACENAPHTHYLENE	208-96-8	mg/kg											
TPH	ANTHRACENE	120-12-7	mg/kg											
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
TPH	BENZO[A]PYRENE	50-32-8	mg/kg											
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
TPH	CHRYSENE	218-01-9	mg/kg											
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
TPH	FLUORANTHENE	206-44-0	mg/kg											
TPH	FLUORENE	86-73-7	mg/kg											
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
TPH	NAPHTHALENE	91-20-3	mg/kg											
TPH	PHENANTHRENE	85-01-8	mg/kg											
TPH	PYRENE	129-00-0	mg/kg											
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg											
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg											
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg											
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg											
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg											
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg											
TPH	TPH-DIESEL RANGE	-3527	mg/kg											
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg											
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg											
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg											
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	2-BUTANONE	78-93-3	mg/kg											
VOCs	2-HEXANONE	591-78-6	mg/kg											
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg											
VOCs	ACETONE	67-64-1	mg/kg											
VOCs	BENZENE	71-43-2	mg/kg											
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	BROMOFORM	75-25-2	mg/kg											
VOCs	BROMOMETHANE	74-83-9	mg/kg											
VOCs	CARBON DISULFIDE	75-15-0	mg/kg											
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	CHLOROETHANE	75-00-3	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	CHLOROFORM	67-66-3	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	CYCLOHEXANE	110-82-7	mg/kg											
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	ETHYLBENZENE	100-41-4	mg/kg											
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg											
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NE-5D	DDA-NE-6D	DDA-SW-2F	DDA-SW-2F	DDA-NW-3E	DDA-NW-3E	DDA-NW-5C	DDA-SE-4D	DDA-SE-5D	DDA-SE-5B	DDA-SE-5D
			Sample Date	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	7/11/2011	7/12/2011	7/12/2011	7/12/2011
			Sample ID	DDA-NE-5D-SO-0204	DDA-NE-6D-SO-0002	DDA-SW-2F-SO-0002	DDA-SW-2F-SO-0204	DDA-NW-3E-SO-0002	DDA-NW-3E-SO-0204	DDA-NW-5C-SO-0000	DDA-SE-04D-SO-081	DDA-SE-05D-SO-0204	DDA-SE-05B-SO-0000	DDA-SE-05D-SO-020
			Sample Type Code	N	N	N	N	N	N	N	N	FD	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	8 - 10 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units											
VOCs	METHYL ACETATE	79-20-9	mg/kg											
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg											
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg											
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg									< 0.0016 U	< 0.0019 U	< 0.002 U
VOCs	O-XYLENE	95-47-6	mg/kg											
VOCs	STYRENE	100-42-5	mg/kg											
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	TOLUENE	108-88-3	mg/kg											
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	TRICHLOROETHENE	79-01-6	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	VINYL CHLORIDE	75-01-4	mg/kg									< 0.00081 U	< 0.00096 U	< 0.001 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg											
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg											

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples with detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting det limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SE-5C	DDA-SE-5B	DDA-SE-5D	DDA-NW-2P	DDA-NW-2P	DDA-NW-4P	DDA-NE-7D	DDA-NW-9E	DDA-NW-9B	DDA-NW-9B	DDA-NE-6E
			Sample Date	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011
			Sample ID	DDA-SE-05C-SO-081	DDA-SE-05B-SO-0204	DDA-SE-05D-SO-040	DDA-NW-02P-SO-000	DDA-NW-02P-SO-040	DDA-NW-4P-0406	DDA-NE-07D-SO-000	DDA-NW-9E-0002	DDA-NW-09B-SO-000	DDA-NW-09B-SO-040	DDA-NE-06E-SO-0204
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	FD
			Depth Interval	8 - 10 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units											
Metals	ALUMINUM	7429-90-5	mg/kg			14100								
Metals	ANTIMONY	7440-36-0	mg/kg			0.3 J								
Metals	ARSENIC	7440-38-2	mg/kg			9.1								
Metals	BARIUM	7440-39-3	mg/kg			22								
Metals	BERYLLIUM	7440-41-7	mg/kg			0.36								
Metals	CADMIUM	7440-43-9	mg/kg			< 0.3 U								
Metals	CALCIUM	7440-70-2	mg/kg			3120								
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg			24								
Metals	COBALT	7440-48-4	mg/kg			11								
Metals	COPPER	7440-50-8	mg/kg			20								
Metals	IRON	7439-89-6	mg/kg			22900								
Metals	LEAD	7439-92-1	mg/kg			9								
Metals	MAGNESIUM	7439-95-4	mg/kg			6794								
Metals	MANGANESE	7439-96-5	mg/kg			409								
Metals	MERCURY	7439-97-6	mg/kg											
Metals	NICKEL	7440-02-0	mg/kg			23								
Metals	POTASSIUM	7440-09-7	mg/kg			1280								
Metals	SELENIUM	7782-49-2	mg/kg			1 J								
Metals	SILVER	7440-22-4	mg/kg			< 0.3 U								
Metals	SODIUM	7440-23-5	mg/kg			157								
Metals	THALLIUM	7440-28-0	mg/kg			< 0.3 U								
Metals	VANADIUM	7440-62-2	mg/kg			33								
Metals	ZINC	7440-66-6	mg/kg			49								
Other	PH	-9	SU											
Other	TOTAL SOLIDS	-29	PCT			94.26								
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.0165 U	< 0.018 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.0165 U	< 0.018 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.0165 U	< 0.018 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.0165 U	< 0.018 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.0165 U	< 0.018 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.0165 U	< 0.018 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.038	< 0.018 U	< 0.018 U	0.31	< 0.018 U	0.076	68.1	5.76	0.109	0.044	3.3
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg											
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg											
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.0019 U	< 0.0019 U	< 0.0019 U								
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0099 U	< 0.0099 U	< 0.0099 U								
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.038	< 0.018 U	< 0.018 U	0.31	< 0.018 U	0.076	68.1	5.76	0.109	0.0440	3.3
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.099 U	< 0.099 U	< 0.099 U								
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00099 U	< 0.00099 U	< 0.00099 U								
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg											
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg											
SVOCs	1,4-DIOXANE	123-91-1	mg/kg											
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg											
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg											
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg											
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SE-5C	DDA-SE-5B	DDA-SE-5D	DDA-NW-2P	DDA-NW-2P	DDA-NW-4P	DDA-NE-7D	DDA-NW-9E	DDA-NW-9B	DDA-NW-9B	DDA-NE-6E
			Sample Date	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011
			Sample ID	DDA-SE-05C-SO-081	DDA-SE-05B-SO-0204	DDA-SE-05D-SO-040	DDA-NW-02P-SO-000	DDA-NW-02P-SO-040	DDA-NW-4P-0406	DDA-NE-07D-SO-000	DDA-NW-9E-0002	DDA-NW-09B-SO-000	DDA-NW-09B-SO-040	DDA-NE-06E-SO-0204
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	FD
			Depth Interval	8 - 10 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units											
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg											
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg											
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg											
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg											
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg											
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg											
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg											
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg											
SVOCs	2-NITROANILINE	88-74-4	mg/kg											
SVOCs	2-NITROPHENOL	88-75-5	mg/kg											
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg											
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg											
SVOCs	3-NITROANILINE	99-09-2	mg/kg											
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg											
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg											
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg											
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg											
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg											
SVOCs	4-NITROANILINE	100-01-6	mg/kg											
SVOCs	4-NITROPHENOL	100-02-7	mg/kg											
SVOCs	ACENAPHTHENE	83-32-9	mg/kg											
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg											
SVOCs	ACETOPHENONE	98-86-2	mg/kg											
SVOCs	ANTHRACENE	120-12-7	mg/kg											
SVOCs	ATRAZINE	1912-24-9	mg/kg											
SVOCs	BENZALDEHYDE	100-52-7	mg/kg											
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg											
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg											
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg											
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg											
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg											
SVOCs	CAPROLACTAM	105-60-2	mg/kg											
SVOCs	CARBAZOLE	86-74-8	mg/kg											
SVOCs	CHRYSENE	218-01-9	mg/kg											
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
SVOCs	DIBENZOFURAN	132-64-9	mg/kg											
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg											
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg											
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg											
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg											
SVOCs	FLUORANTHENE	206-44-0	mg/kg											
SVOCs	FLUORENE	86-73-7	mg/kg											
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg											
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg											
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg											
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg											
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
SVOCs	ISOPHORONE	78-59-1	mg/kg											
SVOCs	NAPHTHALENE	91-20-3	mg/kg											
SVOCs	NITROBENZENE	98-95-3	mg/kg											
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg											
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg											
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg											
SVOCs	PHENANTHRENE	85-01-8	mg/kg											
SVOCs	PHENOL	108-95-2	mg/kg											
SVOCs	PYRENE	129-00-0	mg/kg											
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg											
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SE-5C	DDA-SE-5B	DDA-SE-5D	DDA-NW-2P	DDA-NW-2P	DDA-NW-4P	DDA-NE-7D	DDA-NW-9E	DDA-NW-9B	DDA-NW-9B	DDA-NE-6E
			Sample Date	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011
			Sample ID	DDA-SE-05C-SO-081	DDA-SE-05B-SO-0204	DDA-SE-05D-SO-040	DDA-NW-02P-SO-000	DDA-NW-02P-SO-040	DDA-NW-4P-0406	DDA-NE-07D-SO-000	DDA-NW-9E-0002	DDA-NW-09B-SO-000	DDA-NW-09B-SO-040	DDA-NE-06E-SO-0204
			Sample Type Code	N	N	N	N	N	N	N	N	N	N	FD
			Depth Interval	8 - 10 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units											
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg											
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
TPH	ACENAPHTHENE	83-32-9	mg/kg											
TPH	ACENAPHTHYLENE	208-96-8	mg/kg											
TPH	ANTHRACENE	120-12-7	mg/kg											
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
TPH	BENZO[A]PYRENE	50-32-8	mg/kg											
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
TPH	CHRYSENE	218-01-9	mg/kg											
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
TPH	FLUORANTHENE	206-44-0	mg/kg											
TPH	FLUORENE	86-73-7	mg/kg											
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
TPH	NAPHTHALENE	91-20-3	mg/kg											
TPH	PHENANTHRENE	85-01-8	mg/kg											
TPH	PYRENE	129-00-0	mg/kg											
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg											
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg											
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg											
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg											
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg											
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg											
TPH	TPH-DIESEL RANGE	-3527	mg/kg											
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg											
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.00081 U	0.0002 J	< 0.00091 U								
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg											
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg											
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	2-BUTANONE	78-93-3	mg/kg											
VOCs	2-HEXANONE	591-78-6	mg/kg											
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg											
VOCs	ACETONE	67-64-1	mg/kg											
VOCs	BENZENE	71-43-2	mg/kg											
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	BROMOFORM	75-25-2	mg/kg											
VOCs	BROMOMETHANE	74-83-9	mg/kg											
VOCs	CARBON DISULFIDE	75-15-0	mg/kg											
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	CYCLOHEXANE	110-82-7	mg/kg											
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U								
VOCs	ETHYLBENZENE	100-41-4	mg/kg											
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg											
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-SE-5C	DDA-SE-5B	DDA-SE-5D	DDA-NW-2P	DDA-NW-2P	DDA-NW-4P	DDA-NE-7D	DDA-NW-9E	DDA-NW-9B	DDA-NW-9B	DDA-NE-6E
				Sample Date	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011
				Sample ID	DDA-SE-05C-SO-081	DDA-SE-05B-SO-0204	DDA-SE-05D-SO-040	DDA-NW-02P-SO-000	DDA-NW-02P-SO-040	DDA-NW-4P-0406	DDA-NE-07D-SO-000	DDA-NW-9E-0002	DDA-NW-09B-SO-000	DDA-NW-09B-SO-040	DDA-NE-06E-SO-0204
				Sample Type Code	N	N	N	N	N	N	N	N	N	N	FD
				Depth Interval	8 - 10 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft
Analyte Group	Compound	CAS	Units												
VOCs	METHYL ACETATE	79-20-9	mg/kg												
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg												
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg												
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.0016 U	< 0.002 U	< 0.0018 U									
VOCs	O-XYLENE	95-47-6	mg/kg												
VOCs	STYRENE	100-42-5	mg/kg												
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U									
VOCs	TOLUENE	108-88-3	mg/kg												
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U									
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U									
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.00081 U	< 0.00099 U	< 0.00091 U									
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg												
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg												

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples with detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting det limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-8I	DDA-NE-8B	DDA-NE-8B	DDA-NE-6E	DDA-NE-6E	DDA-NE-5E	DDA-NE-3E	DDA-NE-5E	DDA-SW-5C	DDA-SW-3G	DDA-SW-3G
			Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011
			Sample ID	DDA-NW-08I-SO-0204-0	DDA-NE-08B-SO-0000	DDA-NE-08B-SO-0400	DDA-NE-06E-SO-0200	DDA-NE-06E-SO-0400	DDA-NE-05E-SO-0000	DDA-NE-3E-0002	DDA-NE-05E-SO-0400	DDA-SW-05C-SO-0400	DDA-SW-03G-SO-0002	DDA-SW-03G-SO-0400
			Sample Type Code	FD	N	N	N	N	N	N	N	N	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft
Analyte Group	Compound	CAS	Units											
Metals	ALUMINUM	7429-90-5	mg/kg											
Metals	ANTIMONY	7440-36-0	mg/kg											
Metals	ARSENIC	7440-38-2	mg/kg											
Metals	BARIUM	7440-39-3	mg/kg											
Metals	BERYLLIUM	7440-41-7	mg/kg											
Metals	CADMIUM	7440-43-9	mg/kg											
Metals	CALCIUM	7440-70-2	mg/kg											
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg											
Metals	COBALT	7440-48-4	mg/kg											
Metals	COPPER	7440-50-8	mg/kg											
Metals	IRON	7439-89-6	mg/kg											
Metals	LEAD	7439-92-1	mg/kg											
Metals	MAGNESIUM	7439-95-4	mg/kg											
Metals	MANGANESE	7439-96-5	mg/kg											
Metals	MERCURY	7439-97-6	mg/kg											
Metals	NICKEL	7440-02-0	mg/kg											
Metals	POTASSIUM	7440-09-7	mg/kg											
Metals	SELENIUM	7782-49-2	mg/kg											
Metals	SILVER	7440-22-4	mg/kg											
Metals	SODIUM	7440-23-5	mg/kg											
Metals	THALLIUM	7440-28-0	mg/kg											
Metals	VANADIUM	7440-62-2	mg/kg											
Metals	ZINC	7440-66-6	mg/kg											
Other	PH	-9	SU											
Other	TOTAL SOLIDS	-29	PCT											
Pest_PCBs	4,4-DDD	72-54-8	mg/kg											
Pest_PCBs	4,4-DDE	72-55-9	mg/kg											
Pest_PCBs	4,4-DDT	50-29-3	mg/kg											
Pest_PCBs	ALDRIN	309-00-2	mg/kg											
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg											
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg											
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	4.43 J	1.96	< 0.018 U	3.36	4.99	1.36	2.67	0.012 J	0.026 J	0.323	0.014 J
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg											
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg											
Pest_PCBs	BETA-BHC	319-85-7	mg/kg											
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg											
Pest_PCBs	DIELDRIN	60-57-1	mg/kg											
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg											
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg											
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg											
Pest_PCBs	ENDRIN	72-20-8	mg/kg											
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg											
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg											
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg											
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg											
Pest_PCBs	LINDANE	58-89-9	mg/kg											
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg											
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	4.43	1.96	< 0.018 U	3.36	4.99	1.36	2.67	0.012	0.026	0.323	0.0140
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg											
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg											
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg											
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg											
SVOCs	1,4-DIOXANE	123-91-1	mg/kg											
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg											
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg											
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg											
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-8I	DDA-NE-8B	DDA-NE-8B	DDA-NE-6E	DDA-NE-6E	DDA-NE-5E	DDA-NE-3E	DDA-NE-5E	DDA-SW-5C	DDA-SW-3G	DDA-SW-3G
			Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011
			Sample ID	DDA-NW-08I-SO-0204-D	DDA-NE-08B-SO-0000	DDA-NE-08B-SO-0400	DDA-NE-06E-SO-0200	DDA-NE-06E-SO-0400	DDA-NE-05E-SO-0000	DDA-NE-3E-0002	DDA-NE-05E-SO-0400	DDA-SW-05C-SO-0400	DDA-SW-03G-SO-0002	DDA-SW-03G-SO-0400
			Sample Type Code	FD	N	N	N	N	N	N	N	N	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft
Analyte Group	Compound	CAS	Units											
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg											
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg											
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg											
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg											
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg											
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg											
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg											
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg											
SVOCs	2-NITROANILINE	88-74-4	mg/kg											
SVOCs	2-NITROPHENOL	88-75-5	mg/kg											
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg											
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg											
SVOCs	3-NITROANILINE	99-09-2	mg/kg											
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg											
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg											
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg											
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg											
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg											
SVOCs	4-NITROANILINE	100-01-6	mg/kg											
SVOCs	4-NITROPHENOL	100-02-7	mg/kg											
SVOCs	ACENAPHTHENE	83-32-9	mg/kg											
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg											
SVOCs	ACETOPHENONE	98-86-2	mg/kg											
SVOCs	ANTHRACENE	120-12-7	mg/kg											
SVOCs	ATRAZINE	1912-24-9	mg/kg											
SVOCs	BENZALDEHYDE	100-52-7	mg/kg											
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg											
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg											
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg											
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg											
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg											
SVOCs	CAPROLACTAM	105-60-2	mg/kg											
SVOCs	CARBAZOLE	86-74-8	mg/kg											
SVOCs	CHRYSENE	218-01-9	mg/kg											
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
SVOCs	DIBENZOFURAN	132-64-9	mg/kg											
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg											
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg											
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg											
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg											
SVOCs	FLUORANTHENE	206-44-0	mg/kg											
SVOCs	FLUORENE	86-73-7	mg/kg											
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg											
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg											
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg											
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg											
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
SVOCs	ISOPHORONE	78-59-1	mg/kg											
SVOCs	NAPHTHALENE	91-20-3	mg/kg											
SVOCs	NITROBENZENE	98-95-3	mg/kg											
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg											
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg											
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg											
SVOCs	PHENANTHRENE	85-01-8	mg/kg											
SVOCs	PHENOL	108-95-2	mg/kg											
SVOCs	PYRENE	129-00-0	mg/kg											
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg											
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-8I	DDA-NE-8B	DDA-NE-8B	DDA-NE-6E	DDA-NE-6E	DDA-NE-5E	DDA-NE-3E	DDA-NE-5E	DDA-SW-5C	DDA-SW-3G	DDA-SW-3G
			Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011
			Sample ID	DDA-NW-08I-SO-0204-	DDA-NE-08B-SO-000	DDA-NE-08B-SO-040	DDA-NE-06E-SO-020	DDA-NE-06E-SO-040	DDA-NE-05E-SO-000	DDA-NE-3E-0002	DDA-NE-05E-SO-040	DDA-SW-05C-SO-040	DDA-SW-03G-SO-0002	DDA-SW-03G-SO-040
			Sample Type Code	FD	N	N	N	N	N	N	N	N	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft
Analyte Group	Compound	CAS	Units											
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg											
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
TPH	ACENAPHTHENE	83-32-9	mg/kg											
TPH	ACENAPHTHYLENE	208-96-8	mg/kg											
TPH	ANTHRACENE	120-12-7	mg/kg											
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
TPH	BENZO[A]PYRENE	50-32-8	mg/kg											
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
TPH	CHRYSENE	218-01-9	mg/kg											
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
TPH	FLUORANTHENE	206-44-0	mg/kg											
TPH	FLUORENE	86-73-7	mg/kg											
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
TPH	NAPHTHALENE	91-20-3	mg/kg											
TPH	PHENANTHRENE	85-01-8	mg/kg											
TPH	PYRENE	129-00-0	mg/kg											
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg											
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg											
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg											
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg											
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg											
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg											
TPH	TPH-DIESEL RANGE	-3527	mg/kg											
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg											
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg											
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg											
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg											
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg											
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg											
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg											
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg											
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg											
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg											
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg											
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg											
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg											
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg											
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg											
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg											
VOCs	2-BUTANONE	78-93-3	mg/kg											
VOCs	2-HEXANONE	591-78-6	mg/kg											
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg											
VOCs	ACETONE	67-64-1	mg/kg											
VOCs	BENZENE	71-43-2	mg/kg											
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg											
VOCs	BROMOFORM	75-25-2	mg/kg											
VOCs	BROMOMETHANE	74-83-9	mg/kg											
VOCs	CARBON DISULFIDE	75-15-0	mg/kg											
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg											
VOCs	CHLOROBENZENE	108-90-7	mg/kg											
VOCs	CHLOROETHANE	75-00-3	mg/kg											
VOCs	CHLOROFORM	67-66-3	mg/kg											
VOCs	CHLOROMETHANE	74-87-3	mg/kg											
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg											
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg											
VOCs	CYCLOHEXANE	110-82-7	mg/kg											
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg											
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg											
VOCs	ETHYLBENZENE	100-41-4	mg/kg											
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg											
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-8I	DDA-NE-8B	DDA-NE-8B	DDA-NE-6E	DDA-NE-6E	DDA-NE-5E	DDA-NE-3E	DDA-NE-5E	DDA-SW-5C	DDA-SW-3G	DDA-SW-3G
			Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011
			Sample ID	DDA-NW-08I-SO-0204-	DDA-NE-08B-SO-000	DDA-NE-08B-SO-040	DDA-NE-06E-SO-020	DDA-NE-06E-SO-040	DDA-NE-05E-SO-000	DDA-NE-3E-0002	DDA-NE-05E-SO-040	DDA-SW-05C-SO-040	DDA-SW-03G-SO-0002	DDA-SW-03G-SO-040
			Sample Type Code	FD	N	N	N	N	N	N	N	N	N	N
			Depth Interval	2 - 4 ft	0 - 2 ft	4 - 6 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	0 - 2 ft	4 - 6 ft
Analyte Group	Compound	CAS	Units											
VOCs	METHYL ACETATE	79-20-9	mg/kg											
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg											
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg											
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg											
VOCs	O-XYLENE	95-47-6	mg/kg											
VOCs	STYRENE	100-42-5	mg/kg											
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg											
VOCs	TOLUENE	108-88-3	mg/kg											
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg											
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg											
VOCs	TRICHLOROETHENE	79-01-6	mg/kg											
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg											
VOCs	VINYL CHLORIDE	75-01-4	mg/kg											
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg											
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg											

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples with detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting det limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SW-2I	DDA-NW-8I	DDA-NW-9M	DDA-SW-3N	DDA-W-1L	DDA-NE-3E	DDA-NE-2I	DDA-NW-4R	DDA-NW-6R	DDA-NW-3R	DDA-NW-9M
			Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
			Sample ID	DA-SW-02I-SO-000	DA-NW-08I-SO-020	DA-NW-09M-SO-000	DA-SW-03N-SO-040	DA-W-01L-SO-0400	DA-NE-03E-SO-060	DA-NE-02I-SO-0002	DDA-NW-4R-0002-D	A-NW-06R-SO-0002	DA-NW-03R-SO-000	DA-NW-09M-SO-060
			Sample Type Code	N	N	N	N	N	N	FD	FD	FD	N	N
			Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units											
Metals	ALUMINUM	7429-90-5	mg/kg											
Metals	ANTIMONY	7440-36-0	mg/kg											
Metals	ARSENIC	7440-38-2	mg/kg											
Metals	BARIUM	7440-39-3	mg/kg											
Metals	BERYLLIUM	7440-41-7	mg/kg											
Metals	CADMIUM	7440-43-9	mg/kg											
Metals	CALCIUM	7440-70-2	mg/kg											
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg											
Metals	COBALT	7440-48-4	mg/kg											
Metals	COPPER	7440-50-8	mg/kg											
Metals	IRON	7439-89-6	mg/kg											
Metals	LEAD	7439-92-1	mg/kg											
Metals	MAGNESIUM	7439-95-4	mg/kg											
Metals	MANGANESE	7439-96-5	mg/kg											
Metals	MERCURY	7439-97-6	mg/kg											
Metals	NICKEL	7440-02-0	mg/kg											
Metals	POTASSIUM	7440-09-7	mg/kg											
Metals	SELENIUM	7782-49-2	mg/kg											
Metals	SILVER	7440-22-4	mg/kg											
Metals	SODIUM	7440-23-5	mg/kg											
Metals	THALLIUM	7440-28-0	mg/kg											
Metals	VANADIUM	7440-62-2	mg/kg											
Metals	ZINC	7440-66-6	mg/kg											
Other	PH	-9	SU											
Other	TOTAL SOLIDS	-29	PCT											
Pest_PCBs	4,4-DDD	72-54-8	mg/kg											
Pest_PCBs	4,4-DDE	72-55-9	mg/kg											
Pest_PCBs	4,4-DDT	50-29-3	mg/kg											
Pest_PCBs	ALDRIN	309-00-2	mg/kg											
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg											
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg											
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.02 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	1.11	2.38 J	24	2.64	0.332	< 0.018 U	0.192	0.63	0.576	0.166	< 0.02 U
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg											
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg											
Pest_PCBs	BETA-BHC	319-85-7	mg/kg											
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg											
Pest_PCBs	DIELDRIN	60-57-1	mg/kg											
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg											
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg											
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg											
Pest_PCBs	ENDRIN	72-20-8	mg/kg											
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg											
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg											
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg											
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg											
Pest_PCBs	LINDANE	58-89-9	mg/kg											
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg											
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.11	2.38	24	2.64	0.332	< 0.018 U	0.192	0.63	0.576	0.166	< 0.02 U
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg											
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg											
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg											
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg											
SVOCs	1,4-DIOXANE	123-91-1	mg/kg											
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg											
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg											
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg											
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-SW-2I	DDA-NW-8I	DDA-NW-9M	DDA-SW-3N	DDA-W-1L	DDA-NE-3E	DDA-NE-2I	DDA-NW-4R	DDA-NW-6R	DDA-NW-3R	DDA-NW-9M
				Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
				Sample ID	DA-SW-02I-SO-000	DA-NW-08I-SO-020	DA-NW-09M-SO-000	DA-SW-03N-SO-040	DA-W-01L-SO-0400	DA-NE-03E-SO-060	DA-NE-02I-SO-0002	DDA-NW-4R-0002-D	A-NW-06R-SO-0002	DA-NW-03R-SO-000	DA-NW-09M-SO-060
				Sample Type Code	N	N	N	N	N	N	FD	FD	FD	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units												
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg												
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg												
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg												
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg												
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg												
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg												
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg												
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg												
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg												
SVOCs	2-NITROANILINE	88-74-4	mg/kg												
SVOCs	2-NITROPHENOL	88-75-5	mg/kg												
SVOCs	3- AND 4-METHYLPHENOL	)8-39-4/106-44	mg/kg												
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg												
SVOCs	3-NITROANILINE	99-09-2	mg/kg												
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg												
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg												
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg												
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg												
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg												
SVOCs	4-NITROANILINE	100-01-6	mg/kg												
SVOCs	4-NITROPHENOL	100-02-7	mg/kg												
SVOCs	ACENAPHTHENE	83-32-9	mg/kg												
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg												
SVOCs	ACETOPHENONE	98-86-2	mg/kg												
SVOCs	ANTHRACENE	120-12-7	mg/kg												
SVOCs	ATRAZINE	1912-24-9	mg/kg												
SVOCs	BENZALDEHYDE	100-52-7	mg/kg												
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg												
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg												
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg												
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg												
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg												
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg												
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg												
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg												
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg												
SVOCs	CAPROLACTAM	105-60-2	mg/kg												
SVOCs	CARBAZOLE	86-74-8	mg/kg												
SVOCs	CHRYSENE	218-01-9	mg/kg												
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg												
SVOCs	DIBENZOFURAN	132-64-9	mg/kg												
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg												
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg												
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg												
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg												
SVOCs	FLUORANTHENE	206-44-0	mg/kg												
SVOCs	FLUORENE	86-73-7	mg/kg												
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg												
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg												
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg												
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg												
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg												
SVOCs	ISOPHORONE	78-59-1	mg/kg												
SVOCs	NAPHTHALENE	91-20-3	mg/kg												
SVOCs	NITROBENZENE	98-95-3	mg/kg												
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg												
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg												
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg												
SVOCs	PHENANTHRENE	85-01-8	mg/kg												
SVOCs	PHENOL	108-95-2	mg/kg												
SVOCs	PYRENE	129-00-0	mg/kg												
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg												
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg												

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-SW-2I	DDA-NW-8I	DDA-NW-9M	DDA-SW-3N	DDA-W-1L	DDA-NE-3E	DDA-NE-2I	DDA-NW-4R	DDA-NW-6R	DDA-NW-3R	DDA-NW-9M
			Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
			Sample ID	DA-SW-02I-SO-000	DA-NW-08I-SO-020	DA-NW-09M-SO-000	DA-SW-03N-SO-040	DA-W-01L-SO-0400	DA-NE-03E-SO-060	DA-NE-02I-SO-0002	DDA-NW-4R-0002-D	A-NW-06R-SO-0002	DA-NW-03R-SO-000	DA-NW-09M-SO-060
			Sample Type Code	N	N	N	N	N	N	FD	FD	FD	N	N
			Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units											
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg											
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg											
TPH	ACENAPHTHENE	83-32-9	mg/kg											
TPH	ACENAPHTHYLENE	208-96-8	mg/kg											
TPH	ANTHRACENE	120-12-7	mg/kg											
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg											
TPH	BENZO[A]PYRENE	50-32-8	mg/kg											
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg											
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg											
TPH	CHRYSENE	218-01-9	mg/kg											
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											
TPH	FLUORANTHENE	206-44-0	mg/kg											
TPH	FLUORENE	86-73-7	mg/kg											
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											
TPH	NAPHTHALENE	91-20-3	mg/kg											
TPH	PHENANTHRENE	85-01-8	mg/kg											
TPH	PYRENE	129-00-0	mg/kg											
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg											
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg											
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg											
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg											
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg											
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg											
TPH	TPH-DIESEL RANGE	-3527	mg/kg											
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg											
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg											
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg											
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg											
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg											
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg											
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg											
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg											
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg											
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg											
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg											
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg											
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg											
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg											
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg											
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg											
VOCs	2-BUTANONE	78-93-3	mg/kg											
VOCs	2-HEXANONE	591-78-6	mg/kg											
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg											
VOCs	ACETONE	67-64-1	mg/kg											
VOCs	BENZENE	71-43-2	mg/kg											
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg											
VOCs	BROMOFORM	75-25-2	mg/kg											
VOCs	BROMOMETHANE	74-83-9	mg/kg											
VOCs	CARBON DISULFIDE	75-15-0	mg/kg											
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg											
VOCs	CHLOROBENZENE	108-90-7	mg/kg											
VOCs	CHLOROETHANE	75-00-3	mg/kg											
VOCs	CHLOROFORM	67-66-3	mg/kg											
VOCs	CHLOROMETHANE	74-87-3	mg/kg											
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg											
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg											
VOCs	CYCLOHEXANE	110-82-7	mg/kg											
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg											
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg											
VOCs	ETHYLBENZENE	100-41-4	mg/kg											
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg											
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg											

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-SW-2I	DDA-NW-8I	DDA-NW-9M	DDA-SW-3N	DDA-W-1L	DDA-NE-3E	DDA-NE-2I	DDA-NW-4R	DDA-NW-6R	DDA-NW-3R	DDA-NW-9M
				Sample Date	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
				Sample ID	DA-SW-02I-SO-000	DA-NW-08I-SO-020	DA-NW-09M-SO-000	DA-SW-03N-SO-040	DDA-W-01L-SO-0400	DA-NE-03E-SO-060	DA-NE-02I-SO-0002	DDA-NW-4R-0002-D	)A-NW-06R-SO-0002	DA-NW-03R-SO-000	DA-NW-09M-SO-060
				Sample Type Code	N	N	N	N	N	N	FD	FD	FD	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft
Analyte Group	Compound	CAS	Units												
VOCs	METHYL ACETATE	79-20-9	mg/kg												
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg												
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg												
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg												
VOCs	O-XYLENE	95-47-6	mg/kg												
VOCs	STYRENE	100-42-5	mg/kg												
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg												
VOCs	TOLUENE	108-88-3	mg/kg												
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg												
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg												
VOCs	TRICHLOROETHENE	79-01-6	mg/kg												
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg												
VOCs	VINYL CHLORIDE	75-01-4	mg/kg												
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg												
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg												

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-4R	DDA-NW-6R	DDA-NW-6R	DDA-NW-8R	DDA-NW-8R	DDA-NW-10Q	DDA-NW-10Q	DDA-NW-10G	DDA-NW-10G	DDA-NW-10E
			Sample Date	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
			Sample ID	DDA-NW-4R-0002	DDA-NW-06R-SO-000	DDA-NW-06R-SO-040	DDA-NW-08R-SO-0002	DDA-NW-08R-SO-0204	DDA-NW-10Q-SO-0002	DDA-NW-10Q-SO-0406	DDA-NW-10G-SO-0002	DDA-NW-10G-SO-0204	DDA-NW-10E-SO-0004
			Sample Type Code	N	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg										
Metals	ANTIMONY	7440-36-0	mg/kg										
Metals	ARSENIC	7440-38-2	mg/kg										
Metals	BARIUM	7440-39-3	mg/kg										
Metals	BERYLLIUM	7440-41-7	mg/kg										
Metals	CADMIUM	7440-43-9	mg/kg										
Metals	CALCIUM	7440-70-2	mg/kg										
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg										
Metals	COBALT	7440-48-4	mg/kg										
Metals	COPPER	7440-50-8	mg/kg										
Metals	IRON	7439-89-6	mg/kg										
Metals	LEAD	7439-92-1	mg/kg										
Metals	MAGNESIUM	7439-95-4	mg/kg										
Metals	MANGANESE	7439-96-5	mg/kg										
Metals	MERCURY	7439-97-6	mg/kg										
Metals	NICKEL	7440-02-0	mg/kg										
Metals	POTASSIUM	7440-09-7	mg/kg										
Metals	SELENIUM	7782-49-2	mg/kg										
Metals	SILVER	7440-22-4	mg/kg										
Metals	SODIUM	7440-23-5	mg/kg										
Metals	THALLIUM	7440-28-0	mg/kg										
Metals	VANADIUM	7440-62-2	mg/kg										
Metals	ZINC	7440-66-6	mg/kg										
Other	PH	-9	SU										
Other	TOTAL SOLIDS	-29	PCT										
Pest_PCBs	4,4-DDD	72-54-8	mg/kg										
Pest_PCBs	4,4-DDE	72-55-9	mg/kg										
Pest_PCBs	4,4-DDT	50-29-3	mg/kg										
Pest_PCBs	ALDRIN	309-00-2	mg/kg										
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg										
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg										
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.612	0.471	< 0.018 U	7.85	0.215	1.94	1.84	14.2	0.484	1.2
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg										
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg										
Pest_PCBs	BETA-BHC	319-85-7	mg/kg										
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg										
Pest_PCBs	DIELDRIN	60-57-1	mg/kg										
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg										
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg										
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg										
Pest_PCBs	ENDRIN	72-20-8	mg/kg										
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg										
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg										
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg										
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg										
Pest_PCBs	LINDANE	58-89-9	mg/kg										
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg										
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.612	0.471	< 0.018 U	7.85	0.215	1.94	1.84	14.2	0.484	1.2
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg										
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg										
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg										
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg										
SVOCs	1,4-DIOXANE	123-91-1	mg/kg										
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg										
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg										
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg										
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-4R	DDA-NW-6R	DDA-NW-6R	DDA-NW-8R	DDA-NW-8R	DDA-NW-10Q	DDA-NW-10Q	DDA-NW-10G	DDA-NW-10G	DDA-NW-10E
			Sample Date	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
			Sample ID	DDA-NW-4R-0002	DA-NW-06R-SO-000	DA-NW-06R-SO-040	DDA-NW-08R-SO-0002	DDA-NW-08R-SO-0204	DDA-NW-10Q-SO-0002	DDA-NW-10Q-SO-0406	DDA-NW-10G-SO-0002	DDA-NW-10G-SO-0204	DDA-NW-10E-SO-0004
			Sample Type Code	N	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg										
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg										
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg										
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg										
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg										
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg										
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg										
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg										
SVOCs	2-NITROANILINE	88-74-4	mg/kg										
SVOCs	2-NITROPHENOL	88-75-5	mg/kg										
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg										
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg										
SVOCs	3-NITROANILINE	99-09-2	mg/kg										
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg										
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg										
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg										
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg										
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg										
SVOCs	4-NITROANILINE	100-01-6	mg/kg										
SVOCs	4-NITROPHENOL	100-02-7	mg/kg										
SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
SVOCs	ACETOPHENONE	98-86-2	mg/kg										
SVOCs	ANTHRACENE	120-12-7	mg/kg										
SVOCs	ATRAZINE	1912-24-9	mg/kg										
SVOCs	BENZALDEHYDE	100-52-7	mg/kg										
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg										
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg										
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg										
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg										
SVOCs	CAPROLACTAM	105-60-2	mg/kg										
SVOCs	CARBAZOLE	86-74-8	mg/kg										
SVOCs	CHRYSENE	218-01-9	mg/kg										
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
SVOCs	DIBENZOFURAN	132-64-9	mg/kg										
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg										
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg										
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg										
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg										
SVOCs	FLUORANTHENE	206-44-0	mg/kg										
SVOCs	FLUORENE	86-73-7	mg/kg										
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg										
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg										
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg										
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg										
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
SVOCs	ISOPHORONE	78-59-1	mg/kg										
SVOCs	NAPHTHALENE	91-20-3	mg/kg										
SVOCs	NITROBENZENE	98-95-3	mg/kg										
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg										
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg										
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg										
SVOCs	PHENANTHRENE	85-01-8	mg/kg										
SVOCs	PHENOL	108-95-2	mg/kg										
SVOCs	PYRENE	129-00-0	mg/kg										
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-4R	DDA-NW-6R	DDA-NW-6R	DDA-NW-8R	DDA-NW-8R	DDA-NW-10Q	DDA-NW-10Q	DDA-NW-10G	DDA-NW-10G	DDA-NW-10E
			Sample Date	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
			Sample ID	DDA-NW-4R-0002	DDA-NW-06R-SO-000	DDA-NW-06R-SO-040	DDA-NW-08R-SO-0002	DDA-NW-08R-SO-0204	DDA-NW-10Q-SO-0002	DDA-NW-10Q-SO-0406	DDA-NW-10G-SO-0002	DDA-NW-10G-SO-0204	DDA-NW-10E-SO-0004
			Sample Type Code	N	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg										
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
TPH	ACENAPHTHENE	83-32-9	mg/kg										
TPH	ACENAPHTHYLENE	208-96-8	mg/kg										
TPH	ANTHRACENE	120-12-7	mg/kg										
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
TPH	BENZO[A]PYRENE	50-32-8	mg/kg										
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
TPH	CHRYSENE	218-01-9	mg/kg										
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
TPH	FLUORANTHENE	206-44-0	mg/kg										
TPH	FLUORENE	86-73-7	mg/kg										
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
TPH	NAPHTHALENE	91-20-3	mg/kg										
TPH	PHENANTHRENE	85-01-8	mg/kg										
TPH	PYRENE	129-00-0	mg/kg										
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg										
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg										
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg										
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg										
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg										
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg										
TPH	TPH-DIESEL RANGE	-3527	mg/kg										
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg										
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg										
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg										
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg										
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg										
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg										
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg										
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg										
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg										
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg										
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg										
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg										
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg										
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg										
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg										
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg										
VOCs	2-BUTANONE	78-93-3	mg/kg										
VOCs	2-HEXANONE	591-78-6	mg/kg										
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg										
VOCs	ACETONE	67-64-1	mg/kg										
VOCs	BENZENE	71-43-2	mg/kg										
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg										
VOCs	BROMOFORM	75-25-2	mg/kg										
VOCs	BROMOMETHANE	74-83-9	mg/kg										
VOCs	CARBON DISULFIDE	75-15-0	mg/kg										
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg										
VOCs	CHLOROBENZENE	108-90-7	mg/kg										
VOCs	CHLOROETHANE	75-00-3	mg/kg										
VOCs	CHLOROFORM	67-66-3	mg/kg										
VOCs	CHLOROMETHANE	74-87-3	mg/kg										
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg										
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg										
VOCs	CYCLOHEXANE	110-82-7	mg/kg										
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg										
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg										
VOCs	ETHYLBENZENE	100-41-4	mg/kg										
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg										
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NW-4R	DDA-NW-6R	DDA-NW-6R	DDA-NW-8R	DDA-NW-8R	DDA-NW-10Q	DDA-NW-10Q	DDA-NW-10G	DDA-NW-10G	DDA-NW-10E
			Sample Date	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011
			Sample ID	DDA-NW-4R-0002	DDA-NW-06R-SO-000	DDA-NW-06R-SO-040	DDA-NW-08R-SO-0002	DDA-NW-08R-SO-0204	DDA-NW-10Q-SO-0002	DDA-NW-10Q-SO-0406	DDA-NW-10G-SO-0002	DDA-NW-10G-SO-0204	DDA-NW-10E-SO-0004
			Sample Type Code	N	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg										
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg										
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg										
VOCs	O-XYLENE	95-47-6	mg/kg										
VOCs	STYRENE	100-42-5	mg/kg										
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg										
VOCs	TOLUENE	108-88-3	mg/kg										
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg										
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg										
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg										
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg										
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg										

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NE-2I	DDA-NE-10D	DDA-NE-7I	DDA-NE-13I	DDA-E-1E	DDA-E-1E	DDA-NE-10D	DDA-NE-10D	DDA-NW-4Y
			Sample Date	7/14/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011
			Sample ID	DDA-NE-02I-SO-0002	DDA-NE-10D-SO-0002-FD	DDA-NE-07I-SO-0002	DDA-NE-13I-SO-0002	DDA-E-01E-SO-0002	DDA-E-01E-SO-0608	DDA-NE-10D-SO-0002	DDA-NE-10D-SO-0608	DDA-NW-04Y-SO-0002
			Sample Type Code	N	FD	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
Metals	ALUMINUM	7429-90-5	mg/kg									
Metals	ANTIMONY	7440-36-0	mg/kg									
Metals	ARSENIC	7440-38-2	mg/kg									
Metals	BARIUM	7440-39-3	mg/kg									
Metals	BERYLLIUM	7440-41-7	mg/kg									
Metals	CADMIUM	7440-43-9	mg/kg									
Metals	CALCIUM	7440-70-2	mg/kg									
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
Metals	COBALT	7440-48-4	mg/kg									
Metals	COPPER	7440-50-8	mg/kg									
Metals	IRON	7439-89-6	mg/kg									
Metals	LEAD	7439-92-1	mg/kg									
Metals	MAGNESIUM	7439-95-4	mg/kg									
Metals	MANGANESE	7439-96-5	mg/kg									
Metals	MERCURY	7439-97-6	mg/kg									
Metals	NICKEL	7440-02-0	mg/kg									
Metals	POTASSIUM	7440-09-7	mg/kg									
Metals	SELENIUM	7782-49-2	mg/kg									
Metals	SILVER	7440-22-4	mg/kg									
Metals	SODIUM	7440-23-5	mg/kg									
Metals	THALLIUM	7440-28-0	mg/kg									
Metals	VANADIUM	7440-62-2	mg/kg									
Metals	ZINC	7440-66-6	mg/kg									
Other	PH	-9	SU									
Other	TOTAL SOLIDS	-29	PCT									
Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
Pest_PCBs	ALDRIN	309-00-2	mg/kg									
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.169	10.6	2.24	0.469	3.45	< 0.018 U	7.4	< 0.018 U	1.34
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
Pest_PCBs	ENDRIN	72-20-8	mg/kg									
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
Pest_PCBs	LINDANE	58-89-9	mg/kg									
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.169	10.6	2.24	0.469	3.45	< 0.018 U	7.4	< 0.018 U	1.34
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NE-2I	DDA-NE-10D	DDA-NE-7I	DDA-NE-13I	DDA-E-1E	DDA-E-1E	DDA-NE-10D	DDA-NE-10D	DDA-NW-4Y
				Sample Date	7/14/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011
				Sample ID	DDA-NE-02I-SO-0002	DDA-NE-10D-SO-0002-FD	DDA-NE-07I-SO-0002	DDA-NE-13I-SO-0002	DDA-E-01E-SO-0002	DDA-E-01E-SO-0608	DDA-NE-10D-SO-0002	DDA-NE-10D-SO-0608	DDA-NW-04Y-SO-0002
				Sample Type Code	N	FD	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg										
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg										
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg										
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg										
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg										
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg										
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg										
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg										
SVOCs	2-NITROANILINE	88-74-4	mg/kg										
SVOCs	2-NITROPHENOL	88-75-5	mg/kg										
SVOCs	3- AND 4-METHYLPHENOL	)8-39-4/106-44	mg/kg										
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg										
SVOCs	3-NITROANILINE	99-09-2	mg/kg										
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg										
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg										
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg										
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg										
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg										
SVOCs	4-NITROANILINE	100-01-6	mg/kg										
SVOCs	4-NITROPHENOL	100-02-7	mg/kg										
SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
SVOCs	ACETOPHENONE	98-86-2	mg/kg										
SVOCs	ANTHRACENE	120-12-7	mg/kg										
SVOCs	ATRAZINE	1912-24-9	mg/kg										
SVOCs	BENZALDEHYDE	100-52-7	mg/kg										
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg										
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg										
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg										
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg										
SVOCs	CAPROLACTAM	105-60-2	mg/kg										
SVOCs	CARBAZOLE	86-74-8	mg/kg										
SVOCs	CHRYSENE	218-01-9	mg/kg										
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
SVOCs	DIBENZOFURAN	132-64-9	mg/kg										
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg										
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg										
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg										
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg										
SVOCs	FLUORANTHENE	206-44-0	mg/kg										
SVOCs	FLUORENE	86-73-7	mg/kg										
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg										
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg										
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg										
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg										
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
SVOCs	ISOPHORONE	78-59-1	mg/kg										
SVOCs	NAPHTHALENE	91-20-3	mg/kg										
SVOCs	NITROBENZENE	98-95-3	mg/kg										
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg										
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg										
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg										
SVOCs	PHENANTHRENE	85-01-8	mg/kg										
SVOCs	PHENOL	108-95-2	mg/kg										
SVOCs	PYRENE	129-00-0	mg/kg										
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NE-2I	DDA-NE-10D	DDA-NE-7I	DDA-NE-13I	DDA-E-1E	DDA-E-1E	DDA-NE-10D	DDA-NE-10D	DDA-NW-4Y
			Sample Date	7/14/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011
			Sample ID	DDA-NE-02I-SO-0002	DDA-NE-10D-SO-0002-FD	DDA-NE-07I-SO-0002	DDA-NE-13I-SO-0002	DDA-E-01E-SO-0002	DDA-E-01E-SO-0608	DDA-NE-10D-SO-0002	DDA-NE-10D-SO-0608	DDA-NW-04Y-SO-0002
			Sample Type Code	N	FD	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg									
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg									
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg									
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg									
VOCs	BENZENE	71-43-2	mg/kg									
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									
VOCs	CHLOROBENZENE	108-90-7	mg/kg									
VOCs	CHLOROETHANE	75-00-3	mg/kg									
VOCs	CHLOROFORM	67-66-3	mg/kg									
VOCs	CHLOROMETHANE	74-87-3	mg/kg									
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg									
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg									

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	DDA-NE-2I	DDA-NE-10D	DDA-NE-7I	DDA-NE-13I	DDA-E-1E	DDA-E-1E	DDA-NE-10D	DDA-NE-10D	DDA-NW-4Y
			Sample Date	7/14/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011	7/15/2011
			Sample ID	DDA-NE-02I-SO-0002	DDA-NE-10D-SO-0002-FD	DDA-NE-07I-SO-0002	DDA-NE-13I-SO-0002	DDA-E-01E-SO-0002	DDA-E-01E-SO-0608	DDA-NE-10D-SO-0002	DDA-NE-10D-SO-0608	DDA-NW-04Y-SO-0002
			Sample Type Code	N	FD	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
VOCs	METHYL ACETATE	79-20-9	mg/kg									
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg									
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg									
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg									
VOCs	O-XYLENE	95-47-6	mg/kg									
VOCs	STYRENE	100-42-5	mg/kg									
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg									
VOCs	TOLUENE	108-88-3	mg/kg									
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg									
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg									
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg									
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg									
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples with detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-4Y	DDA-NW-3R	FTA-SB-214	FTA-SB-213	FTA-SB-213	FTA-SB-213	FTA-SB-212	FTA-SB-212	FTA-SB-214
				Sample Date	7/15/2011	7/15/2011	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012
				Sample ID	DA-NW-04Y-SO-020	DDA-NW-03R-SO-0810	FTA-SB-214-0002-D	FTA-SB-213-0002	FTA-SB-213-0206	FTA-SB-213-0610	FTA-SB-212-0002	FTA-SB-212-0206	FTA-SB-214-0002
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	2 - 4 ft	8 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg			13000	11700		14300	14400	15800	13500	
Metals	ANTIMONY	7440-36-0	mg/kg			0.05 J	0.09 J		0.08 J	0.07 J	0.14 J	0.18 J	
Metals	ARSENIC	7440-38-2	mg/kg			6.1 J	9 J		9.8 J	7.1 J	9.4 J	7 J	
Metals	BARIUM	7440-39-3	mg/kg			17.4	21.8		30.3	25.7	39.9	16.7	
Metals	BERYLLIUM	7440-41-7	mg/kg			0.41 J	0.48		0.51	0.51	0.68	0.47	
Metals	CADMIUM	7440-43-9	mg/kg			0.09	0.08 J		0.08	0.19	0.08 J	0.08	
Metals	CALCIUM	7440-70-2	mg/kg			3480	1680		4140	3170	3530	3260	
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg			32.7 J	21.8 J		38.3 J	27.7 J	29.7 J	41.4 J	
Metals	COBALT	7440-48-4	mg/kg			10.3	11.5		11.3	15.1	13.6	12.2	
Metals	COPPER	7440-50-8	mg/kg			18.9	21.2		20.8	22.4	24.5	27.3	
Metals	IRON	7439-89-6	mg/kg			20700	19200		23800	24200	24500	27300	
Metals	LEAD	7439-92-1	mg/kg			10.2 J	11.4 J		16.4 J	11.2 J	12.2 J	10.4 J	
Metals	MAGNESIUM	7439-95-4	mg/kg			7500	5040		7620	7680	6870	8860	
Metals	MANGANESE	7439-96-5	mg/kg			474	470		455	508	526	576	
Metals	MERCURY	7439-97-6	mg/kg			< 0.013 U	< 0.018 U		0.009 J	0.007 J	< 0.014 U	< 0.016 U	
Metals	NICKEL	7440-02-0	mg/kg			23	21.1		24.8	29.5	28.4	28.7	
Metals	POTASSIUM	7440-09-7	mg/kg			760 J	949 J		1780 J	1290 J	2260 J	791 J	
Metals	SELENIUM	7782-49-2	mg/kg			0.19 J	0.21 J		0.28 J	0.23 J	0.22 J	0.24 J	
Metals	SILVER	7440-22-4	mg/kg			0.03 J	0.05 J		0.08	0.02 J	0.05 J	0.03 J	
Metals	SODIUM	7440-23-5	mg/kg			159 J	96.2 J		228 J	324 J	217 J	118 J	
Metals	THALLIUM	7440-28-0	mg/kg			0.06 J	0.08 J		0.14 J	0.08 J	0.12 J	0.06 J	
Metals	VANADIUM	7440-62-2	mg/kg			30.4	27.5		40.9	36.7	39.7	36.6	
Metals	ZINC	7440-66-6	mg/kg			44.8	43.3		53.6	69.1	53.7	47	
Other	PH	-9	SU				5			6.2		6	
Other	TOTAL SOLIDS	-29	PCT			95	90	92	91	91	87	92	
Pest_PCBs	4,4-DDD	72-54-8	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	4,4-DDE	72-55-9	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	4,4-DDT	50-29-3	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ALDRIN	309-00-2	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0215 U	< 0.018 U	< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0215 U	< 0.018 U	< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0215 U	< 0.018 U	< 0.0099 U	< 0.0096 U		< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0215 U	< 0.018 U	< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0215 U	< 0.018 U	< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0215 U	< 0.018 U	< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	< 0.0215 U	< 0.018 U	0.71	0.054		< 0.0088 U	0.32	< 0.0089 U	0.6	
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg			< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg			< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	BETA-BHC	319-85-7	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg			< 0.00084 UJ	< 0.00082 UJ		< 0.00088 UJ	< 0.00092 UJ	< 0.00089 UJ	< 0.00088 UJ	
Pest_PCBs	DIELDRIN	60-57-1	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDRIN	72-20-8	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg			< 0.0016 U	< 0.0016 U		< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg			0.083 J	0.005 J		< 0.0017 U	0.044 J	< 0.0017 U	0.079 J	
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	LINDANE	58-89-9	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg			< 0.0084 U	< 0.0082 U		< 0.0088 U	< 0.0092 U	< 0.0089 U	< 0.0088 U	
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	< 0.0215 U	< 0.018 U	0.71	0.054		< 0.01 U	0.32	< 0.01 U	0.60	
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg			< 0.016 U	< 0.016 U		< 0.017 U	< 0.018 U	< 0.017 U	< 0.017 U	
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg			< 0.00084 U	< 0.00082 U		< 0.00088 U	< 0.00092 U	< 0.00089 U	< 0.00088 U	
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	0.0014 J	< 0.011 U	< 0.01 U	
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U	
SVOCs	1,4-DIOXANE	123-91-1	mg/kg			< 0.049 U	< 0.044 U		< 0.051 U	< 0.049 U	< 0.055 U	< 0.05 U	
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U	
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg			< 0.049 U	< 0.044 U		< 0.051 U	< 0.049 U	0.0041 J	< 0.05 U	
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg			< 0.6 U	< 0.54 U		< 0.62 U	< 0.61 U	< 0.68 UJ	< 0.62 U	
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg			< 0.049 U	< 0.044 U		< 0.051 U	< 0.049 U	< 0.055 U	< 0.05 U	

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-4Y	DDA-NW-3R	FTA-SB-214	FTA-SB-213	FTA-SB-213	FTA-SB-213	FTA-SB-212	FTA-SB-212	FTA-SB-214
				Sample Date	7/15/2011	7/15/2011	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012
				Sample ID	DA-NW-04Y-SO-020	DDA-NW-03R-SO-0810	FTA-SB-214-0002-D	FTA-SB-213-0002	FTA-SB-213-0206	FTA-SB-213-0610	FTA-SB-212-0002	FTA-SB-212-0206	FTA-SB-214-0002
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	2 - 4 ft	8 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg			< 0.073 UJ	< 0.066 UJ		< 0.076 UJ	< 0.074 UJ	< 0.083 UJ	< 0.076 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg			< 0.049 U	< 0.044 U		< 0.051 U	< 0.049 U	< 0.055 U	< 0.05 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg			< 0.6 U	< 0.54 U		< 0.62 U	< 0.61 U	< 0.68 UJ	< 0.62 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg			< 0.6 U	< 0.54 U		< 0.62 U	< 0.61 U	< 0.68 UJ	< 0.62 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg			< 0.098 U	< 0.088 U		< 0.1 U	< 0.099 U	< 0.11 U	< 0.1 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg			< 0.049 U	< 0.044 U		< 0.051 U	< 0.049 U	< 0.055 U	< 0.05 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg			< 0.6 UJ	< 0.54 UJ		< 0.62 UJ	< 0.61 UJ	< 0.68 UJ	< 0.62 UJ
SVOCs	ACENAPHTHENE	83-32-9	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	ANTHRACENE	120-12-7	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	ATRAZINE	1912-24-9	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	0.001 J	0.0018 J	< 0.01 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg			< 0.24 UJ	< 0.22 UJ		< 0.25 UJ	< 0.24 UJ	< 0.28 UJ	< 0.25 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	0.027	< 0.011 U	< 0.01 U
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	0.03	< 0.011 U	0.0042 J
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	0.047	< 0.011 U	< 0.01 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg			< 0.049 U	< 0.044 U		< 0.051 U	< 0.049 U	< 0.055 U	0.0044 J
SVOCs	CAPROLACTAM	105-60-2	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	CARBAZOLE	86-74-8	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	CHRYSENE	218-01-9	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	0.0099 J	< 0.011 U	< 0.01 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg			< 0.049 U	< 0.044 U		< 0.051 U	< 0.049 U	< 0.055 U	< 0.05 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	FLUORENE	86-73-7	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	0.048	< 0.011 U	< 0.01 U
SVOCs	ISOPHORONE	78-59-1	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	NITROBENZENE	98-95-3	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg			< 0.0098 U	< 0.0088 U		< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg			< 0.049 UJ	< 0.044 UJ		< 0.051 UJ	< 0.049 UJ	< 0.055 UJ	< 0.05 UJ
SVOCs	PHENANTHRENE	85-01-8	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	PHENOL	108-95-2	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	PYRENE	129-00-0	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 UJ	< 0.25 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	0.16	< 0.28 U	0.0042
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	< 0.24 U	< 0.28 U	< 0.25 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-4Y	DDA-NW-3R	FTA-SB-214	FTA-SB-213	FTA-SB-213	FTA-SB-213	FTA-SB-212	FTA-SB-212	FTA-SB-214
				Sample Date	7/15/2011	7/15/2011	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012
				Sample ID	DA-NW-04Y-SO-020	DDA-NW-03R-SO-0810	FTA-SB-214-0002-D	FTA-SB-213-0002	FTA-SB-213-0206	FTA-SB-213-0610	FTA-SB-212-0002	FTA-SB-212-0206	FTA-SB-214-0002
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	2 - 4 ft	8 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg			< 0.24 U	< 0.22 U		< 0.25 U	0.16	< 0.28 U	0.0042
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg			< 0.011 U	< 0.012 U		< 0.01 U	< 0.012 U	< 0.01 U	< 0.012 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg			< 0.035 U	< 0.16 U		< 0.016 U	< 0.021 U	< 0.01 U	< 0.012 U
VOCs	BENZENE	71-43-2	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	CHLOROETHANE	75-00-3	mg/kg			< 0.0044 U	< 0.0046 U		< 0.0041 U	< 0.005 U	< 0.004 U	< 0.005 U
VOCs	CHLOROFORM	67-66-3	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg			< 0.0044 U	< 0.0046 U		< 0.0041 U	< 0.005 U	< 0.004 U	< 0.005 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg			< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg			< 0.0044 U	< 0.0046 U		< 0.0041 U	< 0.005 U	< 0.004 U	< 0.005 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	DDA-NW-4Y	DDA-NW-3R	FTA-SB-214	FTA-SB-213	FTA-SB-213	FTA-SB-213	FTA-SB-212	FTA-SB-212	FTA-SB-214
				Sample Date	7/15/2011	7/15/2011	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012
				Sample ID	DA-NW-04Y-SO-020	DDA-NW-03R-SO-0810	FTA-SB-214-0002-D	FTA-SB-213-0002	FTA-SB-213-0206	FTA-SB-213-0610	FTA-SB-212-0002	FTA-SB-212-0206	FTA-SB-214-0002
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	2 - 4 ft	8 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg				< 0.011 U	< 0.012 U		< 0.01 U	< 0.012 U	< 0.01 U	< 0.012 U
VOCs	O-XYLENE	95-47-6	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	STYRENE	100-42-5	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	TOLUENE	108-88-3	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg				< 0.0022 U	< 0.0023 U		< 0.002 U	< 0.0025 U	< 0.002 U	< 0.0025 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg				< 0.0044 U	< 0.0046 U		< 0.0041 U	< 0.005 U	< 0.004 U	< 0.005 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg				< 0.0065 U	< 0.0069 U		< 0.0062 U	< 0.0075 U	< 0.006 U	< 0.0075 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg				< 0.0044 U	< 0.0046 U		< 0.0041 U	< 0.005 U	< 0.004 U	< 0.005 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-214	FTA-SB-214	FTA-SB-206	FTA-SB-211	FTA-SB-208	FTA-SB-208	FTA-SB-208	FTA-SB-220	FTA-SB-220
				Sample Date	11/5/2012	11/5/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-214-0206	FTA-SB-214-0610	FTA-SB-206-0002-D	FTA-SB-211-0002-D	FTA-SB-208-0002	FTA-SB-208-0206	FTA-SB-208-0610	FTA-SB-220-0002	FTA-SB-220-0206
				Sample Type Code	N	N	FD	FD	N	N	N	N	N
				Depth Interval	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	26100		13600	16400	17000		14800	11600	14900
Metals	ANTIMONY	7440-36-0	mg/kg	0.2 J		0.17	0.11	0.08 J		0.08 J	0.06 J	0.07 J
Metals	ARSENIC	7440-38-2	mg/kg	25.1 J		7.5	11.7	4.9 J		8.7 J	4.6 J	7.2 J
Metals	BARIUM	7440-39-3	mg/kg	88		25.8	36.3	18		22	18.6	20.7
Metals	BERYLLIUM	7440-41-7	mg/kg	1.2		0.39 J	0.68	0.36 J		0.47	0.38 J	0.47
Metals	CADMIUM	7440-43-9	mg/kg	0.14		0.13	0.1	0.06 J		0.08	0.07 J	0.07
Metals	CALCIUM	7440-70-2	mg/kg	4710		3640	2810	1470		2110	2360	2510
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	47 J		33.7	30.3	26.2 J		38.1 J	38.9 J	43.8 J
Metals	COBALT	7440-48-4	mg/kg	18.9		11.8	13.4	6.8		12.6	8.6	12.8
Metals	COPPER	7440-50-8	mg/kg	33		25.1	27.6	7.1		26	12.9	24.6
Metals	IRON	7439-89-6	mg/kg	43100		23000	29400	23400		27400	17200	26900
Metals	LEAD	7439-92-1	mg/kg	19.6 J		12.9	12.2	9 J		10.9 J	7.3 J	9.3 J
Metals	MAGNESIUM	7439-95-4	mg/kg	10500		7780	7500	4460		8260	6700	9690
Metals	MANGANESE	7439-96-5	mg/kg	1530		492	596	476		569	315	530
Metals	MERCURY	7439-97-6	mg/kg	< 0.021 U		0.03 J	0.006 J	0.05		< 0.016 U	0.005 J	< 0.017 U
Metals	NICKEL	7440-02-0	mg/kg	45.9		33.1	28.2	15.6		30.5	21.9	35.4
Metals	POTASSIUM	7440-09-7	mg/kg	5640 J		947	1900	549 J		959 J	732 J	918 J
Metals	SELENIUM	7782-49-2	mg/kg	0.3 J		0.32 J	0.27 J	0.8 J		0.22 J	0.28 J	0.23 J
Metals	SILVER	7440-22-4	mg/kg	0.07 J		0.09 J	0.04 J	0.04 J		0.02 J	0.02 J	0.03 J
Metals	SODIUM	7440-23-5	mg/kg	335 J		133 J	159	103 J		91.8 J	91.7 J	112 J
Metals	THALLIUM	7440-28-0	mg/kg	0.26 J		0.07 J	0.11	0.09 J		0.07 J	0.05 J	0.07 J
Metals	VANADIUM	7440-62-2	mg/kg	56.2		42.8	45.4	42.7		38.1	28.8	39.8
Metals	ZINC	7440-66-6	mg/kg	81.1		59.6	59.7	38.5		50.2	38	43
Other	PH	-9	SU					4.9			5.8	
Other	TOTAL SOLIDS	-29	PCT	81	93	87	90	82	92	92	88	90
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0099 U		< 0.17 U	< 0.24 U	< 0.01 U		< 0.0089 U	< 0.0089 U	< 0.0089 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0099 U		< 0.17 U	< 0.24 U	< 0.01 U		< 0.0089 U	< 0.0089 U	< 0.0089 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.012 U		< 0.2 U	< 0.28 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.01 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0099 U		< 0.17 U	< 0.24 U	< 0.01 U		< 0.0089 U	< 0.0089 U	< 0.0089 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0099 U		< 0.17 U	< 0.24 U	< 0.01 U		< 0.0089 U	< 0.0089 U	< 0.0089 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0099 U		< 0.17 UJ	8.3 J	< 0.01 U		< 0.0089 U	< 0.0089 U	< 0.0089 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	< 0.0099 U		14	36 J	0.015 J		< 0.0089 U	1.5	< 0.0089 U
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0099 U		< 0.17 U	< 0.24 U	< 0.01 U		< 0.0089 U	< 0.0089 U	< 0.0089 U
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0099 U		< 0.17 U	< 0.24 U	< 0.01 U		< 0.0089 U	< 0.0089 U	< 0.0089 U
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00099 UJ		< 0.00083 UJ	< 0.00095 UJ	< 0.001 UJ		< 0.00089 UJ		
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0019 U		< 0.0016 U	< 0.0018 U	< 0.002 U		< 0.0017 U		
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.0019 U		2.4 J	4.3 J	0.0015 J		< 0.0017 U		
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0099 U		< 0.0083 U	< 0.0095 U	< 0.01 U		< 0.0089 U		
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	< 0.012 U		14	44	0.015		< 0.01 U	1.5	< 0.01 U
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.019 U		< 0.016 U	< 0.018 U	< 0.02 U		< 0.017 U		
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00099 U		< 0.00083 U	< 0.00095 U	< 0.001 U		< 0.00089 U		
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.06 U		< 0.057 U	< 0.054 U	< 0.058 UJ		< 0.054 U	< 0.056 U	< 0.042 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 UJ		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.06 U		< 0.057 U	< 0.054 U	< 0.058 U		< 0.054 U	< 0.056 U	< 0.042 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.74 U		< 0.7 U	< 0.66 U	< 0.71 U		< 0.67 U	< 0.68 U	< 0.52 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.06 U		< 0.057 U	< 0.054 U	< 0.058 U		< 0.054 U	< 0.056 U	< 0.042 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-214	FTA-SB-214	FTA-SB-206	FTA-SB-211	FTA-SB-208	FTA-SB-208	FTA-SB-208	FTA-SB-220	FTA-SB-220
				Sample Date	11/5/2012	11/5/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-214-0206	FTA-SB-214-0610	FTA-SB-206-0002-D	FTA-SB-211-0002-D	FTA-SB-208-0002	FTA-SB-208-0206	FTA-SB-208-0610	FTA-SB-220-0002	FTA-SB-220-0206
				Sample Type Code	N	N	FD	FD	N	N	N	N	N
				Depth Interval	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.09 UJ		< 0.086 UJ	< 0.08 UJ	< 0.087 UJ		< 0.081 UJ	< 0.084 UJ	< 0.064 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.06 U		< 0.057 U	< 0.054 U	< 0.058 U		< 0.054 U	< 0.056 U	< 0.042 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.74 U		< 0.7 U	< 0.66 UJ	< 0.71 U		< 0.67 U	< 0.68 U	< 0.52 UJ
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.012 U		< 0.011 UJ	< 0.011 UJ	UR		< 0.011 UJ	< 0.011 UJ	< 0.0085 UJ
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.74 U		< 0.7 U	< 0.66 U	< 0.71 U		< 0.67 U	< 0.68 U	< 0.52 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.12 U		< 0.11 U	< 0.11 U	< 0.12 U		< 0.11 U	< 0.11 U	< 0.085 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.06 U		< 0.057 U	< 0.054 U	< 0.058 UJ		< 0.054 U	< 0.056 U	< 0.042 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 UJ		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.74 UJ		< 0.7 UJ	< 0.66 U	< 0.71 UJ		< 0.67 UJ	< 0.68 UJ	< 0.52 UJ
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.3 UJ		< 0.28 UJ	< 0.27 UJ	< 0.29 UJ		< 0.27 UJ	< 0.28 UJ	< 0.21 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.012 U		0.021 J	0.0034 J	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.012 U		0.018 J	< 0.011 U	< 0.012 UJ		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.012 U		0.034	0.0045 J	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	0.68		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	0.61	< 0.21 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.06 U		< 0.057 U	< 0.054 UJ	< 0.058 UJ		< 0.054 UJ	< 0.056 UJ	< 0.042 UJ
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.012 U		0.0048 J	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.06 U		< 0.057 U	< 0.054 U	< 0.058 U		< 0.054 U	< 0.056 U	< 0.042 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.012 U		< 0.011 U	0.0083 J	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 UJ		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.012 U		0.024	0.0064 J	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.012 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.011 U	< 0.011 U	< 0.0085 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.06 UJ		< 0.057 U	< 0.054 U	< 0.058 U		< 0.054 U	< 0.056 U	< 0.042 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	PHENOL	108-95-2	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	PYRENE	129-00-0	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.3 U		0.10	0.014	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.3 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-214	FTA-SB-214	FTA-SB-206	FTA-SB-211	FTA-SB-208	FTA-SB-208	FTA-SB-208	FTA-SB-220	FTA-SB-220
				Sample Date	11/5/2012	11/5/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-214-0206	FTA-SB-214-0610	FTA-SB-206-0002-D	FTA-SB-211-0002-D	FTA-SB-208-0002	FTA-SB-208-0206	FTA-SB-208-0610	FTA-SB-220-0002	FTA-SB-220-0206
				Sample Type Code	N	N	FD	FD	N	N	N	N	N
				Depth Interval	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.3 U		0.10	0.014	< 0.29 U		< 0.27 U	< 0.28 U	< 0.21 U
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.002 U		< 0.0028 U	0.0011 J	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.002 U		< 0.0028 U	0.00069 J	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.01 U		< 0.014 U	< 0.012 U	< 0.014 U		< 0.019 U	< 0.0096 U	< 0.012 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	< 0.012 U		0.058	0.13	0.29		< 0.067 U	< 0.17 U	< 0.031 U
VOCs	BENZENE	71-43-2	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.004 U		< 0.0055 U	< 0.0049 U	< 0.0055 U		< 0.0075 U	< 0.0038 U	< 0.0048 U
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.004 U		< 0.0055 U	< 0.0049 U	< 0.0055 U		< 0.0075 U	< 0.0038 U	< 0.0048 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.004 U		< 0.0055 U	< 0.0049 U	< 0.0055 U		< 0.0075 U	< 0.0038 U	< 0.0048 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-214	FTA-SB-214	FTA-SB-206	FTA-SB-211	FTA-SB-208	FTA-SB-208	FTA-SB-208	FTA-SB-220	FTA-SB-220
				Sample Date	11/5/2012	11/5/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-214-0206	FTA-SB-214-0610	FTA-SB-206-0002-D	FTA-SB-211-0002-D	FTA-SB-208-0002	FTA-SB-208-0206	FTA-SB-208-0610	FTA-SB-220-0002	FTA-SB-220-0206
				Sample Type Code	N	N	FD	FD	N	N	N	N	N
				Depth Interval	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.01 U		< 0.014 U	< 0.012 U	< 0.014 U		< 0.019 U	< 0.0096 U	< 0.012 U
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	STYRENE	100-42-5	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	TOLUENE	108-88-3	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.002 U		< 0.0028 U	< 0.0024 U	< 0.0028 U		< 0.0038 U	< 0.0019 U	< 0.0024 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.004 U		< 0.0055 U	< 0.0049 U	< 0.0055 U		< 0.0075 U	< 0.0038 U	< 0.0048 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0061 U		< 0.0082 U	< 0.0074 U	< 0.0082 U		< 0.011 U	< 0.0058 U	< 0.0073 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.004 U		< 0.0055 U	< 0.0049 U	< 0.0055 U		< 0.0075 U	< 0.0038 U	< 0.0048 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples with detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting det limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-220	FTA-SB-210	FTA-SB-210	FTA-SB-210	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-209	FTA-SB-209
				Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-220-0610	FTA-SB-210-0002	FTA-SB-210-0206	FTA-SB-210-0610	FTA-SB-211-0002	FTA-SB-211-0206	FTA-SB-211-0610	FTA-SB-209-0002	FTA-SB-209-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg		17800		15800	17100	13000	13400	13300	13200	
Metals	ANTIMONY	7440-36-0	mg/kg		0.09 J		0.08 J	0.1	0.08 J	0.09	0.06 J	0.05 J	
Metals	ARSENIC	7440-38-2	mg/kg		9.8 J		6.8 J	10.1	7.7	10.4	6	6.5	
Metals	BARIUM	7440-39-3	mg/kg		39.5		22.2	35.7	28.2	23.6	15.1	23.9	
Metals	BERYLLIUM	7440-41-7	mg/kg		0.67		0.47	0.66	0.46 J	0.4 J	0.33 J	0.34 J	
Metals	CADMIUM	7440-43-9	mg/kg		0.13		0.08	0.12	0.08 J	0.08 J	0.09	0.08 J	
Metals	CALCIUM	7440-70-2	mg/kg		3590		4270	3270	2900	3590	2990	3090	
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg		37.5 J		32.7 J	37.1	29.8	28.2	33.4	28.9	
Metals	COBALT	7440-48-4	mg/kg		15.2		15.3	14.3	11.7	13.9	12.3	11.5	
Metals	COPPER	7440-50-8	mg/kg		31.7		28.4	30.9	22.1	28.4	23.5	23.2	
Metals	IRON	7439-89-6	mg/kg		32000		29800	31000	23600	25800	24400	25000	
Metals	LEAD	7439-92-1	mg/kg		13.6 J		11.3 J	13.6	11.4	13.9	10.6	10.1	
Metals	MAGNESIUM	7439-95-4	mg/kg		9460		8360	8420	6430	7160	9690	7630	
Metals	MANGANESE	7439-96-5	mg/kg		686		632	666	544	544	476	504	
Metals	MERCURY	7439-97-6	mg/kg		< 0.018 U		< 0.015 U	< 0.019 U	< 0.015 U	0.005 J	0.006 J	0.006 J	
Metals	NICKEL	7440-02-0	mg/kg		31.6		31.7	30.3	24.8	28.3	30.7	23.8	
Metals	POTASSIUM	7440-09-7	mg/kg		1960 J		1040 J	1740	1560	1160	691	1060	
Metals	SELENIUM	7782-49-2	mg/kg		0.34 J		0.3 J	0.25 J	0.13 J	0.34 J	0.33 J	0.3 J	
Metals	SILVER	7440-22-4	mg/kg		0.05 J		0.03 J	0.05 J	0.03 J	0.04 J	0.04 J	0.03 J	
Metals	SODIUM	7440-23-5	mg/kg		417 J		164 J	180	136	246	139 J	159 J	
Metals	THALLIUM	7440-28-0	mg/kg		0.11 J		0.06 J	0.12	0.09 J	0.07 J	0.07 J	0.07 J	
Metals	VANADIUM	7440-62-2	mg/kg		47		40.3	45.8	32.6	32.7	38.7	38.5	
Metals	ZINC	7440-66-6	mg/kg		72		59	64	49.4	54.6	46.8	49.5	
Other	PH	-9	SU		6			6			6.4		
Other	TOTAL SOLIDS	-29	PCT	91	89	87	92	80	86	92	94	95	
Pest_PCBs	4,4-DDD	72-54-8	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	4,4-DDE	72-55-9	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	4,4-DDT	50-29-3	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	0.043 J	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ALDRIN	309-00-2	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg		< 0.0089 U		< 0.0092 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.09 U	< 0.0086 UJ	
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg		< 0.0089 U		< 0.0092 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.09 U	< 0.0086 UJ	
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg		< 0.01 U		< 0.011 U	< 0.11 U	< 0.011 U	< 0.0099 U	< 0.11 U	< 0.01 UJ	
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg		< 0.0089 U		< 0.0092 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.09 U	< 0.0086 UJ	
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg		< 0.0089 U		< 0.0092 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.09 U	< 0.0086 UJ	
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg		< 0.0089 U		< 0.0092 U	3.2 J	0.21	< 0.0084 U	< 0.09 U	< 0.0086 UJ	
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg		1.9		< 0.0092 U	13 J	0.74	0.072	8.7	2 J	
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg		< 0.0089 U		< 0.0092 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.09 U	< 0.0086 UJ	
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg		< 0.0089 U		< 0.0092 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.09 U	< 0.0086 UJ	
Pest_PCBs	BETA-BHC	319-85-7	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg		< 0.00089 UJ		< 0.00092 UJ	< 0.00097 UJ	< 0.00094 UJ	< 0.00084 UJ	< 0.00086 UJ	< 0.00086 UJ	
Pest_PCBs	DIELDRIN	60-57-1	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDRIN	72-20-8	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg		< 0.0017 U		< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U	
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg		0.24 J		< 0.0018 U	1.6 J	0.086 J	0.0078 J	0.99 J	0.27 J	
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	LINDANE	58-89-9	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg		< 0.0089 U		< 0.0092 U	< 0.0097 U	< 0.0094 U	< 0.0084 U	< 0.0086 U	< 0.0086 U	
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg		1.9		< 0.011 U	16	0.95	0.072	8.7	2.0	
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg		< 0.017 U		< 0.018 U	< 0.019 U	< 0.018 U	< 0.016 U	< 0.017 U	< 0.017 U	
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg		< 0.00089 U		< 0.00092 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00086 U	< 0.00086 U	
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	0.0013 J	0.0054 J	< 0.01 U	
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	
SVOCs	1,4-DIOXANE	123-91-1	mg/kg		< 0.053 U		< 0.052 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.05 U	< 0.052 U	
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg		< 0.053 U		< 0.052 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.05 U	< 0.052 U	
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg		< 0.65 U		< 0.64 U	< 0.69 U	< 0.68 U	< 0.65 U	< 0.61 U	< 0.64 U	
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg		< 0.053 U		< 0.052 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.05 U	< 0.052 U	

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-220	FTA-SB-210	FTA-SB-210	FTA-SB-210	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-209	FTA-SB-209
				Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-220-0610	FTA-SB-210-0002	FTA-SB-210-0206	FTA-SB-210-0610	FTA-SB-211-0002	FTA-SB-211-0206	FTA-SB-211-0610	FTA-SB-209-0002	FTA-SB-209-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg		< 0.079 UJ		< 0.078 UJ	< 0.084 UJ	< 0.083 UJ	< 0.079 UJ	< 0.075 UJ	< 0.078 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg		< 0.053 U		< 0.052 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.05 U	< 0.052 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg		< 0.65 U		< 0.64 UJ	< 0.69 UJ	< 0.68 UJ	< 0.65 UJ	< 0.61 U	< 0.64 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg		< 0.01 UJ		< 0.01 UJ	< 0.011 U	< 0.011 U	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ
SVOCs	3-NITROANILINE	99-09-2	mg/kg		< 0.65 U		< 0.64 U	< 0.69 U	< 0.68 U	< 0.65 U	< 0.61 U	< 0.64 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg		< 0.1 U		< 0.1 U	< 0.11 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.1 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg		< 0.053 U		< 0.052 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.05 U	< 0.052 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg		< 0.65 UJ		< 0.64 UJ	< 0.69 U	< 0.68 U	< 0.65 U	< 0.61 UJ	< 0.64 UJ
SVOCs	ACENAPHTHENE	83-32-9	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	0.076 J	< 0.26 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	ANTHRACENE	120-12-7	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	0.087 J	< 0.26 U
SVOCs	ATRAZINE	1912-24-9	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	0.0014 J	< 0.01 U	< 0.01 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg		< 0.26 UJ		< 0.26 UJ	< 0.28 UJ	< 0.28 UJ	< 0.26 UJ	< 0.25 UJ	< 0.26 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg		0.1		< 0.01 U	0.0035 J	< 0.011 U	0.0023 J	0.17	0.016 J
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg		0.081		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	0.12	0.013 J
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg		0.14		< 0.01 U	0.0044 J	< 0.011 U	0.0026 J	0.2	0.022
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg		0.093 J		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	0.12 J	< 0.25 U	0.13 J
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg		0.0052 J		< 0.052 UJ	< 0.056 U	< 0.056 U	< 0.053 UJ	< 0.05 U	< 0.052 UJ
SVOCs	CAPROLACTAM	105-60-2	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	CARBAZOLE	86-74-8	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	CHRYSENE	218-01-9	mg/kg		0.11 J		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	0.17 J	< 0.26 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg		0.02 J		< 0.01 U	< 0.011 U	< 0.011 U	0.0025 J	0.028	0.0033 J
SVOCs	DIBENZOFURAN	132-64-9	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg		< 0.053 U		< 0.052 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.05 U	< 0.052 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg		0.21 J		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	0.39	< 0.26 U
SVOCs	FLUORENE	86-73-7	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg		< 0.01 U		< 0.01 U	0.017 J	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg		0.095		< 0.01 U	0.0069 J	0.0056 J	0.0063 J	0.12	0.016 J
SVOCs	ISOPHORONE	78-59-1	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg		0.0043 J		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	0.017 J	< 0.01 U
SVOCs	NITROBENZENE	98-95-3	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg		< 0.01 U		< 0.01 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg		< 0.053 U		< 0.052 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.05 U	< 0.052 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg		0.13 J		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	0.33 J	< 0.26 U
SVOCs	PHENOL	108-95-2	mg/kg		< 0.26 U		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.25 U	< 0.26 U
SVOCs	PYRENE	129-00-0	mg/kg		0.13 J		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	0.27 J	< 0.26 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg		0.98		< 0.26 U	0.015	0.0056	0.014	1.5	0.070
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg		0.13		< 0.26 U	< 0.28 U	< 0.28 U	< 0.26 U	0.51	< 0.26 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-220	FTA-SB-210	FTA-SB-210	FTA-SB-210	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-209	FTA-SB-209
				Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-220-0610	FTA-SB-210-0002	FTA-SB-210-0206	FTA-SB-210-0610	FTA-SB-211-0002	FTA-SB-211-0206	FTA-SB-211-0610	FTA-SB-209-0002	FTA-SB-209-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg		1.1		< 0.26 U	0.015	0.0056	0.014	2.0	0.070
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg		< 0.0025 U		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg		< 0.0025 U		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg		< 0.0025 U		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg		< 0.0025 UJ		< 0.002 U	0.0028 J	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg		< 0.0025 UJ		< 0.002 U	0.0033 J	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg		< 0.0025 U		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg		< 0.0025 UJ		< 0.002 U	0.0042 J	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg		< 0.0025 UJ		< 0.002 U	0.0024 J	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg		< 0.012 U		< 0.01 U	< 0.011 U	< 0.0099 U	< 0.0099 U	< 0.0096 U	< 0.012 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg		< 0.089 U		< 0.026 U	0.15	< 0.0099 U	0.0067 J	0.12	0.15
VOCs	BENZENE	71-43-2	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg		< 0.0025 U		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	CHLOROETHANE	75-00-3	mg/kg		< 0.005 U		< 0.004 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.0038 U	< 0.0048 U
VOCs	CHLOROFORM	67-66-3	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg		< 0.005 U		< 0.004 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.0038 U	< 0.0048 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg		< 0.005 UJ		< 0.004 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.0038 U	< 0.0048 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-220	FTA-SB-210	FTA-SB-210	FTA-SB-210	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-209	FTA-SB-209
				Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012
				Sample ID	FTA-SB-220-0610	FTA-SB-210-0002	FTA-SB-210-0206	FTA-SB-210-0610	FTA-SB-211-0002	FTA-SB-211-0206	FTA-SB-211-0610	FTA-SB-209-0002	FTA-SB-209-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg		< 0.0025 U		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg		< 0.012 U		< 0.01 U	< 0.011 U	< 0.0099 U	< 0.0099 U	< 0.0096 U	< 0.012 U	
VOCs	O-XYLENE	95-47-6	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	STYRENE	100-42-5	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	TOLUENE	108-88-3	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg		< 0.0025 UJ		< 0.002 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0019 U	< 0.0024 U	
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg		< 0.005 U		< 0.004 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.0038 U	< 0.0048 U	
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg		< 0.0074 UJ		< 0.0061 U	< 0.0068 U	< 0.0059 U	< 0.0059 U	< 0.0058 U	< 0.0071 U	
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg		< 0.005 U		< 0.004 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.0038 U	< 0.0048 U	

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-209	FTA-SB-206	FTA-SB-206	FTA-SB-206	FTA-SB-216	FTA-SB-216	FTA-SB-216	FTA-SB-217	FTA-SB-300
				Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012
				Sample ID	FTA-SB-209-0610	FTA-SB-206-0002	FTA-SB-206-0206	FTA-SB-206-0610	FTA-SB-216-0002	FTA-SB-216-0206	FTA-SB-216-0610	FTA-SB-217-0002-D	FTA-SB-300-0002-D
				Sample Type Code	N	N	N	N	N	N	N	FD	FD
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	19000	12800	15600		8970	12500	19100	13300	
Metals	ANTIMONY	7440-36-0	mg/kg	0.15	0.07 J	0.16		0.1	0.05 J	0.15	0.06 J	
Metals	ARSENIC	7440-38-2	mg/kg	20	8.1	23.1		5.3	5.6	12.2	7.3	
Metals	BARIUM	7440-39-3	mg/kg	52.8	24.9	42.2		27.3	17.6	49.9	27.2	
Metals	BERYLLIUM	7440-41-7	mg/kg	0.79	0.42 J	0.62		0.28 J	0.38	0.76	0.38 J	
Metals	CADMIUM	7440-43-9	mg/kg	0.08	0.11	0.1		0.13	0.05 J	0.07 J	0.06 J	
Metals	CALCIUM	7440-70-2	mg/kg	3690	3310	4150		5840	2660	5000	2240	
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	38.2	27.4	29.3		22	27.4	35.9	23.8 J	
Metals	COBALT	7440-48-4	mg/kg	15.1	11.5	12.8		7.8	8.9	14.8	10.4	
Metals	COPPER	7440-50-8	mg/kg	25.5	26.9	22.5		32.1	24.7	26.7	25.2	
Metals	IRON	7439-89-6	mg/kg	31300	22500	27100		16400	25500	34600	19700	
Metals	LEAD	7439-92-1	mg/kg	15.8	12.2	12.4		9.3	8.5	14.5	8.7 J	
Metals	MAGNESIUM	7439-95-4	mg/kg	8490	7200	7410		5170	7680	10100	6570	
Metals	MANGANESE	7439-96-5	mg/kg	662	504	534		345	510	650	469	
Metals	MERCURY	7439-97-6	mg/kg	< 0.02 U	< 0.02 U	< 0.02 U		0.03 J	< 0.013 U	< 0.02 U	0.01 J	
Metals	NICKEL	7440-02-0	mg/kg	36.2	24	30		17.9	22.8	36.3	22.4	
Metals	POTASSIUM	7440-09-7	mg/kg	3390	958	2530		850	904	3210	823 J	
Metals	SELENIUM	7782-49-2	mg/kg	0.45	0.31 J	0.4		0.4	0.27 J	0.55	< 0.27 U	
Metals	SILVER	7440-22-4	mg/kg	0.06 J	0.08 J	0.05 J		0.22	0.03 J	0.05 J	0.04 J	
Metals	SODIUM	7440-23-5	mg/kg	247	118 J	206		118	116 J	249	< 100 U	
Metals	THALLIUM	7440-28-0	mg/kg	0.16	0.07 J	0.13		0.06 J	0.07 J	0.15	0.07 J	
Metals	VANADIUM	7440-62-2	mg/kg	48.3	37.6	38.3		24.8	33.7	45.8	28.6	
Metals	ZINC	7440-66-6	mg/kg	65.6	57.4	56.1		63.2	41.7	70.5	38.5	
Other	PH	-9	SU		6.5			7.1	7.1			
Other	TOTAL SOLIDS	-29	PCT	82	84	83	88	84	90	81	89	88
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0016 U			
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0019 U			
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0016 U			
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.01 U	< 0.2 U	< 0.0094 U		< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.01 U	< 0.2 U	< 0.0094 U		< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.012 U	< 0.24 U	< 0.011 U		< 0.011 U	< 0.0099 U	< 0.011 U	< 0.011 U	
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.01 U	< 0.2 U	< 0.0094 U		< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.01 U	< 0.2 U	< 0.0094 U		< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.01 U	2.6 J	< 0.0094 U		< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	< 0.01 U	12 J	0.022		0.46	0.078	< 0.009 U	< 0.0092 U	
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.01 U	< 0.2 U	< 0.0094 U		< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.01 U	< 0.2 U	< 0.0094 U		< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.001 UJ	< 0.00099 UJ	< 0.00094 UJ		< 0.00097 UJ	< 0.00084 UJ			
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0016 U			
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0016 U			
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0016 U			
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0016 U			
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.002 U	< 0.0019 U	< 0.0018 U		< 0.0019 U	< 0.0016 U			
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.002 U	1.5 J	0.0019 J		0.067 J	0.0097 J			
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.01 U	< 0.0099 U	< 0.0094 U		< 0.0097 U	< 0.0084 U			
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	< 0.012 U	15	0.022		0.46	0.078	< 0.011 U	< 0.011 U	
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.02 U	< 0.019 U	< 0.018 U		< 0.019 U	< 0.016 U			
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.001 U	< 0.00099 U	< 0.00094 U		< 0.00097 U	< 0.00084 U			
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		0.055	0.0018 J	< 0.011 U	< 0.01 U	
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.7 U	< 0.67 U	< 0.52 U		< 0.64 U	< 0.62 U	< 0.7 U	< 0.65 U	
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-209	FTA-SB-206	FTA-SB-206	FTA-SB-206	FTA-SB-216	FTA-SB-216	FTA-SB-216	FTA-SB-217	FTA-SB-300
				Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012
				Sample ID	FTA-SB-209-0610	FTA-SB-206-0002	FTA-SB-206-0206	FTA-SB-206-0610	FTA-SB-216-0002	FTA-SB-216-0206	FTA-SB-216-0610	FTA-SB-217-0002-D	FTA-SB-300-0002-D
				Sample Type Code	N	N	N	N	N	N	N	FD	FD
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.085 UJ	< 0.082 UJ	< 0.064 UJ		< 0.078 UJ	< 0.075 UJ	< 0.086 UJ	< 0.079 UJ	
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		0.21 J	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.7 U	< 0.67 U	< 0.52 U		< 0.64 UJ	< 0.62 U	< 0.7 U	< 0.65 U	
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.011 UJ	< 0.011 UJ	< 0.0085 UJ		< 0.01 U	< 0.01 UJ	< 0.011 UJ	< 0.01 U	
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.7 U	< 0.67 U	< 0.52 U		< 0.64 U	< 0.62 U	< 0.7 U	< 0.65 U	
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.11 U	< 0.11 U	< 0.085 U		< 0.1 U	< 0.1 U	< 0.11 U	< 0.1 U	
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 UJ	
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.7 UJ	< 0.67 UJ	< 0.52 UJ		< 0.64 UJ	< 0.62 UJ	< 0.7 UJ	< 0.65 U	
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		1.7	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		2.8	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.28 UJ	< 0.27 UJ	< 0.21 UJ		< 0.26 UJ	< 0.25 UJ	< 0.28 UJ	< 0.26 U	
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.011 U	0.022 J	< 0.0085 U		6.6	0.14	< 0.011 U	0.0034 J	
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.011 U	0.019 J	< 0.0085 U		4.3	0.1	< 0.011 U	< 0.01 U	
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.011 U	0.03	< 0.0085 U		6.1	0.16	< 0.011 U	0.0045 J	
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		1.5	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		2.3	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.28 U	< 0.27 U	0.12 J		0.22 J	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		0.76	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		6	0.14 J	< 0.28 U	< 0.26 U	
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.011 UJ	0.0048 J	< 0.0085 UJ		0.92 J	0.021 J	< 0.011 UJ	< 0.01 U	
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		0.62	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		14	0.29 J	< 0.28 U	< 0.26 U	
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		1.3	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.011 U	0.004 J	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.0059 J	0.023	0.0044 J		4.7 J	0.1	0.0058 J	0.0067 J	
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		0.16	0.0076 J	< 0.011 U	< 0.01 U	
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.011 U	< 0.011 U	< 0.0085 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.056 U	< 0.055 U	< 0.042 U		< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		9.3	0.2 J	< 0.28 U	< 0.26 U	
SVOCs	PHENOL	108-95-2	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	
SVOCs	PYRENE	129-00-0	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		11	0.18 J	< 0.28 U	< 0.26 U	
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	0.0059	0.099	0.0044		57	1.1	0.0058	0.015	
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.28 U	< 0.27 U	< 0.21 U		15	0.21	< 0.28 U	< 0.26 U	

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SB-209	FTA-SB-206	FTA-SB-206	FTA-SB-206	FTA-SB-216	FTA-SB-216	FTA-SB-216	FTA-SB-217	FTA-SB-300
			Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012
			Sample ID	FTA-SB-209-0610	FTA-SB-206-0002	FTA-SB-206-0206	FTA-SB-206-0610	FTA-SB-216-0002	FTA-SB-216-0206	FTA-SB-216-0610	FTA-SB-217-0002-D	FTA-SB-300-0002-D
			Sample Type Code	N	N	N	N	N	N	N	FD	FD
			Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	0.0059	0.099	0.0044		73	1.3	0.0058	0.015	
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									< 14 U
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									< 24 U
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									< 24 U
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.011 U	< 0.014 U	< 0.0098 U		< 0.014 U	< 0.01 U	< 0.015 U	< 0.01 U	
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	0.012 J	0.059	0.025		0.12	0.043	0.032	0.047	
VOCs	BENZENE	71-43-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0042 U	< 0.0055 U	< 0.0039 U		< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0042 U	< 0.0055 U	< 0.0039 U		< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.0042 U	< 0.0055 U	< 0.0039 U		< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-209	FTA-SB-206	FTA-SB-206	FTA-SB-206	FTA-SB-216	FTA-SB-216	FTA-SB-216	FTA-SB-217	FTA-SB-300
				Sample Date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012
				Sample ID	FTA-SB-209-0610	FTA-SB-206-0002	FTA-SB-206-0206	FTA-SB-206-0610	FTA-SB-216-0002	FTA-SB-216-0206	FTA-SB-216-0610	FTA-SB-217-0002-D	FTA-SB-300-0002-D
				Sample Type Code	N	N	N	N	N	N	N	FD	FD
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.011 U	< 0.014 U	< 0.0098 U		< 0.014 U	< 0.01 U	< 0.015 U	< 0.01 U	
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	STYRENE	100-42-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	TOLUENE	108-88-3	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.002 U		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0021 U	< 0.0028 U	0.0016 J		< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0042 U	< 0.0055 U	< 0.0039 U		< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0064 U	< 0.0082 U	< 0.0058 U		< 0.0082 U	< 0.0062 U	< 0.009 U	< 0.006 U	
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0042 U	< 0.0055 U	< 0.0039 U		< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-215	FTA-SB-215	FTA-SB-218	FTA-SB-218	FTA-SB-217	FTA-SB-217	FTA-SB-300	FTA-SB-203	FTA-SB-203
				Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
				Sample ID	FTA-SB-215-0002	FTA-SB-215-0610	FTA-SB-218-0002	FTA-SB-218-0610	FTA-SB-217-0002	FTA-SB-217-0206	FTA-SB-300-0002	FTA-SB-203-0002	FTA-SB-203-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	6 - 10 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	15100	23000	16600	19100	11600	15300		15000	11200
Metals	ANTIMONY	7440-36-0	mg/kg	0.1 J	0.18 J	0.06 J	0.12 J	0.06 J	0.07 J		0.08 J	0.06 J
Metals	ARSENIC	7440-38-2	mg/kg	7.6	13.9	5.5	11	6.5	8.5		7.3	6.2
Metals	BARIUM	7440-39-3	mg/kg	28.9	65	11.7	49.1	20.4	23.8		41.4	26.3
Metals	BERYLLIUM	7440-41-7	mg/kg	0.35 J	0.87 J	0.26 J	0.64 J	0.32 J	0.36 J		0.33 J	0.26 J
Metals	CADMIUM	7440-43-9	mg/kg	0.1	0.09 J	0.04 J	0.08	0.06 J	0.06 J		0.09	0.07 J
Metals	CALCIUM	7440-70-2	mg/kg	2690	7140	1740	1600	1790	2970		3170	3340
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	27.6 J	42.9 J	25.1 J	35.7 J	21.4 J	35.8 J		37.3 J	22.8 J
Metals	COBALT	7440-48-4	mg/kg	9.6	16.5	8.2	13.8	10.3	12.8		11.8	9.8
Metals	COPPER	7440-50-8	mg/kg	21.6	29.7	6.3	29.4	21.2	24.3		23.6	21.9
Metals	IRON	7439-89-6	mg/kg	22300	36600	19500	33000	18000	23900		22000	18700
Metals	LEAD	7439-92-1	mg/kg	12.5 J	16.1 J	7.9 J	13.6 J	20.1 J	8.9 J		11 J	10.1 J
Metals	MAGNESIUM	7439-95-4	mg/kg	6910	10300	5490	8190	5400	7620		8140	7440
Metals	MANGANESE	7439-96-5	mg/kg	498	714	342	630	452	521		503	400
Metals	MERCURY	7439-97-6	mg/kg	0.03 J	0.03 J	0.04	0.04	0.01 J	0.008 J		0.01 J	0.01 J
Metals	NICKEL	7440-02-0	mg/kg	21.5	39.7	18.3	31	20.5	28.9		29.1	18.8
Metals	POTASSIUM	7440-09-7	mg/kg	1000 J	4290 J	436 J	1780 J	627 J	946 J		751 J	875 J
Metals	SELENIUM	7782-49-2	mg/kg	< 0.45 U	< 0.45 U	< 0.35 U	< 0.31 U	< 0.27 U	< 0.25 U		< 0.33 U	< 0.3 U
Metals	SILVER	7440-22-4	mg/kg	0.05 J	0.07 J	0.03 J	0.03 J	0.05 J	0.03 J		0.04 J	0.03 J
Metals	SODIUM	7440-23-5	mg/kg	< 145 U	318	< 61.2 U	< 101 U	< 73.8 U	< 167 U		< 132 U	< 124 U
Metals	THALLIUM	7440-28-0	mg/kg	0.09 J	0.19 J	0.05 J	0.11 J	0.07 J	0.06 J		0.06 J	0.05 J
Metals	VANADIUM	7440-62-2	mg/kg	38.6	54.3	28.4	42.4	28.9	39		35.6	41
Metals	ZINC	7440-66-6	mg/kg	50.8	74.1	34.5	63.4	35.1	47.6		48.1	42
Other	PH	-9	SU	5.4		4.5		5.4			5.4	
Other	TOTAL SOLIDS	-29	PCT	89	75	80	85	90	89	88	94	91
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0018 U	< 0.002 U							
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0018 U	< 0.002 U							
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0018 U	< 0.002 U							
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0093 U	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0093 U	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.011 U	< 0.012 U	< 0.012 U	< 0.011 U	< 0.011 U	< 0.0098 U		< 0.0097 U	< 0.0092 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0093 U	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0093 U	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0093 U	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	1.1	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0093 U	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0093 U	< 0.01 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.0083 U		< 0.0082 U	< 0.0078 U
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00093 UJ	< 0.001 UJ							
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0018 U	< 0.002 U							
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0018 U	< 0.002 U							
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0018 UJ	< 0.002 UJ							
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0018 U	< 0.002 U							
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0018 U	< 0.002 U							
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.13 J	< 0.002 UJ							
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00093 U	< 0.001 U							
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0093 U	< 0.01 U							
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.1	< 0.012 U	< 0.012 U	< 0.011 U	< 0.011 U	< 0.0098 U		< 0.0097 U	< 0.0092 U
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.018 U	< 0.02 U							
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00093 U	< 0.001 U							
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.011 U	< 0.011 U	0.0018 J	0.0014 J	< 0.0099 U	< 0.0096 U		0.64	0.2
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.055 U	< 0.057 U	< 0.062 U	< 0.055 UJ	< 0.05 U	< 0.048 U		< 0.045 U	< 0.052 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.055 U	< 0.057 U	0.0041 J	0.0033 J	< 0.05 U	< 0.048 U		< 0.045 U	< 0.052 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.68 U	< 0.7 U	< 0.77 U	< 0.67 U	< 0.61 U	< 0.59 U		< 0.55 U	< 0.64 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.055 U	< 0.057 U	< 0.062 U	< 0.055 U	< 0.05 U	< 0.048 U		< 0.045 U	< 0.052 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-215	FTA-SB-215	FTA-SB-218	FTA-SB-218	FTA-SB-217	FTA-SB-217	FTA-SB-300	FTA-SB-203	FTA-SB-203
				Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
				Sample ID	FTA-SB-215-0002	FTA-SB-215-0610	FTA-SB-218-0002	FTA-SB-218-0610	FTA-SB-217-0002	FTA-SB-217-0206	FTA-SB-300-0002	FTA-SB-203-0002	FTA-SB-203-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	6 - 10 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.082 UJ	< 0.085 UJ	< 0.094 UJ	< 0.082 UJ	< 0.074 UJ	< 0.072 UJ		< 0.067 UJ	< 0.078 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.055 U	< 0.057 U	< 0.062 U	< 0.055 U	< 0.05 U	< 0.048 U		< 0.045 U	< 0.052 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		2.1	0.7
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.68 U	< 0.7 U	< 0.77 U	< 0.67 U	< 0.61 U	< 0.59 U		< 0.55 U	< 0.64 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	UR	< 0.0099 U	< 0.0096 U		< 0.0089 UJ	< 0.01 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.68 U	< 0.7 U	< 0.77 U	< 0.67 U	< 0.61 U	< 0.59 U		< 0.55 U	< 0.64 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.11 U	< 0.11 U	< 0.12 U	< 0.11 U	< 0.099 U	< 0.096 U		< 0.089 U	< 0.1 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.055 UJ	< 0.057 UJ	< 0.062 UJ	< 0.055 UJ	< 0.05 UJ	< 0.048 UJ		< 0.045 U	< 0.052 UJ
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 UJ	< 0.01 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.68 U	< 0.7 U	< 0.77 U	< 0.67 U	< 0.61 U	< 0.59 U		< 0.55 U	< 0.64 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		0.47	0.17 J
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.011 U	< 0.011 U	0.0019 J	0.0018 J	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.024	< 0.011 U	0.0032 J	0.0032 J	0.002 J	< 0.0096 U		0.069	0.034
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	0.024	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		0.037	0.016 J
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.037	< 0.011 U	0.0048 J	0.0033 J	0.0029 J	< 0.0096 U		0.038	< 0.01 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	0.0049 J	< 0.057 U	< 0.062 U	< 0.055 U	< 0.05 U	< 0.048 U		< 0.045 U	< 0.052 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		0.17 J	< 0.26 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.008 J	< 0.011 U	0.0031 J	0.0031 J	< 0.0099 U	< 0.0096 U		< 0.0089 UJ	0.0033 J
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	0.086 J
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.055 U	< 0.057 U	< 0.062 U	< 0.055 U	< 0.05 U	< 0.048 U		< 0.045 U	< 0.052 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		0.1 J	< 0.26 U
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		0.77	0.3 J
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.031	< 0.011 U	0.008 J	0.0085 J	0.0052 J	< 0.0096 U		0.017 J	0.01 J
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		0.12	0.041
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.011 U	< 0.011 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0096 U		< 0.0089 U	< 0.01 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.055 U	< 0.057 U	< 0.062 U	< 0.055 U	< 0.05 U	< 0.048 U		< 0.045 U	< 0.052 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		1.6	0.7
SVOCs	PHENOL	108-95-2	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		< 0.22 U	< 0.26 U
SVOCs	PYRENE	129-00-0	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		0.42	0.17 J
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	0.12	< 0.28 U	0.019	0.018	0.010	< 0.24 U		0.85	0.23
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.27 U	< 0.28 U	< 0.31 U	< 0.27 U	< 0.24 U	< 0.24 U		5.1	1.9

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SB-215	FTA-SB-215	FTA-SB-218	FTA-SB-218	FTA-SB-217	FTA-SB-217	FTA-SB-300	FTA-SB-203	FTA-SB-203
			Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
			Sample ID	FTA-SB-215-0002	FTA-SB-215-0610	FTA-SB-218-0002	FTA-SB-218-0610	FTA-SB-217-0002	FTA-SB-217-0206	FTA-SB-300-0002	FTA-SB-203-0002	FTA-SB-203-0206
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	6 - 10 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	0.12	< 0.28 U	0.019	0.018	0.010	< 0.24 U		5.9	2.1
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg							< 15 U		
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg							< 21 U		
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg							< 21 U		
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.011 U	< 0.014 U	< 0.012 U	< 0.011 U	< 0.018 U	< 0.01 U		< 0.0098 U	< 0.012 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	0.14	0.01 J	0.13	0.13	0.059	0.022		0.056	0.023 J
VOCs	BENZENE	71-43-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0043 U	< 0.007 U	< 0.0041 U		< 0.0039 U	< 0.005 U
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0043 U	< 0.007 U	< 0.0041 U		< 0.0039 U	< 0.005 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	0.002 J	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0043 UJ	< 0.007 U	< 0.0041 U		< 0.0039 U	< 0.005 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-215	FTA-SB-215	FTA-SB-218	FTA-SB-218	FTA-SB-217	FTA-SB-217	FTA-SB-300	FTA-SB-203	FTA-SB-203
				Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
				Sample ID	FTA-SB-215-0002	FTA-SB-215-0610	FTA-SB-218-0002	FTA-SB-218-0610	FTA-SB-217-0002	FTA-SB-217-0206	FTA-SB-300-0002	FTA-SB-203-0002	FTA-SB-203-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	6 - 10 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.011 U	< 0.014 U	< 0.012 U	< 0.011 U	< 0.018 U	< 0.01 U		< 0.0098 U	< 0.012 U
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	STYRENE	100-42-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 UJ	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	TOLUENE	108-88-3	mg/kg	0.0032 J	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0022 U	< 0.0035 U	< 0.002 U		< 0.002 U	< 0.0025 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0043 U	< 0.007 U	< 0.0041 U		< 0.0039 U	< 0.005 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0064 U	< 0.0082 U	< 0.0075 U	< 0.0064 UJ	< 0.01 U	< 0.0062 U		< 0.0058 U	< 0.0075 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0043 U	< 0.007 U	< 0.0041 U		< 0.0039 U	< 0.005 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-304	FTA-SB-202	FTA-SB-202	FTA-SB-305	FTA-SB-205	FTA-SB-204	FTA-SB-204	FTA-SB-205	FTA-SB-205
				Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012
				Sample ID	FTA-SB-304-0206	FTA-SB-202-0002	FTA-SB-202-0206	FTA-SB-305-0002	FTA-SB-205-0002-D	FTA-SB-204-0002	FTA-SB-204-0610	FTA-SB-205-0002	FTA-SB-205-0206
				Sample Type Code	N	N	N	N	FD	N	N	N	N
				Depth Interval	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg		12700	14400		14200	15100	18600	15400	18900
Metals	ANTIMONY	7440-36-0	mg/kg		0.08 J	0.04 J		0.17 J	0.09 J	0.18 J	0.16 J	0.22 J
Metals	ARSENIC	7440-38-2	mg/kg		8.2	7.5		9 J	7.3 J	11.9 J	14 J	12.9 J
Metals	BARIUM	7440-39-3	mg/kg		20.5	77.2		33 J	29.3 J	48.1 J	30.6 J	49.4 J
Metals	BERYLLIUM	7440-41-7	mg/kg		0.27 J	0.27 J		0.56	0.47	0.75	0.56	0.74
Metals	CADMIUM	7440-43-9	mg/kg		0.09	0.06 J		0.08	0.08	0.09 J	0.07 J	0.1 J
Metals	CALCIUM	7440-70-2	mg/kg		1520	2880		2940	2910	5440	3640	3360
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg		21 J	31.8 J		26.1 J	26.4 J	32 J	32.6 J	30.9 J
Metals	COBALT	7440-48-4	mg/kg		7.7	10.6		10.5	12.1	13.2	12.4	15.8
Metals	COPPER	7440-50-8	mg/kg		11.4	18.1		23.7 J	24.6 J	24.9 J	21.3 J	30.9 J
Metals	IRON	7439-89-6	mg/kg		19800	21300		24900 J	23100 J	31100 J	24700 J	34700 J
Metals	LEAD	7439-92-1	mg/kg		12 J	7.2 J		11.3 J	10.8 J	13.8 J	10.4 J	14.8 J
Metals	MAGNESIUM	7439-95-4	mg/kg		4660	7670		6950 J	6960 J	8290 J	7870 J	8940 J
Metals	MANGANESE	7439-96-5	mg/kg		628	484		522	602	617	520	666
Metals	MERCURY	7439-97-6	mg/kg		0.04	0.007 J		0.02 J	0.01 J	0.02 J	0.02 J	0.02 J
Metals	NICKEL	7440-02-0	mg/kg		13.5	24		24.4	27.1	31.3	26.9	36.8
Metals	POTASSIUM	7440-09-7	mg/kg		568 J	1510 J		1720 J	907 J	3300 J	1660 J	2720 J
Metals	SELENIUM	7782-49-2	mg/kg		< 0.4 U	< 0.28 U		< 0.24 U	< 0.35 U	< 0.37 U	< 0.28 U	< 0.35 U
Metals	SILVER	7440-22-4	mg/kg		0.04 J	0.02 J		0.04 J	0.03 J	0.06 J	0.03 J	0.04 J
Metals	SODIUM	7440-23-5	mg/kg		< 66.4 U	180		133 J	208 J	257 J	120 J	218 J
Metals	THALLIUM	7440-28-0	mg/kg		0.08 J	0.1 J		0.1	0.07 J	0.15	0.08 J	0.14
Metals	VANADIUM	7440-62-2	mg/kg		28.2	37.1		34.4	32.1	39.1	37.8	39.6
Metals	ZINC	7440-66-6	mg/kg		43.6	44		50.1 J	56.2 J	67.5 J	57.6 J	73 J
Other	PH	-9	SU		5				5.5		6.5	
Other	TOTAL SOLIDS	-29	PCT	94	72	87	78	87	90	82	88	80
Pest_PCBs	4,4-DDD	72-54-8	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	4,4-DDE	72-55-9	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	4,4-DDT	50-29-3	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	ALDRIN	309-00-2	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg		< 0.01 U	< 0.0093 U		< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg		< 0.01 U	< 0.0093 U		< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg		< 0.012 U	< 0.011 U		< 0.0092 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.011 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg		< 0.01 U	< 0.0093 U		< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg		< 0.01 U	< 0.0093 U		< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg		< 0.01 U	< 0.0093 U		< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg		< 0.01 U	< 0.0093 U		0.019 J	0.1	0.018 J	0.076 J	< 0.0092 U
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg		< 0.01 U	< 0.0093 U		< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg		< 0.01 U	< 0.0093 U		< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	BETA-BHC	319-85-7	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg					< 0.00079 UJ	< 0.00092 U	< 0.00093 UJ	< 0.00094 UJ	< 0.00092 UJ
Pest_PCBs	DIELDRIN	60-57-1	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	ENDRIN	72-20-8	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg					< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0018 U
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg					0.0021 J	0.014 J	0.0021 J	0.0088 J	< 0.0018 U
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	LINDANE	58-89-9	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg					< 0.0079 U	< 0.0092 U	< 0.0093 U	< 0.0094 U	< 0.0092 U
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg		< 0.012 U	< 0.011 U		0.019	0.10	0.018	0.076	< 0.011 U
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg					< 0.015 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg					< 0.00079 U	< 0.00092 U	< 0.00093 U	< 0.00094 U	< 0.00092 U
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg		< 0.063 U	< 0.046 U		< 0.055 U	< 0.054 U	< 0.056 U	< 0.051 U	< 0.062 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg		< 0.063 U	< 0.046 U		< 0.055 U	< 0.054 U	0.016 J	< 0.051 U	< 0.062 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg		< 0.78 U	< 0.57 U		< 0.68 U	< 0.66 U	< 0.69 U	< 0.63 U	< 0.76 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg		< 0.063 U	< 0.046 U		< 0.055 U	< 0.054 U	0.0066 J	< 0.051 U	< 0.062 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-304	FTA-SB-202	FTA-SB-202	FTA-SB-305	FTA-SB-205	FTA-SB-204	FTA-SB-204	FTA-SB-205	FTA-SB-205
				Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012
				Sample ID	FTA-SB-304-0206	FTA-SB-202-0002	FTA-SB-202-0206	FTA-SB-305-0002	FTA-SB-205-0002-D	FTA-SB-204-0002	FTA-SB-204-0610	FTA-SB-205-0002	FTA-SB-205-0206
				Sample Type Code	N	N	N	N	FD	N	N	N	N
				Depth Interval	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg		< 0.095 UJ	< 0.069 UJ		< 0.083 UJ	< 0.08 UJ	< 0.084 UJ	< 0.077 UJ	< 0.093 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg		< 0.063 U	< 0.046 U		< 0.055 U	< 0.054 U	< 0.056 U	< 0.051 U	< 0.062 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg		< 0.78 U	< 0.57 U		< 0.68 U	< 0.66 U	< 0.69 U	< 0.63 U	< 0.76 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 UJ	UR	< 0.011 U	< 0.01 UJ	< 0.012 UJ
SVOCs	3-NITROANILINE	99-09-2	mg/kg		< 0.78 U	< 0.57 U		< 0.68 U	< 0.66 U	< 0.69 U	< 0.63 U	< 0.76 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg		< 0.13 U	< 0.092 U		< 0.11 U	< 0.11 U	< 0.11 U	< 0.1 U	< 0.12 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg		< 0.063 UJ	< 0.046 UJ		< 0.055 U	UR	< 0.056 U	< 0.051 U	< 0.062 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 UJ	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg		< 0.78 U	< 0.57 U		< 0.68 U	< 0.66 U	< 0.69 U	< 0.63 U	< 0.76 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	ANTHRACENE	120-12-7	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	ATRAZINE	1912-24-9	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	0.0037 J	< 0.01 U	< 0.012 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg		0.037	0.0082 J		< 0.011 U	0.0069 J	0.0049 J	< 0.01 U	< 0.012 U
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg		0.026	0.0074 J		< 0.011 U	0.0053 J	0.0046 J	< 0.01 U	< 0.012 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	0.0093 J	0.0061 J	0.003 J	< 0.012 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	0.16 J	< 0.25 U	< 0.31 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg		< 0.063 U	< 0.046 U		< 0.055 UJ	< 0.054 U	0.0049 J	< 0.051 UJ	< 0.062 UJ
SVOCs	CAPROLACTAM	105-60-2	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	CARBAZOLE	86-74-8	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	CHRYSENE	218-01-9	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg		0.0062 J	< 0.0092 U		< 0.011 U	< 0.011 U	0.005 J	< 0.01 U	< 0.012 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg		< 0.063 U	< 0.046 U		< 0.055 U	< 0.054 U	< 0.056 U	< 0.051 U	< 0.062 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	FLUORENE	86-73-7	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg		0.022 J	0.008 J		0.0056 J	0.0097 J	0.0091 J	0.0055 J	0.0063 J
SVOCs	ISOPHORONE	78-59-1	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	NITROBENZENE	98-95-3	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg		< 0.013 U	< 0.0092 U		< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.012 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg		< 0.063 U	< 0.046 U		< 0.055 U	< 0.054 U	< 0.056 U	< 0.051 U	< 0.062 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	PHENOL	108-95-2	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	PYRENE	129-00-0	mg/kg		0.17 J	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg		0.26	0.024		0.0056	0.031	0.030	0.0085	0.0063
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg		< 0.31 U	< 0.23 U		< 0.28 U	< 0.26 U	< 0.28 U	< 0.25 U	< 0.31 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SB-304	FTA-SB-202	FTA-SB-202	FTA-SB-305	FTA-SB-205	FTA-SB-204	FTA-SB-204	FTA-SB-205	FTA-SB-205
			Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012
			Sample ID	FTA-SB-304-0206	FTA-SB-202-0002	FTA-SB-202-0206	FTA-SB-305-0002	FTA-SB-205-0002-D	FTA-SB-204-0002	FTA-SB-204-0610	FTA-SB-205-0002	FTA-SB-205-0206
			Sample Type Code	N	N	N	N	FD	N	N	N	N
			Depth Interval	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg		0.26	0.024		0.0056	0.031	0.030	0.0085	0.0063
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	50			220					
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 21 U			< 30 U					
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 21 U			< 30 U					
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg		< 0.015 U	< 0.011 U		< 0.015 U	< 0.012 UJ	< 0.014 U	< 0.0089 U	< 0.012 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg		0.2	0.038		< 0.071 U	< 0.11 U	< 0.052 U	< 0.031 U	< 0.036 U
VOCs	BENZENE	71-43-2	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	0.0014 J	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	CHLOROETHANE	75-00-3	mg/kg		< 0.006 U	< 0.0044 U		< 0.006 U	< 0.0049 U	< 0.0055 U	< 0.0036 U	< 0.005 U
VOCs	CHLOROFORM	67-66-3	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg		< 0.006 U	< 0.0044 U		< 0.006 UJ	< 0.0049 UJ	< 0.0055 U	< 0.0036 U	< 0.005 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	0.008 J	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg		< 0.006 U	< 0.0044 U		< 0.006 U	< 0.0049 UJ	< 0.0055 U	< 0.0036 U	< 0.005 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-304	FTA-SB-202	FTA-SB-202	FTA-SB-305	FTA-SB-205	FTA-SB-204	FTA-SB-204	FTA-SB-205	FTA-SB-205
				Sample Date	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012
				Sample ID	FTA-SB-304-0206	FTA-SB-202-0002	FTA-SB-202-0206	FTA-SB-305-0002	FTA-SB-205-0002-D	FTA-SB-204-0002	FTA-SB-204-0610	FTA-SB-205-0002	FTA-SB-205-0206
				Sample Type Code	N	N	N	N	FD	N	N	N	N
				Depth Interval	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U	
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U	
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg		< 0.015 U	< 0.011 U		< 0.015 U	< 0.012 U	< 0.014 U	< 0.0089 U	< 0.012 U	
VOCs	O-XYLENE	95-47-6	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U	
VOCs	STYRENE	100-42-5	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U	
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U	
VOCs	TOLUENE	108-88-3	mg/kg		0.0048 J	< 0.0022 U		< 0.003 U	0.016 J	0.0015 J	< 0.0018 U	< 0.0025 U	
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 U	< 0.0028 U	< 0.0018 U	< 0.0025 U	
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg		< 0.003 U	< 0.0022 U		< 0.003 U	< 0.0024 UJ	< 0.0028 U	< 0.0018 U	< 0.0025 U	
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg		< 0.006 U	< 0.0044 U		< 0.006 U	< 0.0049 U	< 0.0055 U	< 0.0036 U	< 0.005 U	
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg		< 0.009 U	< 0.0066 U		< 0.009 U	< 0.0074 UJ	< 0.0082 U	< 0.0053 U	< 0.0074 U	
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg		< 0.006 U	< 0.0044 U		< 0.006 U	< 0.0049 U	< 0.0055 U	< 0.0036 U	< 0.005 U	

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-212	FTA-SB-219	FTA-SB-219	FTA-SB-301	FTA-SB-200	FTA-SB-200	FTA-SB-303	FTA-SB-200	FTA-SB-201
				Sample Date	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/13/2012
				Sample ID	FTA-SB-212-0610	FTA-SB-219-0002	FTA-SB-219-0206	FTA-SB-301-0102	FTA-SB-200-0002	FTA-SB-200-0206	FTA-SB-303-0607	FTA-SB-200-0610	FTA-SB-201-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	1 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 7 ft	6 - 10 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	12900	8460	10700		4320 J	3550 J		13100	5870 J
Metals	ANTIMONY	7440-36-0	mg/kg	0.12 J	0.09 J	0.1 J		0.43 J	0.39 J		0.12 J	0.72 J
Metals	ARSENIC	7440-38-2	mg/kg	8.2 J	3.6 J	8 J		5.6 J	3.7 J		7.4 J	6.6 J
Metals	BARIUM	7440-39-3	mg/kg	22 J	33.6 J	19.2 J		114 J	23.7 J		24.7 J	53.9 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.39	0.63	0.48		0.48 J	0.56 J		0.42	0.89 J
Metals	CADMIUM	7440-43-9	mg/kg	0.07	0.37	0.07		0.72 J	0.67 J		0.06 J	1.3 J
Metals	CALCIUM	7440-70-2	mg/kg	3420	3500	2160		22300 J	16600 J		3440	22700 J
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	23.4 J	13.9 J	20.6 J		< 10.6 U	< 18.9 U		25.1 J	27.8 J
Metals	COBALT	7440-48-4	mg/kg	12.6	11.9	8.3		9.8 J	2.2 J		8.7	24.2 J
Metals	COPPER	7440-50-8	mg/kg	24.6 J	8 J	18.2 J		17.6 J	20.2 J		17.8 J	29 J
Metals	IRON	7439-89-6	mg/kg	26000 J	18300 J	17900 J		6840 J	2490 J		22500 J	9160 J
Metals	LEAD	7439-92-1	mg/kg	11.6 J	5.2 J	7.2 J		16.8 J	< 2.5 U		8.5 J	16.3 J
Metals	MAGNESIUM	7439-95-4	mg/kg	6890 J	3310 J	5150 J		2760 J	2270 J		6870 J	3400 J
Metals	MANGANESE	7439-96-5	mg/kg	573	2220	417		2680 J	249 J		453	8600 J
Metals	MERCURY	7439-97-6	mg/kg	0.008 J	0.04 J	0.03 J		0.21 J	0.1 J		< 0.018 U	0.13 J
Metals	NICKEL	7440-02-0	mg/kg	25.2	7.1	17.5		< 8.9 U	< 6.2 U		22.6	15.3 J
Metals	POTASSIUM	7440-09-7	mg/kg	1040 J	583 J	945 J		< 536 U	< 232 U		1470 J	670 J
Metals	SELENIUM	7782-49-2	mg/kg	< 0.32 U	2.4	< 0.37 U		< 4 U	< 5.6 U		< 0.36 U	6.4 J
Metals	SILVER	7440-22-4	mg/kg	0.04 J	0.03 J	0.03 J		0.12 J	0.08 J		0.04 J	0.1 J
Metals	SODIUM	7440-23-5	mg/kg	152 J	110 J	110 J		< 167 U	< 205 U		163 J	194 J
Metals	THALLIUM	7440-28-0	mg/kg	0.06	0.1 J	0.07		0.07 J	< 0.05 U		0.1	0.09 J
Metals	VANADIUM	7440-62-2	mg/kg	29.4	34.2	24.2		17.8 J	11.6 J		33.4	18.9 J
Metals	ZINC	7440-66-6	mg/kg	52.7 J	39 J	34 J		40.7 J	11.2 J		42.5 J	47.7 J
Other	PH	-9	SU		5.7			5.8				5.5
Other	TOTAL SOLIDS	-29	PCT	91	44	82	81	14	12	81	81	15
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0017 U								
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0017 U								
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0017 U								
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00089 U								
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00089 U								
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00089 U								
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0089 U	< 0.018 U	< 0.0096 U		< 0.06 UJ	< 0.063 UJ			< 0.057 UJ
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0089 U	< 0.018 U	< 0.0096 U		< 0.06 UJ	< 0.063 UJ			< 0.057 UJ
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.01 U	< 0.021 U	< 0.011 U		< 0.071 UJ	< 0.074 UJ			< 0.067 UJ
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0089 U	< 0.018 U	< 0.0096 U		< 0.06 UJ	< 0.063 UJ			< 0.057 UJ
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0089 U	< 0.018 U	< 0.0096 U		< 0.06 UJ	< 0.063 UJ			< 0.057 UJ
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0089 U	< 0.018 U	< 0.0096 U		< 0.06 UJ	< 0.063 UJ			< 0.057 UJ
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	< 0.0089 U	0.041	< 0.0096 U		0.58 J	< 0.063 UJ			0.87 J
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0089 U	< 0.018 U	< 0.0096 U		< 0.06 UJ	< 0.063 UJ			< 0.057 UJ
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0089 U	< 0.018 U	< 0.0096 U		< 0.06 UJ	< 0.063 UJ			< 0.057 UJ
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00089 U								
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00089 UJ								
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0017 U								
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00089 U								
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0017 U								
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0017 U								
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0017 U								
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0017 U								
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.0017 U								
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00089 U								
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00089 U								
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00089 U								
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0089 U								
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	< 0.01 U	0.041	< 0.011 U		0.58	< 0.074 U			0.87
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.017 U								
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00089 U								
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.01 U	0.069	0.014 J		0.017 J	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.052 U	< 0.11 U	< 0.05 U		< 0.33 UJ	< 0.38 UJ		< 0.05 U	< 0.28 UJ
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.052 U	< 0.11 U	< 0.05 U		< 0.33 UJ	< 0.38 UJ		< 0.05 U	< 0.28 UJ
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.63 U	< 1.4 U	< 0.62 U		< 4 UJ	< 4.7 UJ		< 0.62 U	< 3.4 UJ
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.052 U	< 0.11 U	< 0.05 U		< 0.33 UJ	< 0.38 UJ		< 0.05 U	< 0.28 UJ

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-212	FTA-SB-219	FTA-SB-219	FTA-SB-301	FTA-SB-200	FTA-SB-200	FTA-SB-303	FTA-SB-200	FTA-SB-201
				Sample Date	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/13/2012
				Sample ID	FTA-SB-212-0610	FTA-SB-219-0002	FTA-SB-219-0206	FTA-SB-301-0102	FTA-SB-200-0002	FTA-SB-200-0206	FTA-SB-303-0607	FTA-SB-200-0610	FTA-SB-201-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	1 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 7 ft	6 - 10 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.077 UJ	< 0.16 UJ	< 0.076 UJ		< 0.49 UJ	< 0.58 UJ		< 0.075 UJ	< 0.42 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.052 U	< 0.11 U	< 0.05 U		< 0.33 UJ	< 0.38 UJ		< 0.05 U	< 0.28 UJ
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.63 U	< 1.4 U	< 0.62 U		< 4 UJ	< 4.7 UJ		< 0.62 U	< 3.4 UJ
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.01 UJ	< 0.022 UJ	< 0.01 UJ		< 0.066 UJ	< 0.077 UJ		< 0.01 UJ	< 0.056 UJ
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.63 U	< 1.4 U	< 0.62 U		< 4 UJ	< 4.7 UJ		< 0.62 U	< 3.4 UJ
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.1 U	< 0.22 U	< 0.1 U		< 0.66 UJ	< 0.77 UJ		< 0.1 U	< 0.56 UJ
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.052 U	< 0.11 U	< 0.05 U		< 0.33 UJ	< 0.38 UJ		< 0.05 U	< 0.28 UJ
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.63 U	< 1.4 U	< 0.62 U		< 4 UJ	< 4.7 UJ		< 0.62 U	< 3.4 UJ
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	0.93 J		< 0.25 U	< 1.4 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.01 U	0.0074 J	0.0022 J		< 0.066 UJ	< 0.077 UJ		< 0.01 U	0.021 J
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.26 U	< 0.54 U	0.58		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.052 UJ	< 0.11 UJ	0.0059 J		< 0.33 UJ	< 0.38 UJ		< 0.05 UJ	0.031 J
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.01 U	0.0044 J	< 0.01 U		< 0.066 UJ	0.016 J		< 0.01 U	< 0.056 UJ
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.052 U	< 0.11 U	< 0.05 U		< 0.33 UJ	< 0.38 UJ		< 0.05 U	< 0.28 UJ
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.01 U	0.018 J	0.0054 J		0.082 J	0.048 J		0.0047 J	0.05 J
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.01 U	0.043 J	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.01 U	< 0.022 U	< 0.01 U		< 0.066 UJ	< 0.077 UJ		< 0.01 U	< 0.056 UJ
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.052 U	< 0.11 U	< 0.05 U		< 0.33 UJ	< 0.38 UJ		< 0.05 U	< 0.28 UJ
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	PHENOL	108-95-2	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	PYRENE	129-00-0	mg/kg	< 0.26 U	< 0.54 U	< 0.25 U		< 1.6 UJ	< 1.9 UJ		< 0.25 U	< 1.4 UJ
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.26 U	0.030	0.0076		0.082	0.064		0.0047	0.071
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.26 U	0.043	< 0.25 U		< 1.6 U	< 1.9 U		< 0.25 U	< 1.4 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SB-212	FTA-SB-219	FTA-SB-219	FTA-SB-301	FTA-SB-200	FTA-SB-200	FTA-SB-303	FTA-SB-200	FTA-SB-201
			Sample Date	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/13/2012
			Sample ID	FTA-SB-212-0610	FTA-SB-219-0002	FTA-SB-219-0206	FTA-SB-301-0102	FTA-SB-200-0002	FTA-SB-200-0206	FTA-SB-303-0607	FTA-SB-200-0610	FTA-SB-201-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	1 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 7 ft	6 - 10 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.26 U	0.073	0.0076		0.082	0.064		0.0047	0.071
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg				< 16 U			< 16 U		
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg				< 24 U			< 24 U		
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg				< 24 U			< 24 U		
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	0.014 J
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.01 U	< 0.04 UJ	< 0.012 U		< 0.14 UJ	< 0.14 UJ		< 0.012 U	< 0.12 UJ
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	< 0.024 U	0.76 J	< 0.061 U		1.4 J	1.8 J		< 0.046 U	2 J
VOCs	BENZENE	71-43-2	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 UJ		< 0.028 UJ	< 0.028 UJ		< 0.0024 UJ	< 0.024 UJ
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.004 U	< 0.016 UJ	< 0.0046 U		< 0.055 UJ	< 0.055 UJ		< 0.0048 U	< 0.048 UJ
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.004 UJ	< 0.016 UJ	< 0.0046 U		< 0.055 UJ	< 0.055 UJ		< 0.0048 U	< 0.048 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	0.014 J
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.002 U	0.011 J	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.004 U	< 0.016 UJ	< 0.0046 U		< 0.055 UJ	< 0.055 UJ		< 0.0048 U	< 0.048 UJ

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-212	FTA-SB-219	FTA-SB-219	FTA-SB-301	FTA-SB-200	FTA-SB-200	FTA-SB-303	FTA-SB-200	FTA-SB-201
				Sample Date	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/8/2012	11/13/2012
				Sample ID	FTA-SB-212-0610	FTA-SB-219-0002	FTA-SB-219-0206	FTA-SB-301-0102	FTA-SB-200-0002	FTA-SB-200-0206	FTA-SB-303-0607	FTA-SB-200-0610	FTA-SB-201-0002
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 10 ft	0 - 2 ft	2 - 6 ft	1 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 7 ft	6 - 10 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.01 U	< 0.04 UJ	< 0.012 U		< 0.14 UJ	< 0.14 UJ		< 0.012 U	< 0.12 UJ
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	STYRENE	100-42-5	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	TOLUENE	108-88-3	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.002 U	< 0.008 UJ	< 0.0023 U		< 0.028 UJ	< 0.028 UJ		< 0.0024 U	< 0.024 UJ
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.004 U	< 0.016 UJ	< 0.0046 U		< 0.055 UJ	< 0.055 UJ		< 0.0048 U	< 0.048 UJ
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0061 U	< 0.024 UJ	< 0.007 U		< 0.082 UJ	< 0.082 UJ		< 0.0073 U	< 0.072 UJ
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.004 U	< 0.016 U	< 0.0046 U		< 0.055 U	< 0.055 U		< 0.0048 U	< 0.048 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-201	FTA-SB-201	FTA-SB-302	FTA-ANOM1D-SO-SURF	FTA-ANOM4-SO-DEEP	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Date	11/13/2012	11/13/2012	11/13/2012	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-SB-201-0406	FTA-SB-201-0206	FTA-SB-302-0810	FTA-ANOM1D-SO-SURF-D	FTA-ANOM4-SO-DEEP-D	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Type Code	N	N	N	FD	FD	N	N	N	N
				Depth Interval	4 - 6 ft	2 - 6 ft	8 - 10 ft	0 - 2 ft	3 - 4 ft	2 - 3 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg		8720 J		16700	14800	13400	12300	13000	18600	
Metals	ANTIMONY	7440-36-0	mg/kg		0.38 J		0.08 J	0.12 J	0.11 J	0.13 J	0.08 J	0.17 J	
Metals	ARSENIC	7440-38-2	mg/kg		3.4 J		8.3 J	9.5 J	9.2 J	10.4 J	7.1 J	11.3 J	
Metals	BARIUM	7440-39-3	mg/kg		25 J		29.4	24.3 J	27	24.9	18.8	48.3	
Metals	BERYLLIUM	7440-41-7	mg/kg		0.53 J		0.6	0.59	0.53	0.54	0.49	0.74 J	
Metals	CADMIUM	7440-43-9	mg/kg		0.51 J		0.08	0.09	0.22	< 0.09 U	0.08	0.09	
Metals	CALCIUM	7440-70-2	mg/kg		15400 J		3150	2500	2860	2970	2420	2260	
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg		27.8 J		21 J	22.2 J	26.7 J	24.8 J	34.4 J	28.3 J	
Metals	COBALT	7440-48-4	mg/kg		5 J		11.8	9.8	12.2	11.2	10.6	11.6	
Metals	COPPER	7440-50-8	mg/kg		35.9 J		24.8	21.9	25.6	18.8	23.5	24.2	
Metals	IRON	7439-89-6	mg/kg		10400 J		24400	21500	22200	21800	23200	26800	
Metals	LEAD	7439-92-1	mg/kg		5.7 J		18.5 J	10.9 J	10.7 J	10.6 J	10.9 J	12.9 J	
Metals	MAGNESIUM	7439-95-4	mg/kg		4480 J		6760	5940	7390	6320	7500	6910	
Metals	MANGANESE	7439-96-5	mg/kg		1460 J		822 J	463	1290	474	473 J	519	
Metals	MERCURY	7439-97-6	mg/kg		0.13 J		0.007 J	0.006 J	0.006 J	0.008 J	0.006 J	0.02 J	
Metals	NICKEL	7440-02-0	mg/kg		14.1 J		22.5 J	22.1 J	29.1 J	24 J	23.8 J	27.4 J	
Metals	POTASSIUM	7440-09-7	mg/kg		585 J		1060 J	918 J	1320 J	1250 J	783 J	2330 J	
Metals	SELENIUM	7782-49-2	mg/kg		5.7 J		0.23 J	0.12 J	0.17 J	0.29 J	0.13 J	0.31 J	
Metals	SILVER	7440-22-4	mg/kg		0.06 J		0.08	0.03 J	0.03 J	0.04 J	0.03 J	0.05 J	
Metals	SODIUM	7440-23-5	mg/kg		181 J		135	155	158	148	90.7 J	132 J	
Metals	THALLIUM	7440-28-0	mg/kg		0.09 J		0.09	0.09	0.15	0.09 J	0.06 J	0.12	
Metals	VANADIUM	7440-62-2	mg/kg		22 J		30 J	31.9 J	32 J	34.4 J	32.4 J	40.5 J	
Metals	ZINC	7440-66-6	mg/kg		25.7 J		58.7 J	52.3 J	48.1 J	48.4 J	46.2 J	60.5 J	
Other	PH	-9	SU				7.1				8.6	8.1	
Other	TOTAL SOLIDS	-29	PCT	15	19	88	94	92	93	91	94	86	
Pest_PCBs	4,4-DDD	72-54-8	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	4,4-DDE	72-55-9	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	4,4-DDT	50-29-3	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	ALDRIN	309-00-2	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg		< 0.038 UJ		< 0.0088 U	< 0.0082 U	< 0.0082 U	< 0.0085 U	< 0.0088 U	< 0.0095 U	
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg		< 0.038 UJ		< 0.0088 U	< 0.0082 U	< 0.0082 U	< 0.0085 U	< 0.0088 U	< 0.0095 U	
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg		< 0.045 UJ		< 0.01 U	< 0.0096 U	< 0.0097 U	< 0.01 U	< 0.01 U	< 0.011 U	
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg		< 0.038 UJ		< 0.0088 U	< 0.0082 U	< 0.0082 U	< 0.0085 U	< 0.0088 U	< 0.0095 U	
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg		< 0.038 UJ		< 0.0088 U	< 0.0082 U	< 0.0082 U	< 0.0085 U	< 0.0088 U	< 0.0095 U	
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg		< 0.038 UJ		< 0.0088 U	< 0.0082 U	< 0.0082 U	< 0.0085 U	< 0.0088 U	< 0.0095 U	
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg		< 0.038 UJ		0.58	< 0.0082 U	0.44	0.12	0.59	0.97	
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg		< 0.038 UJ		< 0.0088 U	< 0.0082 U	< 0.0082 U	< 0.0085 U	< 0.0088 U	< 0.0095 U	
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg		< 0.038 UJ		< 0.0088 U	< 0.0082 U	< 0.0082 U	< 0.0085 U	< 0.0088 U	< 0.0095 U	
Pest_PCBs	BETA-BHC	319-85-7	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 U	< 0.00085 U	< 0.00088 U	< 0.00095 U	
Pest_PCBs	DIELDRIN	60-57-1	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 UJ	
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 U	< 0.0016 U	< 0.0017 U	< 0.0018 U	
Pest_PCBs	ENDRIN	72-20-8	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg				< 0.0017 U	< 0.0016 U	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 U	
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
Pest_PCBs	LINDANE	58-89-9	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg				< 0.0088 U	< 0.0082 U	< 0.0082 UJ	< 0.0085 UJ	< 0.0088 UJ	< 0.0095 U	
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg		< 0.045 U		0.58	< 0.0096 U	0.44	0.12	0.59	0.97	
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg				< 0.017 U	< 0.016 U	< 0.016 U	< 0.016 U	< 0.017 U	< 0.018 U	
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg				< 0.00088 U	< 0.00082 U	< 0.00082 UJ	< 0.00085 UJ	< 0.00088 UJ	< 0.00095 U	
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U	
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U	
SVOCs	1,4-DIOXANE	123-91-1	mg/kg		< 0.25 UJ		< 0.051 UJ	< 0.052 UJ	< 0.047 UJ	< 0.049 UJ	< 0.052 UJ	< 0.057 UJ	
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg		< 0.05 UJ		< 0.01 UJ	< 0.01 UJ	< 0.0094 UJ	< 0.0099 UJ	< 0.01 UJ	< 0.011 UJ	
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg		< 0.25 UJ		< 0.051 U	< 0.052 U	< 0.047 U	< 0.049 U	< 0.052 U	< 0.057 U	
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg		< 3 UJ		< 0.63 U	< 0.64 U	< 0.58 U	< 0.61 U	< 0.65 U	< 0.7 U	
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg		< 0.25 UJ		< 0.051 U	< 0.052 U	< 0.047 U	< 0.049 U	< 0.052 U	< 0.057 U	

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-201	FTA-SB-201	FTA-SB-302	FTA-ANOM1D-SO-SURF	FTA-ANOM4-SO-DEEP	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Date	11/13/2012	11/13/2012	11/13/2012	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-SB-201-0406	FTA-SB-201-0206	FTA-SB-302-0810	FTA-ANOM1D-SO-SURF-D	FTA-ANOM4-SO-DEEP-D	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Type Code	N	N	N	FD	FD	N	N	N	N
				Depth Interval	4 - 6 ft	2 - 6 ft	8 - 10 ft	0 - 2 ft	3 - 4 ft	2 - 3 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg		< 1.2 UJ		< 0.25 UJ	< 0.26 UJ	< 0.23 UJ	< 0.24 UJ	< 0.26 UJ	< 0.28 UJ
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg		< 0.37 UJ		< 0.076 U	< 0.078 U	< 0.07 U	< 0.074 UJ	< 0.079 UJ	< 0.086 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg		< 0.25 UJ		< 0.051 U	< 0.052 U	< 0.047 U	< 0.049 U	< 0.052 U	< 0.057 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg		< 3 UJ		< 0.63 U	< 0.64 U	< 0.58 U	< 0.61 U	< 0.65 U	< 0.7 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 UJ	< 0.01 UJ	UR
SVOCs	3-NITROANILINE	99-09-2	mg/kg		< 3 UJ		< 0.63 U	< 0.64 U	< 0.58 U	< 0.61 U	< 0.65 U	< 0.7 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg		< 0.5 UJ		< 0.1 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.1 U	< 0.11 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg		< 0.25 UJ		< 0.051 UJ	< 0.052 UJ	< 0.047 UJ	< 0.049 UJ	< 0.052 UJ	< 0.057 UJ
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg		< 3 UJ		< 0.63 U	< 0.64 U	< 0.58 U	< 0.61 U	< 0.65 U	< 0.7 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	ANTHRACENE	120-12-7	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	ATRAZINE	1912-24-9	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg		< 1.2 UJ		< 0.25 UJ	< 0.26 UJ	< 0.23 UJ	< 0.24 UJ	< 0.26 UJ	< 0.28 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg		0.016 J		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 UJ	0.0037 J	< 0.011 UJ
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 UJ
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 UJ	0.0072 J	< 0.011 UJ
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg		< 0.25 UJ		< 0.051 U	< 0.052 U	< 0.047 U	< 0.049 U	< 0.052 U	< 0.057 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	CARBAZOLE	86-74-8	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	CHRYSENE	218-01-9	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 UJ	< 0.01 UJ	< 0.011 UJ
SVOCs	DIBENZOFURAN	132-64-9	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg		< 0.25 UJ		< 0.051 U	< 0.052 U	< 0.047 U	< 0.049 U	< 0.052 U	< 0.057 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	FLUORENE	86-73-7	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg		0.027 J		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 UJ	< 0.01 UJ	< 0.011 UJ
SVOCs	ISOPHORONE	78-59-1	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg		< 0.05 UJ		0.0027 J	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	NITROBENZENE	98-95-3	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg		< 0.05 UJ		< 0.01 U	< 0.01 U	< 0.0094 U	< 0.0099 U	< 0.01 U	< 0.011 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg		< 0.25 UJ		< 0.051 U	< 0.052 U	< 0.047 U	< 0.049 U	< 0.052 U	< 0.057 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	PHENOL	108-95-2	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	PYRENE	129-00-0	mg/kg		< 1.2 UJ		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg		0.043		< 0.25 U	< 0.26 U	< 0.23 U	< 0.24 U	0.011	< 0.28 U
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg		< 1.2 U		0.0027	< 0.26 U	< 0.23 U	< 0.24 U	< 0.26 U	< 0.28 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-201	FTA-SB-201	FTA-SB-302	FTA-ANOM1D-SO-SURF	FTA-ANOM4-SO-DEEP	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Date	11/13/2012	11/13/2012	11/13/2012	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-SB-201-0406	FTA-SB-201-0206	FTA-SB-302-0810	FTA-ANOM1D-SO-SURF-D	FTA-ANOM4-SO-DEEP-D	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Type Code	N	N	N	FD	FD	N	N	N	N
				Depth Interval	4 - 6 ft	2 - 6 ft	8 - 10 ft	0 - 2 ft	3 - 4 ft	2 - 3 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg		0.043		0.0027	< 0.26 U	< 0.23 U	< 0.24 U	0.011	< 0.28 U
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	ACENAPHTHENE	83-32-9	mg/kg				< 0.2 U	< 0.19 U	< 0.2 U	< 0.18 UJ	< 0.2 U	< 0.2 UJ
TPH	ACENAPHTHYLENE	208-96-8	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	ANTHRACENE	120-12-7	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	BENZO[A]PYRENE	50-32-8	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	CHRYSENE	218-01-9	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	FLUORANTHENE	206-44-0	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	FLUORENE	86-73-7	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	NAPHTHALENE	91-20-3	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	PHENANTHRENE	85-01-8	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	PYRENE	129-00-0	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 UJ	< 0.16 U	< 0.16 UJ
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg				< 0.16 U	< 0.15 U	< 0.16 U	< 0.14 U	< 0.16 U	< 0.16 U
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg				< 0.2 U	< 0.19 U	< 0.2 U	< 0.18 U	< 0.2 U	< 0.2 U
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg				< 0.2 U	< 0.19 U	< 0.2 U	< 0.18 U	< 0.2 U	< 0.2 U
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg			< 14 U	< 16 U	< 15 U	16 J	< 14 UJ	< 16 U	< 16 UJ
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg			< 19 U	< 19 U	< 21 U	< 19 U	< 22 U	< 18 U	< 19 UJ
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg			< 19 U	< 19 U	< 21 U	< 19 U	< 22 U	< 18 U	< 19 U
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.025 UJ			0.00096 J	< 0.0022 U	< 0.0023 U	0.0097	0.0022 J	0.0025 J
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	0.0565 J								
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	0.00085 J
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.12 UJ			< 0.01 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.01 U	< 0.011 UJ
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	2.4 J			< 0.054 U	< 0.011 U	< 0.052 U	< 0.012 U	0.13 J	< 0.093 U
VOCs	BENZENE	71-43-2	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.05 UJ			< 0.0042 U	< 0.0045 U	< 0.0046 U	< 0.005 U	< 0.0042 U	< 0.0042 UJ
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.05 UJ			< 0.0042 U	< 0.0045 U	< 0.0046 U	< 0.005 U	< 0.0042 U	< 0.0042 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	0.049 J			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	0.011 J			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 UJ	< 0.0021 UJ
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.05 UJ			< 0.0042 U	< 0.0045 U	< 0.0046 U	< 0.005 U	< 0.0042 U	< 0.0042 UJ

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SB-201	FTA-SB-201	FTA-SB-302	FTA-ANOM1D-SO-SURF	FTA-ANOM4-SO-DEEP	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Date	11/13/2012	11/13/2012	11/13/2012	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-SB-201-0406	FTA-SB-201-0206	FTA-SB-302-0810	FTA-ANOM1D-SO-SURF-D	FTA-ANOM4-SO-DEEP-D	FTA-WANOM1-SO-BOTPCB	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1C-SO-SURF
				Sample Type Code	N	N	N	FD	FD	N	N	N	N
				Depth Interval	4 - 6 ft	2 - 6 ft	8 - 10 ft	0 - 2 ft	3 - 4 ft	2 - 3 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.12 UJ			< 0.01 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.01 U	< 0.011 UJ	
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	STYRENE	100-42-5	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.025 UJ			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	TOLUENE	108-88-3	mg/kg	0.022 J			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	0.0075 J			< 0.0021 U	< 0.0022 U	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.025 UJ			< 0.0021 U	0.0027 J	< 0.0023 U	< 0.0025 U	< 0.0021 U	< 0.0021 UJ	
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	0.083 J			< 0.0042 U	< 0.0045 U	< 0.0046 U	< 0.005 U	< 0.0042 U	< 0.0042 UJ	
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.075 UJ			< 0.0062 U	< 0.0068 U	< 0.0068 U	< 0.0074 U	< 0.0062 U	< 0.0064 UJ	
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.05 U			< 0.0042 U	< 0.0045 U	< 0.0046 U	< 0.005 U	< 0.0042 U	< 0.0042 U	

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Date	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	2 - 3.75 ft	3 - 4.5 ft	3 - 4.5 ft	3 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 7.5 ft	2 - 4 ft	2 - 3 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	26200	16000	14800	15800	14900	14600	12500	14300	14000
Metals	ANTIMONY	7440-36-0	mg/kg	0.18 J	0.13 J	0.1 J	0.12 J	0.09 J	0.1 J	0.1 J	0.09 J	0.09 J
Metals	ARSENIC	7440-38-2	mg/kg	18.2 J	11.8 J	7.2 J	11.2 J	9.8 J	8.8 J	7.8 J	7.2 J	7.1 J
Metals	BARIUM	7440-39-3	mg/kg	39.2	34.8	23	43 J	23.4	26.4	26.5	26.9	36.5
Metals	BERYLLIUM	7440-41-7	mg/kg	0.8 J	0.63	0.58	0.58	0.52	0.52	0.47	0.48	0.7
Metals	CADMIUM	7440-43-9	mg/kg	0.17	0.1	0.09	0.11	0.1	0.08	0.1	0.12	0.09
Metals	CALCIUM	7440-70-2	mg/kg	5600	3290	3120	3970	2650	2950	2550	3840	2470
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	56.4 J	27.3 J	25.9 J	37 J	25.5 J	24.4 J	31.4 J	25 J	23.9 J
Metals	COBALT	7440-48-4	mg/kg	20.8	11.4	11.7	14.2	11.7	10.7	12.8	10.5	9.9
Metals	COPPER	7440-50-8	mg/kg	48.8	22.8	23.8	29.2	25.3	23.6	28.4	22.3	21.7
Metals	IRON	7439-89-6	mg/kg	43800	25700	24700	31300	24300	24100	26300	22200	24100
Metals	LEAD	7439-92-1	mg/kg	22.4 J	13.2 J	10.3 J	13.1 J	13.8 J	10.9 J	13.5 J	12.4 J	9.4 J
Metals	MAGNESIUM	7439-95-4	mg/kg	13000	7200	7430	9560	7290	6800	8930	7070	6720
Metals	MANGANESE	7439-96-5	mg/kg	1060	599	486	625	503	483	549	495	561
Metals	MERCURY	7439-97-6	mg/kg	0.01 J	0.008 J	0.006 J	0.01 J	0.01 J	0.008 J	0.006 J	0.01 J	0.01 J
Metals	NICKEL	7440-02-0	mg/kg	43.1 J	26.2 J	25.3 J	30.5 J	23.6 J	24.6 J	29.7 J	23.8 J	22.1 J
Metals	POTASSIUM	7440-09-7	mg/kg	1850 J	1770 J	1100 J	1290 J	1030 J	1320 J	1380 J	1060 J	1300 J
Metals	SELENIUM	7782-49-2	mg/kg	0.25 J	0.23 J	0.17 J	0.2 J	0.19 J	0.25 J	0.22 J	0.2 J	0.38 J
Metals	SILVER	7440-22-4	mg/kg	0.07 J	0.09	0.04 J	0.04 J	0.06 J	0.04 J	0.04 J	0.03 J	0.04 J
Metals	SODIUM	7440-23-5	mg/kg	334	238	193	225	113	202	134	125	107
Metals	THALLIUM	7440-28-0	mg/kg	0.15 J	0.12	0.1	0.11	0.08	0.1	0.07	0.07 J	0.1
Metals	VANADIUM	7440-62-2	mg/kg	64.4 J	36.5 J	38.7 J	49.1 J	34.8 J	31.8 J	36.3 J	30.8 J	30.4 J
Metals	ZINC	7440-66-6	mg/kg	98.8 J	54.4 J	54.5 J	56.9 J	52.4 J	47.1 J	44.8 J	45.3 J	58.2 J
Other	PH	-9	SU					7.4				
Other	TOTAL SOLIDS	-29	PCT	53	90	92	73	90	90	87	90	89
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.014 U	< 0.0091 UJ	< 0.0078 UJ	< 0.011 U	< 0.0093 U	< 0.0085 U	< 0.0096 U	< 0.18 U	< 0.0082 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.014 U	< 0.0091 UJ	< 0.0078 UJ	< 0.011 U	< 0.0093 U	< 0.0085 U	< 0.0096 U	< 0.18 U	< 0.0082 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.017 U	< 0.011 UJ	< 0.0092 UJ	< 0.013 U	< 0.011 U	< 0.01 U	< 0.011 U	< 0.21 U	< 0.0096 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.014 U	< 0.0091 UJ	< 0.0078 UJ	< 0.011 U	< 0.0093 U	< 0.0085 U	< 0.0096 U	< 0.18 U	< 0.0082 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.014 U	< 0.0091 UJ	< 0.0078 UJ	< 0.011 U	< 0.0093 U	< 0.0085 U	< 0.0096 U	< 0.18 U	< 0.0082 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.014 U	< 0.0091 UJ	< 0.0078 UJ	< 0.011 U	< 0.0093 U	< 0.0085 U	< 0.0096 U	< 0.18 U	< 0.0082 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.35	0.32 J	0.054 J	< 0.011 U	1.8	0.22	1.2	12	0.29
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.014 U	< 0.0091 UJ	< 0.0078 UJ	< 0.011 U	< 0.0093 U	< 0.0085 U	< 0.0096 U	< 0.18 U	< 0.0082 U
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.014 U	< 0.0091 UJ	< 0.0078 UJ	< 0.011 U	< 0.0093 U	< 0.0085 U	< 0.0096 U	< 0.18 U	< 0.0082 U
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.0014 U	< 0.00091 U	< 0.00078 U	< 0.0011 U	< 0.00093 U	< 0.00085 U	< 0.00096 U	< 0.00088 U	< 0.00082 U
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0028 U	< 0.0018 U	< 0.0015 U	< 0.0022 U	< 0.0018 U	< 0.0016 U	< 0.0019 U	< 0.0017 U	< 0.0016 U
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.0028 UJ	< 0.0018 UJ	< 0.0015 UJ	< 0.0022 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0019 U	< 0.0017 UJ	< 0.0016 UJ
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.014 UJ	< 0.0091 UJ	< 0.0078 UJ	< 0.011 UJ	< 0.0093 U	< 0.0085 UJ	< 0.0096 U	< 0.0088 UJ	< 0.0082 UJ
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.35	0.32	0.054	< 0.013 U	1.8	0.22	1.2	12	0.29
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.028 U	< 0.018 U	< 0.015 U	< 0.022 U	< 0.018 U	< 0.016 U	< 0.019 U	< 0.017 U	< 0.016 U
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0014 UJ	< 0.00091 UJ	< 0.00078 UJ	< 0.0011 UJ	< 0.00093 U	< 0.00085 UJ	< 0.00096 U	< 0.00088 UJ	< 0.00082 UJ
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.016 U	0.13	0.32	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	0.022	< 0.01 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.083 UJ	< 0.052 UJ	< 0.05 UJ	< 0.061 UJ	< 0.051 UJ	< 0.055 UJ	< 0.043 UJ	< 0.046 UJ	< 0.05 UJ
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.016 UJ	< 0.01 UJ	< 0.01 UJ	< 0.012 UJ	< 0.01 UJ	< 0.011 UJ	< 0.0086 UJ	< 0.0093 UJ	< 0.01 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.083 U	< 0.052 U	< 0.05 U	< 0.061 U	< 0.051 U	< 0.055 U	< 0.043 U	< 0.046 U	< 0.05 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 1 U	< 0.64 U	< 0.62 U	< 0.75 U	< 0.63 U	< 0.68 U	< 0.53 U	< 0.57 U	< 0.61 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.083 U	< 0.052 U	< 0.05 U	< 0.061 U	< 0.051 U	0.004 J	< 0.043 U	< 0.046 U	< 0.05 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Date	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	2 - 3.75 ft	3 - 4.5 ft	3 - 4.5 ft	3 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 7.5 ft	2 - 4 ft	2 - 3 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.41 UJ	< 0.26 UJ	< 0.25 UJ	< 0.3 UJ	< 0.25 UJ	< 0.27 UJ	< 0.21 UJ	< 0.23 UJ	< 0.25 UJ
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.12 UJ	< 0.077 UJ	< 0.075 UJ	< 0.092 U	< 0.077 U	< 0.083 U	< 0.065 U	< 0.07 UJ	< 0.075 UJ
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.016 U	0.16	0.29	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.083 U	< 0.052 U	< 0.05 U	< 0.061 U	< 0.051 U	< 0.055 U	< 0.043 U	< 0.046 U	< 0.05 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 1 U	< 0.64 U	< 0.62 U	< 0.75 U	< 0.63 U	< 0.68 U	< 0.53 U	< 0.57 U	< 0.61 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.016 UJ	< 0.01 UJ	< 0.01 UJ	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 UJ	< 0.01 UJ
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 1 U	< 0.64 U	< 0.62 U	< 0.75 U	< 0.63 U	< 0.68 U	< 0.53 U	< 0.57 U	< 0.61 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.16 U	< 0.1 U	< 0.1 U	< 0.12 U	< 0.1 U	< 0.11 U	< 0.086 U	< 0.093 U	< 0.1 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.083 UJ	< 0.052 UJ	< 0.05 UJ	< 0.061 UJ	< 0.051 UJ	< 0.055 UJ	< 0.043 UJ	< 0.046 UJ	< 0.05 UJ
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 1 U	< 0.64 U	< 0.62 U	< 0.75 U	< 0.63 U	< 0.68 U	< 0.53 U	< 0.57 U	< 0.61 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.41 U	0.068 J	0.18 J	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.41 UJ	0.22 J	0.76 J	< 0.3 UJ	< 0.25 UJ	< 0.27 UJ	< 0.21 UJ	< 0.23 UJ	< 0.25 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.016 UJ	< 0.01 UJ	< 0.01 UJ	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	0.0061 J	< 0.01 UJ
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.016 U	< 0.01 UJ	< 0.01 UJ	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	0.005 J	< 0.01 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.016 UJ	< 0.01 UJ	< 0.01 UJ	< 0.012 U	< 0.01 U	< 0.011 UJ	< 0.0086 U	< 0.0093 U	0.0028 J
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	0.31 J	< 0.26 U	< 0.25 U	0.17 J	< 0.25 U	0.14 J	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.083 U	< 0.052 UJ	< 0.05 UJ	< 0.061 U	< 0.051 U	< 0.055 U	< 0.043 U	< 0.046 U	< 0.05 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.016 UJ	< 0.01 UJ	< 0.01 UJ	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 UJ	< 0.01 UJ
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.083 U	0.035 J	< 0.05 U	< 0.061 U	< 0.051 U	< 0.055 U	< 0.043 U	< 0.046 U	< 0.05 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.41 U	0.089 J	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	0.0074 J	< 0.01 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.016 UJ	< 0.01 UJ	< 0.01 UJ	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	0.011 J	< 0.01 UJ
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.016 U	0.031	0.0066 J	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.016 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U	< 0.011 U	< 0.0086 U	< 0.0093 U	< 0.01 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.083 U	< 0.052 U	< 0.05 U	< 0.061 U	< 0.051 U	< 0.055 U	< 0.043 U	< 0.046 U	< 0.05 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.41 U	0.35	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	PHENOL	108-95-2	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	PYRENE	129-00-0	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.41 U	< 0.26 U	< 0.25 U	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	0.022	0.0028
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.41 U	0.54	0.19	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	< 0.23 U	< 0.25 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Date	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	2 - 3.75 ft	3 - 4.5 ft	3 - 4.5 ft	3 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 7.5 ft	2 - 4 ft	2 - 3 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.41 U	0.54	0.19	< 0.3 U	< 0.25 U	< 0.27 U	< 0.21 U	0.022	0.0028
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	ACENAPHTHENE	83-32-9	mg/kg	< 0.3 U	0.24	0.45	< 0.25 U	< 0.19 U	< 0.2 U	< 0.18 U	< 0.19 U	< 0.19 UJ
TPH	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	ANTHRACENE	120-12-7	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	CHRYSENE	218-01-9	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	FLUORANTHENE	206-44-0	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	FLUORENE	86-73-7	mg/kg	< 0.24 U	0.24	0.27	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	NAPHTHALENE	91-20-3	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	PHENANTHRENE	85-01-8	mg/kg	< 0.24 U	0.7	1	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.15 UJ
TPH	PYRENE	129-00-0	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	0.39	< 0.15 UJ
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg	< 0.24 U	< 0.15 U	< 0.16 U	< 0.19 U	< 0.15 U	< 0.15 U	< 0.14 U	0.39	< 0.15 U
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg	< 0.3 U	1.2	1.7	< 0.25 U	< 0.19 U	< 0.2 U	< 0.18 U	< 0.19 U	< 0.19 U
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg	< 0.3 U	1.2	1.7	< 0.25 U	< 0.19 U	< 0.2 U	< 0.18 U	0.39	< 0.19 U
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	260	720	950	< 19 U	17 J	< 15 U	21	74	< 15 UJ
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 43 U	< 19 U	< 20 U	< 31 U	< 19 U	< 21 U	< 22 U	< 18 U	< 21 U
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 43 U	20 J	< 20 U	< 31 U	< 19 U	< 21 U	< 22 U	< 18 U	< 21 U
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	0.0045 J	0.002 J	0.0023 J	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0038 U	< 0.0025 UJ	< 0.0024 UJ	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	0.019	0.0051	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0038 U	0.034 J	< 0.0024 UJ	< 0.003 U	0.0018 J	< 0.0021 U	0.0019 J	0.11	0.00064 J
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0038 U	0.01 J	0.0025 J	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	0.0018 J	< 0.0019 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0038 U	0.0032 J	< 0.0024 UJ	< 0.003 U	< 0.0028 U	< 0.0021 U	0.0017 J	0.029	< 0.0019 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0038 U	0.0024 J	< 0.0024 UJ	< 0.003 U	< 0.0028 U	< 0.0021 U	0.0025 J	0.024	< 0.0019 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.019 U	< 0.012 U	< 0.012 U	< 0.015 U	< 0.014 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.0095 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	< 0.035 U	< 0.029 U	< 0.046 U	< 0.015 U	< 0.11 U	< 0.042 U	< 0.08 U	< 0.039 U	< 0.04 U
VOCs	BENZENE	71-43-2	mg/kg	< 0.0038 U	0.0021 J	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0075 U	< 0.005 U	< 0.0048 U	< 0.006 U	< 0.0055 U	< 0.0042 U	< 0.0044 U	< 0.0044 U	< 0.0038 U
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0075 U	< 0.005 U	< 0.0048 U	< 0.006 U	< 0.0055 U	< 0.0042 U	< 0.0044 U	< 0.0044 U	< 0.0038 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	0.0019 J	< 0.0021 U	0.0045	0.0013 J	< 0.0019 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0038 U	0.023	0.0056	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0038 U	0.021 J	0.0027 J	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 UJ	< 0.0019 UJ
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.0075 U	0.046	0.0054 J	< 0.006 U	< 0.0055 U	< 0.0042 U	< 0.0044 U	< 0.0044 U	< 0.0038 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Date	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
				Sample ID	FTA-ANOM1C-SO-INT	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-INT	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-NPCB-SO-BOTPCB
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	2 - 3.75 ft	3 - 4.5 ft	3 - 4.5 ft	3 - 4 ft	0 - 2 ft	2 - 4 ft	6 - 7.5 ft	2 - 4 ft	2 - 3 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0038 U	0.0073	0.0015 J	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.019 U	< 0.012 U	< 0.012 U	< 0.015 U	< 0.014 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.0095 U
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0038 U	0.042 J	0.0074 J	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	STYRENE	100-42-5	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	TOLUENE	108-88-3	mg/kg	< 0.0038 U	0.019	0.016	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	< 0.003 U	< 0.0028 U	< 0.0021 U	< 0.0022 U	< 0.0022 U	< 0.0019 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0038 U	< 0.0025 U	< 0.0024 U	0.0039 J	0.0078	0.007	0.0031 J	0.0006 J	< 0.0019 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0075 U	< 0.005 U	< 0.0048 U	< 0.006 U	< 0.0055 U	< 0.0042 U	< 0.0044 U	< 0.0044 U	< 0.0038 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.011 U	0.088	0.013 J	< 0.009 U	< 0.0082 U	< 0.0062 U	< 0.0066 U	< 0.0066 U	< 0.0057 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0075 U	0.088	0.013	< 0.006 U	< 0.0055 U	< 0.0042 U	< 0.0044 U	< 0.0044 U	< 0.0038 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de limit within the sample is presented as a non-detect value. Calculated totals have a CAS r beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01	FTA-AREAC-01	FTA-AREAB-01	FTA-AREAB-01
				Sample Date	9/26/2013	9/26/2013	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014
				Sample ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02-0002-D	FTA-AREAB-02-0002	FTA-AREAB-02-0206	FTA-AREAC-01-0002	FTA-AREAC-01-0206	FTA-AREAB-01-0002	FTA-AREAB-01-0206
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	19700	14600	11700	13600	16100	12800	11300	13200	15000
Metals	ANTIMONY	7440-36-0	mg/kg	0.16 J	0.12 J	0.063 J	0.079 J	0.11 J	0.067 J	0.064 J	0.057 J	0.11 J
Metals	ARSENIC	7440-38-2	mg/kg	11.3 J	9.5 J	7.07 J	7.85 J	21.4 J	8.31 J	8.84 J	7.4 J	13.4 J
Metals	BARIUM	7440-39-3	mg/kg	52.7	32.9	18 J	29.6 J	41.9 J	20.9 J	18 J	22.9 J	41.5 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.87	0.66	0.503 J	0.463 J	0.68 J	0.443 J	0.338 J	0.397 J	0.627 J
Metals	CADMIUM	7440-43-9	mg/kg	0.1	0.09	0.0654 J	0.166 J	0.0738 J	0.0799 J	0.0795 J	0.126 J	0.0687 J
Metals	CALCIUM	7440-70-2	mg/kg	2270	2310	2920	2700	3740	2560	2420	2880	3700
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	30.1 J	23.8 J	23.3 J	32.1 J	29.2 J	22.9 J	21.6 J	26.6 J	27 J
Metals	COBALT	7440-48-4	mg/kg	11.8	10.4	9.5 J	10.6 J	12.4 J	11.8 J	10.5 J	10.4 J	11 J
Metals	COPPER	7440-50-8	mg/kg	25.2	27.9	19 J	20.1 J	20.7 J	24 J	20.5 J	22.6 J	18.9 J
Metals	IRON	7439-89-6	mg/kg	28400	22400	21600	24200	28000	25000	21900	22400	26300
Metals	LEAD	7439-92-1	mg/kg	13.6 J	12.8 J	8.72 J	10.8 J	12.3 J	13.6 J	10.1 J	10.5 J	11.6 J
Metals	MAGNESIUM	7439-95-4	mg/kg	7260	6570	6760	7560	7750	6150	6190	7010	7170
Metals	MANGANESE	7439-96-5	mg/kg	584	570	503	481	584	548	485	685	615
Metals	MERCURY	7439-97-6	mg/kg	0.01 J	0.02 J	0.01 J	0.012 J	0.0061 J	0.0049 J	0.0058 J	0.011 J	0.0086 J
Metals	NICKEL	7440-02-0	mg/kg	29.1 J	25.2 J	21.4 J	26.3 J	31.5 J	25 J	22.6 J	25.6 J	26.1 J
Metals	POTASSIUM	7440-09-7	mg/kg	2790 J	1330 J	642 J	1120 J	2330 J	889 J	744 J	738 J	2400 J
Metals	SELENIUM	7782-49-2	mg/kg	0.18 J	0.17 J	< 0.23 U	0.068 J	< 0.21 U	0.1 J	< 0.24 U	0.056 J	0.23 J
Metals	SILVER	7440-22-4	mg/kg	0.06 J	0.04 J	0.029 J	0.043 J	0.043 J	0.042 J	0.03 J	0.042 J	0.049 J
Metals	SODIUM	7440-23-5	mg/kg	157	99.9	117 J	103 J	188 J	154 J	109 J	122 J	218 J
Metals	THALLIUM	7440-28-0	mg/kg	0.14	0.08	0.052 J	0.0822 J	0.115 J	0.0666 J	0.052 J	0.067 J	0.123 J
Metals	VANADIUM	7440-62-2	mg/kg	43.3 J	31.8 J	31 J	39.6 J	36.8 J	28.8 J	26.3 J	28.6 J	35.7 J
Metals	ZINC	7440-66-6	mg/kg	60.6 J	55 J	46.8 J	51.2 J	58.4 J	51.6 J	43.7 J	48 J	53.5 J
Other	PH	-9	SU	6.9								
Other	TOTAL SOLIDS	-29	PCT	84	89	91	88	82	91	92	90	84
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0017 U	< 0.0016 U	< 0.00032 U	< 0.00034 UJ	< 0.00038 U	< 0.00033 UJ	0.002 J	< 0.00031 UJ	< 0.00038 UJ
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0017 U	< 0.0016 U	< 0.00032 U	< 0.00034 UJ	< 0.00038 U	< 0.00033 UJ	< 0.00029 U	< 0.00031 UJ	< 0.00038 UJ
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0017 U	< 0.0016 U	0.073 J	0.41 J	< 0.00038 U	< 0.00033 UJ	< 0.00029 U	0.15 J	0.0083 J
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	< 0.0002 UJ
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	< 0.0002 UJ
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	< 0.0002 UJ
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0086 U	< 0.0083 U	< 0.016 U	< 0.076 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.035 U	< 0.0016 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0086 U	< 0.0083 U	< 0.016 U	< 0.076 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.035 U	< 0.0016 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.01 U	< 0.0098 U	< 0.019 U	< 0.089 U	< 0.0024 U	< 0.002 U	< 0.0018 U	< 0.042 U	< 0.0019 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0086 U	< 0.0083 U	< 0.016 U	< 0.076 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.035 U	< 0.0016 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0086 U	< 0.0083 U	< 0.016 U	< 0.076 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.035 U	< 0.0016 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0086 U	< 0.0083 U	< 0.016 U	< 0.076 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.035 U	< 0.0016 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.075	0.15	1.4 J	11	0.035	0.11	0.037	3.1	0.063
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0086 U	< 0.0083 U	< 0.016 U	< 0.076 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.035 U	< 0.0016 U
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0086 U	< 0.0083 U	< 0.016 U	< 0.076 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.035 U	< 0.0016 U
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	0.00074 J
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	< 0.0002 UJ
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0017 U	< 0.0016 U	0.026 J	0.13 J	0.00023 J	0.0018 J	< 0.00029 U	0.045 J	0.0022 J
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	0.00026 J	< 0.0002 UJ
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0017 U	< 0.0016 U	0.02 J	< 0.00034 UJ	< 0.00038 U	< 0.00033 UJ	< 0.00029 U	< 0.00031 UJ	< 0.00038 UJ
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0017 U	< 0.0016 U	< 0.032 UJ	0.22 J	0.0007 J	0.0061 J	< 0.00029 U	0.15 J	0.0081 J
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0017 U	< 0.0016 U	< 0.00032 UJ	< 0.00034 UJ	< 0.00038 UJ	< 0.00033 UJ	< 0.00029 UJ	< 0.00031 UJ	< 0.00038 UJ
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0017 U	< 0.0016 U	< 0.00032 U	< 0.00034 UJ	< 0.00038 U	< 0.00033 UJ	0.001 J	< 0.00031 UJ	< 0.00038 UJ
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.0017 U	< 0.0016 U	0.13 J	0.79 J	0.0016 J	0.013 J	0.0041 J	0.29 J	0.016 J
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	< 0.0002 UJ
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	< 0.0002 UJ
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	0.00094	< 0.00016 UJ	< 0.0002 UJ
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0086 U	< 0.0083 U	0.32 J	1.6 J	< 0.002 U	0.03 J	< 0.0015 U	0.61 J	0.032 J
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.075	0.15	1.4	11	0.035	0.11	0.037	3.1	0.063
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.017 U	< 0.016 U	< 0.0032 U	< 0.0034 UJ	< 0.0038 U	< 0.0033 UJ	< 0.0029 U	< 0.0031 UJ	< 0.0038 UJ
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00086 U	< 0.00083 U	< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.00015 U	< 0.00016 UJ	< 0.0002 UJ
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.058 UJ	< 0.047 UJ	< 0.049 UJ	< 0.055 UJ	< 0.054 UJ	< 0.051 UJ	< 0.051 UJ	< 0.052 UJ	< 0.049 UJ
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.012 UJ	< 0.0095 UJ	< 0.0098 UJ	< 0.011 UJ	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.0098 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.058 U	< 0.047 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.72 U	< 0.58 U	< 0.6 U	< 0.68 U	< 0.67 U	< 0.63 U	< 0.63 U	< 0.64 U	< 0.6 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.058 U	< 0.047 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01	FTA-AREAC-01	FTA-AREAB-01	FTA-AREAB-01
				Sample Date	9/26/2013	9/26/2013	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014
				Sample ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02-0002-D	FTA-AREAB-02-0002	FTA-AREAB-02-0206	FTA-AREAC-01-0002	FTA-AREAC-01-0206	FTA-AREAB-01-0002	FTA-AREAB-01-0206
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.29 UJ	< 0.24 UJ	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.088 U	< 0.071 U	UR	UR	UR	UR	UR	UR	UR
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.058 U	< 0.047 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.29 U	< 0.24 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.72 U	< 0.58 U	< 0.6 U	< 0.68 U	< 0.67 U	< 0.63 U	< 0.63 U	< 0.64 U	< 0.6 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.29 U	< 0.24 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.72 U	< 0.58 U	< 0.6 U	< 0.68 U	< 0.67 U	< 0.63 U	< 0.63 U	< 0.64 U	< 0.6 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.12 U	< 0.095 U	< 0.098 U	< 0.11 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.098 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.058 UJ	< 0.047 UJ	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.72 U	< 0.58 U	< 0.6 U	< 0.68 U	< 0.67 U	< 0.63 U	< 0.63 UJ	< 0.64 U	< 0.6 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.29 U	< 0.24 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	0.0046 J	< 0.0098 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.29 U	< 0.24 U							
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.29 UJ	< 0.24 UJ	< 0.24 UJ	< 0.27 UJ	< 0.27 UJ	< 0.25 UJ	< 0.25 UJ	< 0.26 UJ	< 0.24 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	0.011 J	< 0.011 U	0.0022 J	< 0.01 U	0.019 J	< 0.0098 U
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	0.0095 J	< 0.011 U	< 0.01 U	< 0.01 U	0.015 J	< 0.0098 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	0.0028 J	< 0.01 U	0.022	< 0.0098 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.012 U	< 0.0095 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.058 U	< 0.047 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.012 U	< 0.0095 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.058 U	< 0.047 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	0.0051 J	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.29 U	< 0.24 U	< 0.24 UJ	< 0.27 UJ	< 0.27 UJ	< 0.25 UJ	< 0.25 U	< 0.26 UJ	< 0.24 UJ
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	0.01 J	< 0.011 U	0.0021 J	< 0.01 U	0.015 J	< 0.0098 U
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 UJ	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.012 U	< 0.0095 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.29 U	< 0.24 U	< 0.0098 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0098 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.058 U	< 0.047 U	< 0.049 U	< 0.055 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.049 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	PHENOL	108-95-2	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	PYRENE	129-00-0	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.24 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	0.031	< 0.27 U	0.0071	< 0.25 U	0.071	< 0.24 U
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	< 0.27 U	< 0.27 U	< 0.25 U	< 0.25 U	0.0046	< 0.24 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01	FTA-AREAC-01	FTA-AREAB-01	FTA-AREAB-01
				Sample Date	9/26/2013	9/26/2013	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014
				Sample ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02-0002-D	FTA-AREAB-02-0002	FTA-AREAB-02-0206	FTA-AREAC-01-0002	FTA-AREAC-01-0206	FTA-AREAB-01-0002	FTA-AREAB-01-0206
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.29 U	< 0.24 U	< 0.24 U	0.031	< 0.27 U	0.0071	< 0.25 U	0.076	< 0.24 U
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	ACENAPHTHENE	83-32-9	mg/kg	< 0.23 UJ	< 0.18 U							
TPH	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	ANTHRACENE	120-12-7	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	CHRYSENE	218-01-9	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	FLUORANTHENE	206-44-0	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	FLUORENE	86-73-7	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	NAPHTHALENE	91-20-3	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	PHENANTHRENE	85-01-8	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	PYRENE	129-00-0	mg/kg	< 0.18 UJ	< 0.14 U							
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg	< 0.18 U	< 0.14 U							
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg	< 0.23 U	< 0.18 U							
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg	< 0.23 U	< 0.18 U							
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	< 18 UJ	< 14 U	< 16 U	42	< 17 U	< 15 U	< 14 U	13 J	< 16 UJ
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 22 U	< 21 U	< 24 U	< 21 U	< 30 U	< 22 U	< 20 U	< 39 U	< 23 U
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 22 U	< 21 U	< 24 U	< 21 U	< 30 U	< 22 U	< 20 U	< 39 U	< 23 U
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	0.00085 J	0.0013 J	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	0.001 J	0.0021 J	< 0.0016 U	0.00072 J	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.014 U	< 0.011 U	< 0.0078 U	< 0.011 UJ	< 0.012 U	< 0.01 U	< 0.0092 U	< 0.01 U	< 0.011 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	< 0.06 U	0.14	< 0.077 U	0.099 J	0.025	< 0.033 U	0.033	< 0.061 U	< 0.015 U
VOCs	BENZENE	71-43-2	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0055 U	< 0.0044 U	< 0.0031 U	< 0.0044 UJ	< 0.0047 U	< 0.0042 U	< 0.0037 U	< 0.0041 U	< 0.0044 U
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0055 U	< 0.0044 U	< 0.0031 U	< 0.0044 UJ	< 0.0047 U	< 0.0042 U	< 0.0037 U	< 0.0041 U	< 0.0044 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.0055 U	< 0.0044 U	< 0.0031 U	< 0.0044 UJ	< 0.0047 U	< 0.0042 U	< 0.0037 U	< 0.0041 U	< 0.0044 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01	FTA-AREAC-01	FTA-AREAB-01	FTA-AREAB-01
				Sample Date	9/26/2013	9/26/2013	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014
				Sample ID	FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-INT	FTA-AREAA-02-0002-D	FTA-AREAB-02-0002	FTA-AREAB-02-0206	FTA-AREAC-01-0002	FTA-AREAC-01-0206	FTA-AREAB-01-0002	FTA-AREAB-01-0206
				Sample Type Code	N	N	FD	N	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.014 U	< 0.011 U	< 0.0078 U	< 0.011 UJ	< 0.012 U	< 0.01 U	< 0.0092 U	< 0.01 U	< 0.011 U
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	STYRENE	100-42-5	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	TOLUENE	108-88-3	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0028 U	< 0.0022 U	< 0.0016 U	< 0.0022 UJ	< 0.0024 U	< 0.0021 U	< 0.0018 U	< 0.002 U	< 0.0022 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0055 U	< 0.0044 U	< 0.0031 U	< 0.0044 UJ	< 0.0047 U	< 0.0042 U	< 0.0037 U	< 0.0041 U	< 0.0044 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0082 U	< 0.0066 U	< 0.0046 U	< 0.0065 UJ	< 0.007 U	< 0.0062 U	< 0.0056 U	< 0.0062 U	< 0.0066 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0055 U	< 0.0044 U	< 0.0031 U	< 0.0044 U	< 0.0047 U	< 0.0042 U	< 0.0037 U	< 0.0041 U	< 0.0044 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-01	FTA-AREAA-01	FTA-AREAB-01	FTA-AREAI-01	FTA-AREAI-01	FTA-AREAH-01	FTA-AREAJ-01
				Sample Date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/18/2014	6/18/2014
				Sample ID	FTA-AREAA-02-0002	FTA-AREAA-02-0206	FTA-AREAA-01-0002	FTA-AREAA-01-0206	FTA-AREAB-01-0610	FTA-AREAI-01-0002	FTA-AREAI-01-0206	FTA-AREAH-01-0206-D	FTA-AREAJ-01-0206
				Sample Type Code	N	N	N	N	N	N	N	FD	N
				Depth Interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	10200	16200	11500	16800	14900	13400	13400	10700	13300
Metals	ANTIMONY	7440-36-0	mg/kg	0.04 J	0.142 J	0.059 J	0.19 J	0.121 J	0.054 J	0.12 J	0.07 J	0.075 J
Metals	ARSENIC	7440-38-2	mg/kg	6.01 J	15.9 J	6.33 J	10 J	14.5 J	5.82 J	6.73 J	7.08 J	8.43 J
Metals	BARIUM	7440-39-3	mg/kg	26.9 J	43.1 J	24.4 J	46.7 J	42.2 J	15.3 J	40.1 J	21.3 J	25 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.36 J	0.702 J	0.546 J	0.828 J	0.6 J	0.444 J	0.615 J	0.415 J	0.418 J
Metals	CADMIUM	7440-43-9	mg/kg	0.049 J	0.0607 J	0.0721 J	0.0831 J	0.0854 J	0.0784 J	0.068 J	0.0656 J	0.0826 J
Metals	CALCIUM	7440-70-2	mg/kg	2510	3630	2510	5270	3270	2700	3980	2730	3540
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	61.2 J	29 J	24.9 J	30.5 J	27.4 J	39 J	25.2 J	24.6 J	26 J
Metals	COBALT	7440-48-4	mg/kg	8.39 J	11.8 J	8.97 J	12.5 J	13.7 J	12.5 J	9.86 J	9.72 J	11.7 J
Metals	COPPER	7440-50-8	mg/kg	18.9 J	20 J	20.5 J	21 J	24.2 J	21.6 J	17.2 J	18.6 J	20.1 J
Metals	IRON	7439-89-6	mg/kg	19500	28600	19100	29500	29100	23900	22100	18800	23100
Metals	LEAD	7439-92-1	mg/kg	86.2 J	13.3 J	11 J	14.5 J	14 J	10.4 J	12.1 J	8.5 J	8.99 J
Metals	MAGNESIUM	7439-95-4	mg/kg	6990	7450	6000	8030	7620	8780	6490	5280	6640
Metals	MANGANESE	7439-96-5	mg/kg	393	523	365	617	617	534	435	456	573
Metals	MERCURY	7439-97-6	mg/kg	0.0052 J	0.013 J	0.0078 J	0.012 J	0.0064 J	< 0.015 U	0.011 J	< 0.013 U	< 0.018 U
Metals	NICKEL	7440-02-0	mg/kg	24.9 J	29.7 J	23.4 J	31.1 J	30.3 J	32.2 J	25 J	25.6 J	24.9 J
Metals	POTASSIUM	7440-09-7	mg/kg	472 J	2790 J	950 J	3120 J	1640 J	546 J	2640 J	979 J	1130 J
Metals	SELENIUM	7782-49-2	mg/kg	0.13 J	0.22 J	< 0.23 U	< 0.27 U	< 0.345 U	< 0.26 U	< 0.283 U	0.16 J	0.23 J
Metals	SILVER	7440-22-4	mg/kg	0.02 J	0.0464 J	0.03 J	< 0.061 U	0.0379 J	0.029 J	< 0.0502 U	0.03 J	0.04 J
Metals	SODIUM	7440-23-5	mg/kg	84.1 J	212 J	149 J	244 J	165 J	90.2 J	210 J	191 J	182 J
Metals	THALLIUM	7440-28-0	mg/kg	0.053 J	0.125 J	0.0766 J	0.151 J	0.103 J	0.0597 J	0.14 J	0.065 J	0.08 J
Metals	VANADIUM	7440-62-2	mg/kg	30.9 J	36.1 J	27.6 J	40.4 J	35.5 J	35.9 J	32.9 J	27.5 J	35.4 J
Metals	ZINC	7440-66-6	mg/kg	39.6 J	58.4 J	44 J	65.4 J	63.2 J	49 J	52.4 J	39.2 J	47.8 J
Other	PH	-9	SU									
Other	TOTAL SOLIDS	-29	PCT	91	82	91	82	90	97	85	92	90
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.00036 UJ	< 0.00039 U	< 0.00033 UJ	< 0.0004 UJ	< 0.00032 U	< 0.0003 U	< 0.00034 U	< 0.00036 U	< 0.00037 UJ
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.00036 UJ	< 0.00039 U	< 0.00033 UJ	< 0.0004 UJ	< 0.00032 U	< 0.0003 U	< 0.00034 U	0.00058 J	< 0.00037 UJ
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0036 UJ	< 0.00039 U	< 0.00033 UJ	< 0.0004 UJ	0.0023 J	0.021 J	0.0011	< 0.00036 U	0.003 J
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0016 U	< 0.002 U	< 0.0016 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0016 U	< 0.002 U	< 0.0016 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0019 U	< 0.0024 U	< 0.0018 U	< 0.0024 U	< 0.002 U	< 0.0018 U	< 0.0021 U	< 0.0022 U	< 0.0022 UJ
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0016 U	< 0.002 U	< 0.0016 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0016 U	< 0.002 U	< 0.0016 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0016 U	< 0.002 U	< 0.0016 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.58 J	< 0.002 U	0.12	< 0.002 U	0.049	0.48	0.02	0.088	0.043 J
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0016 U	< 0.002 U	< 0.0016 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0016 U	< 0.002 U	< 0.0016 U	< 0.002 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	0.0083 J	< 0.00039 U	0.0026 J	< 0.0004 UJ	< 0.00032 U	0.006	< 0.00034 U	0.0033 J	0.0019 J
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.00036 UJ	< 0.00039 U	< 0.00033 UJ	< 0.0004 UJ	< 0.00032 U	0.0058	0.00032 J	< 0.00036 U	< 0.00037 UJ
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	0.015 J	< 0.00039 U	0.0025 J	< 0.0004 UJ	0.0013 J	0.011 J	< 0.00034 U	< 0.00036 U	0.0029 J
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.00036 UJ	< 0.00039 UJ	< 0.00033 UJ	< 0.0004 UJ	< 0.00032 UJ	0.024 J	< 0.00034 UJ	0.00087 J	0.00045 J
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.00036 UJ	< 0.00039 U	< 0.00033 UJ	< 0.0004 UJ	< 0.00032 U	< 0.0003 U	< 0.00034 U	< 0.00036 U	< 0.00037 UJ
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.058 J	< 0.00039 U	0.01 J	< 0.0004 UJ	0.0057 J	0.044 J	0.0022 J	0.0023 J	< 0.00037 UJ
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	0.00033 J
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	0.00018 J	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	0.1 J	< 0.002 U	0.012 J	< 0.002 UJ	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0018 U	< 0.0019 UJ
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.58	< 0.0024 U	0.12	< 0.0024 U	0.049	0.48	0.020	0.088	0.043
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.0036 UJ	< 0.0039 U	< 0.0033 UJ	< 0.004 UJ	< 0.0032 U	< 0.003 U	< 0.0034 U	< 0.0036 U	< 0.0037 UJ
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00018 UJ	< 0.0002 U	< 0.00017 UJ	< 0.0002 UJ	< 0.00017 U	< 0.00015 U	< 0.00018 U	< 0.00018 U	< 0.00019 UJ
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.046 UJ	< 0.058 UJ	< 0.053 UJ	< 0.048 UJ	< 0.047 UJ	< 0.051 UJ	< 0.052 UJ	< 0.048 U	< 0.051 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.0093 UJ	< 0.012 UJ	< 0.01 UJ	< 0.0096 UJ	< 0.0094 UJ	< 0.01 UJ	< 0.01 UJ	< 0.0097 UJ	< 0.01 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.57 U	< 0.71 U	< 0.65 U	< 0.75 UJ	< 0.58 U	< 0.63 U	< 0.64 U	< 0.59 U	< 0.63 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-01	FTA-AREAA-01	FTA-AREAB-01	FTA-AREAI-01	FTA-AREAI-01	FTA-AREAH-01	FTA-AREAJ-01
				Sample Date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/18/2014	6/18/2014
				Sample ID	FTA-AREAA-02-0002	FTA-AREAA-02-0206	FTA-AREAA-01-0002	FTA-AREAA-01-0206	FTA-AREAB-01-0610	FTA-AREAI-01-0002	FTA-AREAI-01-0206	FTA-AREAH-01-0206-D	FTA-AREAJ-01-0206
				Sample Type Code	N	N	N	N	N	N	N	FD	N
				Depth Interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	UR	UR	UR	UR	UR	UR	UR	UR	UR
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.57 U	< 0.71 U	< 0.65 U	< 0.75 UJ	< 0.58 U	< 0.63 U	< 0.64 U	< 0.59 U	< 0.63 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.57 U	< 0.71 U	< 0.65 U	< 0.75 UJ	< 0.58 U	< 0.63 U	< 0.64 U	< 0.59 U	< 0.63 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.093 U	< 0.12 U	< 0.1 U	< 0.096 U	< 0.094 U	< 0.1 U	< 0.1 U	< 0.097 U	< 0.1 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.57 U	< 0.71 U	< 0.65 U	< 0.75 UJ	< 0.58 U	< 0.63 U	< 0.64 U	< 0.59 U	< 0.63 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg									
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.23 UJ	< 0.29 UJ	< 0.26 UJ	< 0.3 UJ	< 0.23 UJ	< 0.25 UJ	< 0.26 UJ	< 0.24 UJ	0.21 J
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	0.002 J	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 UJ
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 UJ	< 0.25 UJ
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.23 U	< 0.29 U	0.15 J	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.23 UJ	< 0.29 UJ	< 0.26 UJ	< 0.3 UJ	< 0.23 UJ	< 0.25 UJ	< 0.26 UJ	< 0.24 U	< 0.25 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.0093 UJ	< 0.012 UJ	< 0.01 UJ	< 0.0096 UJ	< 0.0094 UJ	< 0.01 UJ	< 0.01 UJ	< 0.0097 U	< 0.01 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.0093 U	< 0.012 U	< 0.01 U	< 0.0096 U	< 0.0094 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.046 U	< 0.058 U	< 0.053 U	< 0.048 U	< 0.047 U	< 0.051 U	< 0.052 U	< 0.048 U	< 0.051 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	PHENOL	108-95-2	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	PYRENE	129-00-0	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 UJ	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 U	< 0.23 U	0.0020	< 0.26 U	< 0.24 U	< 0.25 U
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 U	< 0.23 U	< 0.25 U	< 0.26 U	< 0.24 U	< 0.25 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-01	FTA-AREAA-01	FTA-AREAB-01	FTA-AREAI-01	FTA-AREAI-01	FTA-AREAH-01	FTA-AREAJ-01
				Sample Date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/18/2014	6/18/2014
				Sample ID	FTA-AREAA-02-0002	FTA-AREAA-02-0206	FTA-AREAA-01-0002	FTA-AREAA-01-0206	FTA-AREAB-01-0610	FTA-AREAI-01-0002	FTA-AREAI-01-0206	FTA-AREAH-01-0206-D	FTA-AREAJ-01-0206
				Sample Type Code	N	N	N	N	N	N	N	FD	N
				Depth Interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.23 U	< 0.29 U	< 0.26 U	< 0.3 U	< 0.23 U	0.0020	< 0.26 U	< 0.24 U	< 0.25 U
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	< 12 U	< 16 U	< 15 U	< 16 U	< 14 U	< 12 U	< 16 U	< 16 UJ	< 16 UJ
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 22 U	< 36 U	< 29 U	< 34 U	< 28 U	< 26 U	< 42 U	< 22 U	< 32 U
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 22 U	< 36 U	< 29 U	< 34 U	< 28 U	< 26 U	< 42 U	< 22 U	< 32 U
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.01 U	< 0.012 U	< 0.012 U	< 0.0085 U	< 0.0075 UJ	< 0.0082 U	< 0.012 U	< 0.0096 U	< 0.012 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	0.087	< 0.026 U	< 0.056 U	< 0.0088 U	< 0.0075 U	< 0.037 U	< 0.022 U	0.015 J	0.025 J
VOCs	BENZENE	71-43-2	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0041 U	< 0.0047 U	< 0.005 U	< 0.0034 U	< 0.003 UJ	< 0.0033 U	< 0.0048 U	< 0.0038 U	< 0.005 U
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0041 U	< 0.0047 U	< 0.005 U	< 0.0034 U	< 0.003 UJ	< 0.0033 U	< 0.0048 U	< 0.0038 U	< 0.005 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.0041 U	< 0.0047 U	< 0.005 U	< 0.0034 U	< 0.003 UJ	< 0.0033 U	< 0.0048 U	< 0.0038 U	< 0.005 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-01	FTA-AREAA-01	FTA-AREAB-01	FTA-AREAI-01	FTA-AREAI-01	FTA-AREAH-01	FTA-AREAJ-01
				Sample Date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/18/2014	6/18/2014
				Sample ID	FTA-AREAA-02-0002	FTA-AREAA-02-0206	FTA-AREAA-01-0002	FTA-AREAA-01-0206	FTA-AREAB-01-0610	FTA-AREAI-01-0002	FTA-AREAI-01-0206	FTA-AREAH-01-0206-D	FTA-AREAJ-01-0206
				Sample Type Code	N	N	N	N	N	N	N	FD	N
				Depth Interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.01 U	< 0.012 U	< 0.012 U	< 0.0085 U	< 0.0075 UJ	< 0.0082 U	< 0.012 U	< 0.0096 U	< 0.012 U
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	STYRENE	100-42-5	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	TOLUENE	108-88-3	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.002 U	< 0.0024 U	< 0.0025 U	< 0.0017 U	< 0.0015 UJ	< 0.0016 U	< 0.0024 U	< 0.0019 U	< 0.0025 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0041 U	< 0.0047 U	< 0.005 U	< 0.0034 U	< 0.003 UJ	< 0.0033 U	< 0.0048 U	< 0.0038 U	< 0.005 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0062 U	< 0.007 U	< 0.0075 U	< 0.0051 U	< 0.0045 UJ	< 0.005 U	< 0.0071 U	< 0.0058 U	< 0.0075 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0041 U	< 0.0047 U	< 0.005 U	< 0.0034 U	< 0.003 U	< 0.0033 U	< 0.0048 U	< 0.0038 U	< 0.005 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples with detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAJ-01	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAG-03	FTA-AREAG-03	FTA-AREAG-02	FTA-AREAG-02
				Sample Date	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014
				Sample ID	FTA-AREAJ-01-069.4	FTA-AREAH-01-0002	FTA-AREAH-01-0206	FTA-AREAD-02-0002	FTA-AREAD-02-0206	FTA-AREAG-03-0002	FTA-AREAG-03-0206	FTA-AREAG-02-0002	FTA-AREAG-02-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 9.4 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
Metals	ALUMINUM	7429-90-5	mg/kg	12300	13700	12400	14200	11100	14500	12800	11800	17900
Metals	ANTIMONY	7440-36-0	mg/kg	0.053 J	0.078 J	0.071 J	0.061 J	0.062 J	0.078 J	0.061 J	< 0.046 U	0.1 J
Metals	ARSENIC	7440-38-2	mg/kg	5.65 J	9.78 J	8 J	8.5 J	7.68 J	8.29 J	7.83 J	5.74 J	16.1 J
Metals	BARIUM	7440-39-3	mg/kg	18.1 J	24.6 J	23 J	31.2 J	24.4 J	39.7 J	23.8 J	23.7 J	47 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.354 J	0.458 J	0.421 J	0.537 J	0.426 J	0.639 J	0.47 J	0.404 J	0.767 J
Metals	CADMIUM	7440-43-9	mg/kg	0.062 J	0.0787 J	0.0749 J	0.0814 J	0.0788 J	0.084 J	0.0928 J	0.0826 J	0.0996 J
Metals	CALCIUM	7440-70-2	mg/kg	2930	2330	3080	2470	2190	2090	2310	3600	3330
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	24.7 J	24.6 J	26.1 J	27.6 J	21.4 J	28 J	25.4 J	19.5 J	33.2 J
Metals	COBALT	7440-48-4	mg/kg	10.4 J	11.2 J	11 J	11.2 J	10.4 J	11.1 J	12 J	8.47 J	14.4 J
Metals	COPPER	7440-50-8	mg/kg	17.8 J	20.4 J	21.1 J	18.7 J	17.8 J	20.4 J	19.8 J	21.6 J	28.6 J
Metals	IRON	7439-89-6	mg/kg	22100	23300	21200	22800	19100	22000	22600	21200	29400
Metals	LEAD	7439-92-1	mg/kg	7.49 J	12.5 J	9.34 J	9.47 J	9.11 J	12 J	12.5 J	8.01 J	14.6 J
Metals	MAGNESIUM	7439-95-4	mg/kg	7090	6090	6510	6380	4940	5910	6530	6270	8000
Metals	MANGANESE	7439-96-5	mg/kg	459	509	443	497	445	461	891	432	603
Metals	MERCURY	7439-97-6	mg/kg	< 0.016 U	< 0.014 U	< 0.016 U	< 0.018 U	< 0.018 U	0.0049 J	< 0.014 U	0.011 J	0.008 J
Metals	NICKEL	7440-02-0	mg/kg	21.7 J	23.5 J	24.3 J	26.1 J	22.2 J	25 J	25 J	17.9 J	33 J
Metals	POTASSIUM	7440-09-7	mg/kg	891 J	1040 J	1030 J	1380 J	1120 J	1700 J	1000 J	1000 J	2210 J
Metals	SELENIUM	7782-49-2	mg/kg	0.2 J	0.309 J	0.16 J	0.22 J	0.27 J	0.331 J	0.28 J	0.2 J	0.346 J
Metals	SILVER	7440-22-4	mg/kg	0.028 J	0.031 J	0.039 J	0.027 J	0.03 J	0.038 J	0.024 J	0.044 J	0.042 J
Metals	SODIUM	7440-23-5	mg/kg	156 J	96.5 J	226 J	101 J	110 J	165 J	105 J	276 J	214 J
Metals	THALLIUM	7440-28-0	mg/kg	0.062 J	0.0808 J	0.073 J	0.0891 J	0.0988 J	0.113 J	0.111 J	0.0774 J	0.124 J
Metals	VANADIUM	7440-62-2	mg/kg	30.8 J	33 J	33.2 J	33.2 J	27.4 J	33.7 J	30.5 J	35.4 J	44.4 J
Metals	ZINC	7440-66-6	mg/kg	44.6 J	50 J	45.4 J	47 J	41.6 J	52.8 J	48.2 J	46.5 J	65.1 J
Other	PH	-9	SU									
Other	TOTAL SOLIDS	-29	PCT	92	91	93	88	89	90	91	90	85
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.00034 U	0.0092 J	< 0.00034 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.0036 U	< 0.00036 U	< 0.00034 UJ	< 0.00038 UJ
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.00034 U	< 0.00036 UJ	< 0.00034 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.0036 U	< 0.00036 U	< 0.00034 UJ	< 0.00038 UJ
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	0.0013	0.039 J	< 0.00034 UJ	0.0032 J	< 0.00035 UJ	0.76 J	< 0.00036 U	< 0.00034 UJ	0.0015 J
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.18 U	< 0.0018 U	< 0.018 U	< 0.002 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.18 U	< 0.0018 U	< 0.018 U	< 0.002 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.002 U	< 0.0022 U	< 0.002 U	< 0.0022 U	< 0.0021 U	< 0.22 U	< 0.0022 U	< 0.021 U	< 0.0023 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.18 U	< 0.0018 U	< 0.018 U	< 0.002 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.18 U	< 0.0018 U	< 0.018 U	< 0.002 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.18 U	< 0.0018 U	< 0.018 U	< 0.002 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.017	0.57	0.099 J	0.052	< 0.0018 U	15	0.56	1.2	0.026 J
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.18 U	< 0.0018 U	< 0.018 U	< 0.002 U
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0017 U	< 0.0018 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.18 U	< 0.0018 U	< 0.018 U	< 0.002 U
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	0.00084 J	0.024 J	< 0.00034 UJ	0.0018 J	< 0.00035 UJ	0.48 J	0.02 J	0.034 J	0.00049 J
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	0.00044 J	< 0.0002 UJ
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.00034 U	< 0.00036 UJ	< 0.00034 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.0036 U	< 0.00036 U	< 0.00034 UJ	0.00044 J
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.00034 U	< 0.00036 UJ	< 0.00034 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.0036 U	0.034 J	< 0.00034 UJ	< 0.00038 UJ
Pest_PCBs	ENDRIN	72-20-8	mg/kg	0.00025 J	0.0056 J	< 0.00034 UJ	0.0005 J	< 0.00035 UJ	0.13 J	0.0065 J	0.0076 J	< 0.00038 UJ
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.00034 U	< 0.00036 UJ	< 0.00034 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.0036 U	< 0.00036 U	< 0.00034 UJ	< 0.00038 UJ
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.00034 U	0.017 J	< 0.00034 UJ	0.0011 J	< 0.00035 UJ	0.32 J	0.017 J	0.024 J	0.0028 J
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00017 U	0.0031 J	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	0.087 J	0.0043 J	0.0044 J	< 0.0002 UJ
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0017 U	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	0.064 J	< 0.0018 U	< 0.0018 UJ	< 0.002 UJ
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.017	0.57	0.099	0.052	< 0.0021 U	15	0.56	1.2	0.026
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.0034 U	< 0.0036 UJ	< 0.0034 UJ	< 0.0036 UJ	< 0.0035 UJ	< 0.036 U	< 0.0036 U	< 0.0034 UJ	< 0.0038 UJ
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00017 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 UJ	< 0.0002 UJ
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	0.0019 J	< 0.011 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.01 UJ	< 0.01 UJ	< 0.011 UJ	< 0.011 UJ	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.011 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	0.0032 J	< 0.056 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.63 U	< 0.63 U	< 0.66 U	< 0.65 U	< 0.66 U	< 0.62 U	< 0.63 U	< 0.64 U	< 0.69 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	0.0035 J	< 0.056 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAJ-01	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAG-03	FTA-AREAG-03	FTA-AREAG-02	FTA-AREAG-02
				Sample Date	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014
				Sample ID	FTA-AREAJ-01-069.4	FTA-AREAH-01-0002	FTA-AREAH-01-0206	FTA-AREAD-02-0002	FTA-AREAD-02-0206	FTA-AREAG-03-0002	FTA-AREAG-03-0206	FTA-AREAG-02-0002	FTA-AREAG-02-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 9.4 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	UR	UR	UR	UR	UR	UR	UR	UR	UR
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.63 U	< 0.63 U	< 0.66 U	< 0.65 U	< 0.66 U	< 0.62 U	< 0.63 U	< 0.64 U	< 0.69 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	UR	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.63 U	< 0.63 U	< 0.66 U	< 0.65 U	< 0.66 U	< 0.62 U	< 0.63 U	< 0.64 U	< 0.69 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.1 U	< 0.1 U	< 0.11 U	< 0.11 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.11 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 UJ	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.63 U	< 0.63 U	< 0.66 U	< 0.65 U	< 0.66 U	< 0.62 U	< 0.63 U	< 0.64 U	< 0.69 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0015 U	< 0.01 U	0.0094 J	< 0.011 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg									
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	0.0014 J	< 0.01 U	0.002 J	0.0023 J
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.25 UJ	< 0.25 UJ	< 0.26 UJ	< 0.26 UJ	< 0.27 UJ	< 0.25 UJ	< 0.25 UJ	< 0.26 UJ	< 0.28 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	0.0023 J	< 0.011 U	0.013 J	< 0.01 U	0.046	0.0029 J
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	0.011 J	< 0.01 U	0.038	< 0.011 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	0.003 J	< 0.011 U	0.016 J	< 0.01 U	0.058	0.0029 J
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.25 UJ	< 0.25 UJ	< 0.26 UJ	< 0.26 UJ	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.25 UJ	< 0.25 UJ	< 0.26 UJ	< 0.26 UJ	< 0.27 UJ	< 0.25 UJ	< 0.25 UJ	< 0.26 UJ	< 0.28 UJ
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	0.0083 J	0.0029 J	0.0025 J	< 0.011 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	0.0029 J	< 0.011 U	0.015 J	< 0.01 U	0.052	0.0054 J
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	0.0029 J	< 0.011 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.051 U	< 0.051 U	< 0.054 U	< 0.053 U	< 0.054 U	< 0.051 U	< 0.051 U	< 0.052 U	< 0.056 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	PHENOL	108-95-2	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	PYRENE	129-00-0	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	< 0.26 U	< 0.28 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	0.0082	< 0.27 U	0.055	< 0.25 U	0.19	0.011
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.25 U	< 0.25 U	0.012	< 0.28 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-AREAJ-01	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAG-03	FTA-AREAG-03	FTA-AREAG-02	FTA-AREAG-02
			Sample Date	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014
			Sample ID	FTA-AREAJ-01-069.4	FTA-AREAH-01-0002	FTA-AREAH-01-0206	FTA-AREAD-02-0002	FTA-AREAD-02-0206	FTA-AREAG-03-0002	FTA-AREAG-03-0206	FTA-AREAG-02-0002	FTA-AREAG-02-0206
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	6 - 9.4 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.25 U	< 0.25 U	< 0.26 U	0.0082	< 0.27 U	0.055	< 0.25 U	0.21	0.011
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
TPH	ACENAPHTHENE	83-32-9	mg/kg									
TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
TPH	ANTHRACENE	120-12-7	mg/kg									
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
TPH	CHRYSENE	218-01-9	mg/kg									
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
TPH	FLUORANTHENE	206-44-0	mg/kg									
TPH	FLUORENE	86-73-7	mg/kg									
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
TPH	NAPHTHALENE	91-20-3	mg/kg									
TPH	PHENANTHRENE	85-01-8	mg/kg									
TPH	PYRENE	129-00-0	mg/kg									
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	< 14 UJ	9.4 J	< 15 UJ	< 15 UJ	< 16 UJ	< 15 UJ	< 16 UJ	< 15 UJ	< 17 UJ
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 25 U	< 23 U	< 21 U	< 27 U	< 23 U	< 27 U	< 24 U	< 20 U	< 29 U
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 25 U	< 23 U	< 21 U	< 27 U	< 23 U	< 27 U	< 24 U	< 20 U	< 29 U
TPH	TPH-DIESEL RANGE	-3527	mg/kg									
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg									
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	0.00095 J	0.00094 J	< 0.0021 UJ	< 0.002 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	2-BUTANONE	78-93-3	mg/kg									
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.012 U	< 0.0095 UJ	< 0.0081 U	< 0.0099 UJ	< 0.0095 UJ	< 0.0084 UJ	< 0.012 UJ	< 0.01 UJ	< 0.0099 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
VOCs	ACETONE	67-64-1	mg/kg	0.012 J	0.042 J	0.019 J	0.078 J	0.01 J	0.037 J	0.042 J	0.1 J	0.038
VOCs	BENZENE	71-43-2	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
VOCs	BROMOFORM	75-25-2	mg/kg									
VOCs	BROMOMETHANE	74-83-9	mg/kg									
VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0046 U	< 0.0038 UJ	< 0.0032 U	< 0.004 UJ	< 0.0038 UJ	< 0.0034 UJ	< 0.0047 UJ	< 0.0042 UJ	< 0.004 U
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0046 U	< 0.0038 UJ	< 0.0032 U	< 0.004 UJ	< 0.0038 UJ	< 0.0034 UJ	< 0.0047 UJ	< 0.0042 UJ	< 0.004 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
VOCs	CYCLOHEXANE	110-82-7	mg/kg									
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.0046 U	< 0.0038 UJ	< 0.0032 U	< 0.004 UJ	< 0.0038 UJ	< 0.0034 UJ	< 0.0047 UJ	< 0.0042 UJ	< 0.004 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAJ-01	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAG-03	FTA-AREAG-03	FTA-AREAG-02	FTA-AREAG-02
				Sample Date	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014
				Sample ID	FTA-AREAJ-01-069.4	FTA-AREAH-01-0002	FTA-AREAH-01-0206	FTA-AREAD-02-0002	FTA-AREAD-02-0206	FTA-AREAG-03-0002	FTA-AREAG-03-0206	FTA-AREAG-02-0002	FTA-AREAG-02-0206
				Sample Type Code	N	N	N	N	N	N	N	N	N
				Depth Interval	6 - 9.4 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft
Analyte Group	Compound	CAS	Units										
VOCs	METHYL ACETATE	79-20-9	mg/kg										
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.012 U	< 0.0095 UJ	< 0.0081 U	< 0.0099 UJ	< 0.0095 UJ	< 0.0084 UJ	< 0.012 UJ	< 0.01 UJ	< 0.0099 U
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	STYRENE	100-42-5	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	TOLUENE	108-88-3	mg/kg	< 0.0023 U	0.0029 J	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0023 U	< 0.0019 UJ	< 0.0016 U	< 0.002 UJ	< 0.0019 UJ	< 0.0017 UJ	< 0.0024 UJ	< 0.0021 UJ	< 0.002 U
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0046 U	< 0.0038 UJ	< 0.0032 U	< 0.004 UJ	< 0.0038 UJ	< 0.0034 UJ	< 0.0047 UJ	< 0.0042 UJ	< 0.004 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0069 U	< 0.0057 UJ	< 0.0049 U	< 0.0059 UJ	< 0.0057 UJ	< 0.005 UJ	< 0.007 UJ	< 0.0063 UJ	< 0.0059 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0046 U	< 0.0038 U	< 0.0032 U	< 0.004 U	< 0.0038 U	< 0.0034 U	< 0.0047 U	< 0.0042 U	< 0.004 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS
beginning with "RA-".

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAG-01	FTA-AREAG-01	FTA-AREAE-01	FTA-AREAD-01	FTA-AREAD-01	FTA-AREAF-01	FTA-AREAF-01	FTA-AREAE-01
				Sample Date	6/18/2014	6/18/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014
				Sample ID	FTA-AREAG-01-0002	FTA-AREAG-01-0206	FTA-AREAE-01-0610-D	FTA-AREAD-01-0002	FTA-AREAD-01-0206	FTA-AREAF-01-0002	FTA-AREAF-01-0206	FTA-AREAE-01-0610
				Sample Type Code	N	N	FD	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft
Analyte Group	Compound	CAS	Units									
Metals	ALUMINUM	7429-90-5	mg/kg	12900	15200	11400	14200	9940	9720	12600	12400
Metals	ANTIMONY	7440-36-0	mg/kg	0.057 J	0.072 J	0.083 J	0.099 J	0.059 J	0.078 J	0.089 J	0.093 J
Metals	ARSENIC	7440-38-2	mg/kg	6.82 J	14.3 J	7.23 J	9.61 J	7.46 J	7.63 J	9.86 J	9.26 J
Metals	BARIUM	7440-39-3	mg/kg	21 J	37.1 J	21.8 J	32 J	17.6 J	16 J	26.2 J	23.5 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.43 J	0.579 J	0.432 J	0.544 J	0.383 J	0.377 J	0.502 J	0.497 J
Metals	CADMIUM	7440-43-9	mg/kg	0.0825 J	0.125 J	0.0753 J	0.0817 J	0.0528 J	0.05 J	0.0749 J	0.0795 J
Metals	CALCIUM	7440-70-2	mg/kg	3120	3410	3300	1720	1770	2370	3140	3490
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	30.6 J	33 J	22.5 J	28 J	18.2 J	18.4 J	24.6 J	29.8 J
Metals	COBALT	7440-48-4	mg/kg	11.5 J	12.2 J	9.3 J	10.2 J	8.08 J	8.09 J	10.6 J	10.9 J
Metals	COPPER	7440-50-8	mg/kg	23.1 J	21.8 J	17.4 J	20.2 J	15.9 J	16.6 J	19.3 J	18.2 J
Metals	IRON	7439-89-6	mg/kg	22700	26900	20100	22500	16800	18000	21900	22200
Metals	LEAD	7439-92-1	mg/kg	10.7 J	11.5 J	8.4 J	16.7 J	7.34 J	10.9 J	10 J	9.36 J
Metals	MAGNESIUM	7439-95-4	mg/kg	7370	7910	5900	6150	5070	4770	6370	6850
Metals	MANGANESE	7439-96-5	mg/kg	507	592	419	392	354	386	446	491
Metals	MERCURY	7439-97-6	mg/kg	0.0043 J	0.0076 J	< 0.012 U	< 0.017 U	< 0.016 U	< 0.015 U	0.0042 J	< 0.018 U
Metals	NICKEL	7440-02-0	mg/kg	23.8 J	25.4 J	22.9 J	23.4 J	18.6 J	17.7 J	23.8 J	24.6 J
Metals	POTASSIUM	7440-09-7	mg/kg	821 J	1590 J	1030 J	897 J	655 J	755 J	1290 J	1120 J
Metals	SELENIUM	7782-49-2	mg/kg	0.21 J	0.32 J	< 0.28 U	< 0.27 U	< 0.15 U	< 0.21 U	< 0.23 U	< 0.21 U
Metals	SILVER	7440-22-4	mg/kg	0.026 J	0.042 J	0.037 J	0.038 J	0.023 J	0.033 J	0.063 J	0.045 J
Metals	SODIUM	7440-23-5	mg/kg	178 J	162 J	147 J	87 J	89 J	104 J	183 J	188 J
Metals	THALLIUM	7440-28-0	mg/kg	0.072 J	0.0987 J	0.064 J	0.078 J	0.044 J	0.057 J	0.088 J	0.0789 J
Metals	VANADIUM	7440-62-2	mg/kg	37.1 J	44.5 J	26.3 J	36.8 J	24.4 J	23.2 J	32.7 J	34.5 J
Metals	ZINC	7440-66-6	mg/kg	49.9 J	57.7 J	41.5 J	53 J	35.8 J	35.6 J	46.8 J	47.3 J
Other	PH	-9	SU								
Other	TOTAL SOLIDS	-29	PCT	95	91	93	87	86	92	93	92
Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.00032 UJ	0.0015 J	< 0.00033 UJ	< 0.00034 UJ	< 0.00038 UJ	< 0.00027 U	< 0.00034 UJ	< 0.00034 UJ
Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.00032 UJ	0.000082 J	< 0.00033 UJ	< 0.00034 UJ	< 0.00038 UJ	< 0.00027 U	< 0.00034 UJ	< 0.00034 UJ
Pest_PCBs	4,4-DDT	50-29-3	mg/kg	0.023 J	0.0016 J	< 0.00033 UJ	0.0056 J	< 0.00038 UJ	0.011	< 0.00034 UJ	0.00074 J
Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	0.00016 J	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.0017 U	< 0.0018 U	< 0.0019 U	< 0.0014 U	< 0.0017 U	< 0.0017 U
Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.0017 U	< 0.0018 U	< 0.0019 U	< 0.0014 U	< 0.0017 U	< 0.0017 U
Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0019 UJ	< 0.0019 U	< 0.002 U	< 0.0021 U	< 0.0023 U	< 0.0016 U	< 0.002 U	< 0.002 U
Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.0017 U	< 0.0018 U	< 0.0019 U	< 0.0014 U	< 0.0017 U	< 0.0017 U
Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.0017 U	< 0.0018 U	< 0.0019 U	< 0.0014 U	< 0.0017 U	< 0.0017 U
Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.0017 U	< 0.0018 U	< 0.0019 U	< 0.0014 U	< 0.0017 U	< 0.0017 U
Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.33 J	0.044	0.023 J	0.083 J	< 0.0019 UJ	0.24 J	< 0.0017 UJ	0.013 J
Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.0017 U	< 0.0018 U	< 0.0019 U	< 0.0014 U	< 0.0017 U	< 0.0017 U
Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.0017 U	< 0.0018 U	< 0.0019 U	< 0.0014 U	< 0.0017 U	< 0.0017 U
Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00016 UJ	0.000086 J	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.00032 UJ	0.00042 J	0.00033 J	< 0.00034 UJ	< 0.00038 UJ	0.0018	< 0.00034 UJ	< 0.00034 UJ
Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.00032 UJ	< 0.00032 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00038 UJ	< 0.00027 U	< 0.00034 UJ	< 0.00034 UJ
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	0.01 J	0.00068 J	< 0.00033 UJ	< 0.00034 UJ	< 0.00038 UJ	< 0.00027 U	< 0.00034 UJ	< 0.00034 UJ
Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.00032 UJ	< 0.00032 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00038 UJ	< 0.00027 UJ	< 0.00034 UJ	< 0.00034 UJ
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.00032 UJ	< 0.00032 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00038 UJ	0.017 J	< 0.00034 UJ	< 0.00034 UJ
Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.045 J	0.0031 J	0.0021 J	0.01 J	0.00013 J	0.013 J	< 0.00034 UJ	0.0017 J
Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00016 UJ	0.00018 J	0.00012 J	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0016 UJ	< 0.0016 UJ	< 0.0017 UJ	< 0.0018 UJ	< 0.0019 UJ	< 0.0014 U	< 0.0017 UJ	< 0.0017 UJ
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.33	0.044	0.023	0.083	< 0.0023 U	0.24	< 0.002 U	0.013
Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.0032 UJ	< 0.0032 UJ	< 0.0033 UJ	< 0.0034 UJ	< 0.0038 UJ	< 0.0027 U	< 0.0034 UJ	< 0.0034 UJ
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00017 UJ	< 0.00018 UJ	< 0.00019 UJ	< 0.00014 U	< 0.00017 UJ	< 0.00017 UJ
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	0.0016 J	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 U	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.01 UJ	< 0.0093 UJ	< 0.0096 UJ	< 0.0095 UJ	< 0.011 UJ	< 0.01 UJ	< 0.0095 UJ	< 0.0098 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 U	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.64 U	< 0.68 UJ	< 0.59 U	< 0.58 U	< 0.7 U	< 0.61 U	< 0.59 U	< 0.6 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 U	< 0.05 U	< 0.048 U	< 0.049 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAG-01	FTA-AREAG-01	FTA-AREAE-01	FTA-AREAD-01	FTA-AREAD-01	FTA-AREAF-01	FTA-AREAF-01	FTA-AREAE-01
				Sample Date	6/18/2014	6/18/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014
				Sample ID	FTA-AREAG-01-0002	FTA-AREAG-01-0206	FTA-AREAE-01-0610-D	FTA-AREAD-01-0002	FTA-AREAD-01-0206	FTA-AREAF-01-0002	FTA-AREAF-01-0206	FTA-AREAE-01-0610
				Sample Type Code	N	N	FD	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft
Analyte Group	Compound	CAS	Units									
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	UR	UR	UR	UR	UR	UR	UR	UR
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 U	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 UJ	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.64 U	< 0.68 UJ	< 0.59 U	< 0.58 U	< 0.7 U	< 0.61 U	< 0.59 U	< 0.6 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	3- AND 4-METHYLPHENOL	08-39-4/106-44	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 UJ	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	UR	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.64 U	< 0.68 UJ	< 0.59 U	< 0.58 U	< 0.7 U	< 0.61 U	< 0.59 U	< 0.6 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.1 U	< 0.093 U	< 0.096 U	< 0.095 U	< 0.11 U	< 0.1 U	< 0.095 U	< 0.098 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 UJ	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.64 U	< 0.68 UJ	< 0.59 U	< 0.58 U	< 0.7 U	< 0.61 U	< 0.59 U	< 0.6 U
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	0.027	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg								
SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	0.0021 J	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.26 UJ	< 0.27 UJ	< 0.24 UJ	< 0.24 UJ	< 0.28 UJ	< 0.25 UJ	< 0.24 UJ	< 0.24 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.085	0.0031 J	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	0.058	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 UJ	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.092	0.0038 J	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	0.087 J	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.26 UJ	< 0.27 UJ	< 0.24 UJ	< 0.24 UJ	< 0.28 UJ	< 0.25 UJ	< 0.24 UJ	< 0.24 UJ
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 U	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 U	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	0.2 J	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.069	0.0032 J	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	0.008 J	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 UJ	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.01 U	< 0.0093 U	< 0.0096 U	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.0095 U	< 0.0098 U
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.052 U	< 0.046 U	< 0.048 U	< 0.047 U	< 0.057 U	< 0.05 U	< 0.048 U	< 0.049 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	0.16 J	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	PHENOL	108-95-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	PYRENE	129-00-0	mg/kg	0.16 J	< 0.27 UJ	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	0.75	0.010	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	0.20	< 0.27 U	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAG-01	FTA-AREAG-01	FTA-AREAE-01	FTA-AREAD-01	FTA-AREAD-01	FTA-AREAF-01	FTA-AREAF-01	FTA-AREAE-01
				Sample Date	6/18/2014	6/18/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014
				Sample ID	FTA-AREAG-01-0002	FTA-AREAG-01-0206	FTA-AREAE-01-0610-D	FTA-AREAD-01-0002	FTA-AREAD-01-0206	FTA-AREAF-01-0002	FTA-AREAF-01-0206	FTA-AREAE-01-0610
				Sample Type Code	N	N	FD	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft
Analyte Group	Compound	CAS	Units									
SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	0.95	0.010	< 0.24 U	< 0.24 U	< 0.28 U	< 0.25 U	< 0.24 U	< 0.24 U
TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg								
TPH	ACENAPHTHENE	83-32-9	mg/kg								
TPH	ACENAPHTHYLENE	208-96-8	mg/kg								
TPH	ANTHRACENE	120-12-7	mg/kg								
TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg								
TPH	BENZO[A]PYRENE	50-32-8	mg/kg								
TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg								
TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg								
TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg								
TPH	CHRYSENE	218-01-9	mg/kg								
TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg								
TPH	FLUORANTHENE	206-44-0	mg/kg								
TPH	FLUORENE	86-73-7	mg/kg								
TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg								
TPH	NAPHTHALENE	91-20-3	mg/kg								
TPH	PHENANTHRENE	85-01-8	mg/kg								
TPH	PYRENE	129-00-0	mg/kg								
TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg								
TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg								
TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg								
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	10 J	< 14 UJ	< 15 UJ	< 16 UJ	16 J	< 16 U	11 J	< 15 UJ
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 25 U	< 20 U	< 17 UJ	< 21 U	< 20 U	< 17 U	< 18 U	< 18 U
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 25 U	< 20 U	< 17 UJ	< 21 U	< 20 U	< 17 U	< 18 U	< 18 U
TPH	TPH-DIESEL RANGE	-3527	mg/kg								
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGAN	-3524	mg/kg								
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg								
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg								
VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg								
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg								
VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg								
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	2-BUTANONE	78-93-3	mg/kg								
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.0074 UJ	< 0.01 U	< 0.0098 UJ	< 0.01 UJ	< 0.0099 UJ	< 0.0099 U	< 0.0099 U	< 0.01 UJ
VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg								
VOCs	ACETONE	67-64-1	mg/kg	0.046 J	0.062 J	0.012 J	0.059 J	0.048 J	0.038	0.015 J	0.018 J
VOCs	BENZENE	71-43-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg								
VOCs	BROMOFORM	75-25-2	mg/kg								
VOCs	BROMOMETHANE	74-83-9	mg/kg								
VOCs	CARBON DISULFIDE	75-15-0	mg/kg								
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0039 UJ	< 0.0042 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 UJ
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0039 UJ	< 0.0042 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg								
VOCs	CYCLOHEXANE	110-82-7	mg/kg								
VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg								
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg								
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	M- AND P-XYLENE	08-38-3/106-42	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0039 UJ	< 0.0042 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 UJ

TABLE B-1
ANALYTICAL DATA SUMMARY TABLES - SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-AREAG-01	FTA-AREAG-01	FTA-AREAE-01	FTA-AREAD-01	FTA-AREAD-01	FTA-AREAF-01	FTA-AREAF-01	FTA-AREAE-01
				Sample Date	6/18/2014	6/18/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014
				Sample ID	FTA-AREAG-01-0002	FTA-AREAG-01-0206	FTA-AREAE-01-0610-D	FTA-AREAD-01-0002	FTA-AREAD-01-0206	FTA-AREAF-01-0002	FTA-AREAF-01-0206	FTA-AREAE-01-0610
				Sample Type Code	N	N	FD	N	N	N	N	N
				Depth Interval	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft
Analyte Group	Compound	CAS	Units									
VOCs	METHYL ACETATE	79-20-9	mg/kg									
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.0074 UJ	< 0.01 U	< 0.0098 UJ	< 0.01 UJ	< 0.0099 U	< 0.0099 U	< 0.0099 U	< 0.01 UJ
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	STYRENE	100-42-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	TOLUENE	108-88-3	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg								
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.002 UJ	< 0.0021 UJ	< 0.002 U	< 0.002 U	< 0.002 U	< 0.002 UJ
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg								
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0039 UJ	< 0.0042 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 UJ
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0044 UJ	< 0.0062 U	< 0.0058 UJ	< 0.0063 UJ	< 0.0059 U	< 0.0059 U	< 0.0059 U	< 0.006 UJ
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.003 U	< 0.0042 U	< 0.0039 U	< 0.0042 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples wit
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting de
limit within the sample is presented as a non-detect value. Calculated totals have a CAS r
beginning with "RA-".

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 1999 GROUNDWATER DATA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	OU01-DP-02	OU01-DP-02	OU01-DP-04	OU01-DP-04	OU01-DP-05	OU01-DP-05	OU01-DP-06	OU01-DP-06	OU01-DP-06	OU01-DP-07	OU01-DP-07	OU01-DP-08	OU01-DP-08	OU01-DP-07	OU01-DP-09	OU01-DP-09	OU01-DP-09	OU01-DP-10	OU01-DP-10	OU01-DP-10	OU01-DP-11	OU01-DP-11	OU01-DP-11	OU01-DP-12	OU01-DP-12	OU01-DP-12	OU01-DP-13	OU01-DP-13	OU01-DP-14	OU01-DP-14	OU01-DP-15	OU01-DP-16
				Sample Date	5/24/1999	5/24/1999	5/19/1999	5/20/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/20/1999	5/25/1999	5/25/1999	5/25/1999	5/26/1999	5/26/1999	5/26/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/25/1999	5/26/1999
				Sample Type Code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
				Sample ID	DP-02-6	DP-02-6DL	DP-04-32	DP-04-6	DP-05-49	DP-05-6	DP-06-38	DP-06-6	DP-06-6DL	DP-07-36	DP-07-6	DP-08-5	DP-08-5DL	DP-07-6DL	DP-09-24	DP-09-6	DP-09-6DL	DP-10-40	DP-10-6	DP-10-6DL	DP-11-36	DP-11-6	DP-11-6DL	DP-12-32	DP-12-6	DP-12-6-D	DP-13-6	DP-13-6DL	DP-14-6	DP-14-6DL	DP-15-16	DP-16-17
				Screen Interval	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	49 - 49 ft	6 - 6 ft	38 - 38 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	5 - 5 ft	5 - 5 ft	6 - 6 ft	24 - 24 ft	6 - 6 ft	6 - 6 ft	40 - 40 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	16 - 16 ft	17 - 17 ft
Analyte Group	Compound	CAS	Fraction	Units																																
SVOCs_EPH	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 10 U		< 10 U	23	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	27				< 10 U	< 10 U		22	160 E	200 D	13	100		< 14 U	< 10 U	< 10 U	66		200 E	300 D	< 10 U	
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	4 J		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-METHYLPHENOL	106-44-5	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 10 U		< 10 U	2 J	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	4 J				< 10 U	< 10 U		< 10 U	8 J	9 JD	< 10 U	6 J		< 14 U	< 10 U	< 10 U	4 J		12	14 JD	< 10 U	
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		5 J	7 JD	< 10 U	
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		2 J	< 30 U	< 10 U	
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	2 J		10 J	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		4 J	< 10 U				< 10 U	< 10 U		4 J	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	3 J				< 10 U	< 10 U		< 10 U	3 J	< 20 U	< 10 U	12		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		4 J	< 30 U	< 10 U	
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	4 J				< 10 U	< 10 U		< 10 U	6 J	7 JD	< 10 U	5 J		< 14 U	< 10 U	< 10 U	3 J		12	16 JD	< 10 U	
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		2 J	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 10 U		8 J	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 10 U		< 10 U	4 J	< 10 U	< 10 U	< 10 U	4 J		< 10 U	8 J				< 10 U	< 10 U		3 J	11	14 JD	< 10 U	8 J		< 14 U	< 10 U	< 10 U	6 J		22	28 JD	< 10 U	
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 10 U		< 10 U	10 J	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	24				< 10 U	< 10 U		7 J	96	110 D	< 10 U	74		< 14 U	< 10 U	< 10 U	8 J		37	44 D	< 10 U	
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L	< 10 U		< 10 U	3 J	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	7 J				< 10 U	3 J		5 J	18	20 D	3 J	11		< 14 U	< 10 U	< 10 U	7 J		47	54 D	< 10 U	
SVOCs_EPH	PHENOL	108-95-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		3 J	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	PYRENE	129-00-0	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		6 J	8 JD	< 10 U	
TPH	TPH-PURGEABLE	-240	N	ug/L	< 50 U		150	520	< 50 U	81	< 50 U	140		100	640	1100			110	1500		550	2100		99	1400		59	< 50 U	< 50 U	970		1800		< 50 U	< 50 U
TPH	TPH-TOTAL UNKNOWN DIESEL RANGE ORGANI	-3523	N	ug/L	5400 E	5500 D	80	1300	< 50 U	900	< 50 U	2700	2700 D	500	6300 E	5800 E	5800 D	6400 D	600	4600 E	5000 D	300	6500 E	7200 D	790	12000 E	12000 D	60 B	77 B	63 B	6800 E	7300 D	9600 E	9700 D	< 50 U	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	7	< 5 U	4 J		< 5 U	8	6			< 5 U	< 5 U		< 5 U	3 J		< 5 U	15		< 5 U	< 5 U		2 J		< 5 U		< 5 U	< 5 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	2-BUTANONE	78-93-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U	< 10 U			< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U		< 10 U		< 10 U	< 10 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U	< 10 U			< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U		< 10 U		< 10 U	< 10 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U	< 10 U			< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U		< 10 U		< 10 U	< 10 U
VOCs	ACETONE	67-64-1	N	ug/L	7 J		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	5 J	3 J			< 10 U	8 JB		< 10 U	< 10 U		< 10 U	4 J		< 10 U	5 JB		3 JB		< 10 U		< 10 U	5 JB
VOCs	BENZENE	71-43-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	BROMODICHLOROMETHANE	75-27-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	BROMOFORM	75-25-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	BROMOMETHANE	74-83-9	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	CARBON DISULFIDE	75-15-0	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		4 J	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 1999 GROUNDWATER DATA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	OU01-DP-02	OU01-DP-02	OU01-DP-04	OU01-DP-04	OU01-DP-05	OU01-DP-05	OU01-DP-06	OU01-DP-06	OU01-DP-06	OU01-DP-07	OU01-DP-07	OU01-DP-08	OU01-DP-08	OU01-DP-07	OU01-DP-09	OU01-DP-09	OU01-DP-09	OU01-DP-10	OU01-DP-10	OU01-DP-10	OU01-DP-11	OU01-DP-11	OU01-DP-11	OU01-DP-12	OU01-DP-12	OU01-DP-12	OU01-DP-13	OU01-DP-13	OU01-DP-14	OU01-DP-14	OU01-DP-15	OU01-DP-16
					Sample Date	5/24/1999	5/24/1999	5/19/1999	5/20/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/20/1999	5/25/1999	5/25/1999	5/25/1999	5/26/1999	5/26/1999	5/26/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/25/1999	5/26/1999
					Sample Type Code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
					Sample ID	DP-02-6	DP-02-6DL	DP-04-32	DP-04-6	DP-05-49	DP-05-6	DP-06-38	DP-06-6	DP-06-6DL	DP-07-36	DP-07-6	DP-08-5	DP-08-5DL	DP-07-6DL	DP-09-24	DP-09-6	DP-09-6DL	DP-10-40	DP-10-6	DP-10-6DL	DP-11-36	DP-11-6	DP-11-6DL	DP-12-32	DP-12-6	DP-12-6-D	DP-13-6	DP-13-6DL	DP-14-6	DP-14-6DL	DP-15-16	DP-16-17
					Screen Interval	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	49 - 49 ft	6 - 6 ft	38 - 38 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	5 - 5 ft	5 - 5 ft	6 - 6 ft	24 - 24 ft	6 - 6 ft	6 - 6 ft	40 - 40 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	16 - 16 ft	17 - 17 ft
Analyte Group	Compound	CAS	Fraction	Units																																	
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	DIBROMOCHLOROMETHANE	124-48-1	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	16	8			< 5 U	< 5 U	3 J	16			< 5 U	26		< 5 U	< 5 U		2 J		< 5 U		< 5 U	< 5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 5 U				< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	23	23			< 5 U	< 5 U					< 5 U	82		< 5 U	< 5 U		3 J				< 5 U	< 5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	2 J	< 5 U			< 5 U	< 5 U	< 5 U	5 J			< 5 U	11		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1 J		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1 J		< 5 U	3 J	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	XYLENES, TOTAL CALC (a)	RA-1330-20-7	N	ug/L	< 5 U				< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	23	23			< 5 U	< 5 U					< 5 U	82		< 5 U	< 5 U		3				< 5 U	< 5 U

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
N - Normal sample.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
VOC - Volatile organic compound.
(a) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., xylene) concentrations. For samples without any detections of individual compounds (i.e., xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2007 GROUNDWATER DATA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	A31-MW01	A31-MW02	A31-MW03	A31-MW04
				Sample Date	10/26/2007	10/26/2007	10/26/2007	10/26/2007
				Sample Type Code	N	N	N	N
				Sample ID	A31-MW01	A31-MW02	A31-MW03	A31-MW04
				Screen Interval	1.5 - 4.5 ft	0.5 - 4.5 ft	0.5 - 1.5 ft	1 - 3 ft
Analyte Group	Compound	CAS	Fraction	Units				
Other	DISSOLVED OXYGEN		N	ug/L	9660	8220	10050	6810
Other	OXIDATION REDUCTION POTENTIAL		N	MV	-18	59	170	33
Other	PH		N	SU	6.53	5.92	5.49	6.15
Other	SPECIFIC CONDUCTANCE		N	US/CM	0.169	0.131	0.084	0.122
Other	TEMPERATURE		N	DEG/C	13.42	13.82	12.64	12.99
Other	TURBIDITY		N	NTU	917	1000 >	128	9.66
TPH	TPH-DIESEL RANGE	-3527	N	ug/L	110 J	180 J	51 J	140 J
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	-3524	N	ug/L	< 10 U	< 10 U	< 10 U	19
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	N	ug/L	< 5 UJ	< 5 UJ	< 5 UJ	< 5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DIBROMOETHANE	106-93-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 5 UJ	< 5 UJ	< 5 UJ	0.6 J
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 5 U	< 5 U	< 5 U	5
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 5 U	< 5 U	< 5 U	8
VOCs	2-BUTANONE	78-93-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	ACETONE	67-64-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BENZENE	71-43-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BROMODICHLOROMETHANE	75-27-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BROMOFORM	75-25-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BROMOMETHANE	74-83-9	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CARBON DISULFIDE	75-15-0	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 5 U	< 5 U	< 5 U	3 J
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 5 UJ	< 5 UJ	< 5 UJ	< 5 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 5 U	< 5 U	1 J	3 J
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CYCLOHEXANE	110-82-7	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	DIBROMOCHLOROMETHANE	124-48-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 10 U	< 10 U	< 10 U	< 10 U
VOCs	METHYL ACETATE	79-20-9	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 5 U	< 5 U	2 J	2 J
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
VOCs	XYLENES, TOTAL CALC (a)	RA-1330-20-7	N	ug/L	< 10 U	< 10 U	< 10 U	< 10 U

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
N - Normal sample.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., xylene) concentrations. For samples without any detections of individual compounds (i.e., xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
					Sample Date	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
					Sample Type Code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Sample ID	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814	FTA-MW-5-061814-D	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
					Screen Interval	4 - 14 ft	4 - 14 ft	4 - 14 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft
Group	Compound	CAS	Fraction	Units																	
Metals	ALUMINUM	7429-90-5	F	ug/L		44.6 J	< 100 U	100 J	34.1 J	< 100 U	< 100 U	26 J	39.7 J	< 100 U	17 J	18.2 J	< 100 U	< 100 U	47.6 J	< 100 U	44 J
Metals	ANTIMONY	7440-36-0	F	ug/L		< 0.5 U	0.12 J	0.25 J	< 0.5 U	< 0.5 U	0.065 J	0.12 J	< 0.5 U	< 0.5 U	0.16 J	< 0.5 U	< 0.5 U	0.29 J	< 0.5 U	< 0.5 U	0.34 J
Metals	ARSENIC	7440-38-2	F	ug/L		< 4.8 U	6.4	5.6	7.4	4.8 J	4.6 J	9.7	< 4 U	2.6 J	2.4 J	4.3 J	3.4 J	6.4	2.8 J	< 4 U	< 4 U
Metals	BARIUM	7440-39-3	F	ug/L		< 3 U	2.36 J	2.2 J	6.6	3.33 J	3.09 J	4.21 J	4.6 J	4.36 J	6.78	1.9 J	< 3 U	1.9 J	1.3 J	< 3 U	1.7 J
Metals	BERYLLIUM	7440-41-7	F	ug/L		< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	0.05 J
Metals	CADMIUM	7440-43-9	F	ug/L		< 0.2 U	0.19 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.045 J	< 0.2 U	< 0.2 U	< 0.2 U	0.08 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	F	ug/L		11100	19100	17800	4210	6460	6380	6980	7730	6930	10600	3440	3820	4140	5110	4470	7590
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L		< 4 U	< 4 U	4.1 J	< 4 U	< 4 U	< 4 U	2.3 J	< 4 U	< 4 U	1.8 J	< 4 U	4.5 J	3.13 J	< 4 U	4.67 J	2.25 J
Metals	COBALT	7440-48-4	F	ug/L		0.21 J	0.072 J	0.12 J	2.3	1.86	1.87	2.4	4.1	4.18	5.5	5	5.39	7.56	0.15 J	0.079 J	0.099 J
Metals	COPPER	7440-50-8	F	ug/L		< 2 U	< 2 U	0.99 J	< 2 U	< 2 U	< 2 U	0.57 J	< 2 U	< 2 U	0.86 J	< 2 U	< 2 U	2.37 J	4	< 2 U	1.6 J
Metals	IRON	7439-89-6	F	ug/L		50.9 J	< 80 U	86.2 J	1970	1400	1380	2100	3270	3070	4280	1100	1210	2310	263	198	319
Metals	LEAD	7439-92-1	F	ug/L		< 0.5 U	< 0.5 U	0.21 J	< 0.5 U	0.12 J	0.12 J	0.18 J	< 0.5 U	0.24 J	0.13 J	< 0.5 U	0.18 J	0.23 J	< 0.5 U	0.094 J	0.12 J
Metals	MAGNESIUM	7439-95-4	F	ug/L		1860	2410	2320	1220	1470	1450	1700	2180	1850	2810	1110	1060	1230	1940	1570	2520
Metals	MANGANESE	7439-96-5	F	ug/L		1.6 J	1.8 J	2.6 J	196	203	206	334	3460	3020	4080	1650	1740	2100	551	463	823
Metals	MERCURY	7439-97-6	F	ug/L		< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	0.01 J	< 0.1 U	< 0.1 U	0.01 J	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L		5.9	3.88	4.15	1.1 J	1.64 J	0.88 J	2.11	0.52 J	1.2 J	1.2 J	1.2 J	2.9	2.59	0.26 J	1.4 J	1.1 J
Metals	POTASSIUM	7440-09-7	F	ug/L		< 940 U	1100	1140	660 J	715 J	684 J	815 J	414 J	550 J	584 J	714 J	678 J	716 J	539 J	528 J	474 J
Metals	SELENIUM	7782-49-2	F	ug/L		0.29 J	< 3 U	0.45 J	0.93 J	< 3 U	< 3 U	0.24 J	0.32 J	0.77 J	< 3 U	0.45 J	0.77 J	< 3 U	0.54 J	0.39 J	< 3 U
Metals	SILVER	7440-22-4	F	ug/L		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L		5520	4900	5700	3180	4550	4480	4490	4400	3820	4940	4200	3750	4010	4930	4350	5470
Metals	THALLIUM	7440-28-0	F	ug/L		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L		< 4 U	< 4 U	0.54 J	1.3 J	1.3 J	1.6 J	1.2 J	< 4 UJ	0.51 J	0.7 J	0.93 J	1.3 J	1.1 J	0.87 J	1.1 J	0.53 J
Metals	ZINC	7440-66-6	F	ug/L		< 10 U	4 J	< 10 U	< 10 U	2.2 J	1.8 J	2.3 J	< 10 U	2.6 J	3.1 J	< 10 U	4 J	2.2 J	< 10 U	2.5 J	2.2 J
Metals	ALUMINUM	7429-90-5	N	ug/L		3080	1660	1420	58.8 J	< 100 U	< 100 U	214 J	87.8 J	< 100 U	60 J	36.7 J	< 100 U	58 J	76.6 J	< 100 U	27 J
Metals	ANTIMONY	7440-36-0	N	ug/L		< 0.5 U	0.15 J	0.26 J	< 0.5 U	< 0.5 U	< 0.5 U	0.39 J	< 0.5 U	< 0.5 U	0.24 J	< 0.5 U	< 0.5 U	0.37 J	< 0.5 U	< 0.5 U	0.32 J
Metals	ARSENIC	7440-38-2	N	ug/L		< 6 U	7.9	8.8	7.6	3.9 J	4.9 J	16	2.7 J	2.7 J	2.6 J	4 J	4.3 J	6.7	< 4 U	< 4 U	< 4 U
Metals	BARIUM	7440-39-3	N	ug/L		14.4	8.98	21.2	6.4	3.74 J	4.89 J	6.53	5.1	4.97 J	6.11	1.7 J	< 3 U	2 J	1.4 J	< 3 U	1.7 J
Metals	BERYLLIUM	7440-41-7	N	ug/L		0.14 J	0.078 J	0.28 J	< 0.2 U	< 0.2 U	< 0.2 U	0.064 J	< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	0.038 J	< 0.2 U	< 0.2 UJ	0.036 J
Metals	CADMIUM	7440-43-9	N	ug/L		< 0.2 U	< 0.2 U	0.059 J	< 0.2 U	< 0.2 U	< 0.2 U	0.16 J	< 0.2 U	< 0.2 U	0.043 J	0.09 J	< 0.2 U	0.042 J	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	N	ug/L		10500	19200	19600	4890	6530	6720	7320	7830	7010	9940	3490	3670	4180	5220	4580	7490
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L		7.6	< 4.08 U	6.7	< 4 U	5.15	< 4 U	2.72 J	< 4 U	4.28 J	1.6 J	< 4 U	4.41 J	3.72 J	< 4 U	4.61 J	3.57 J
Metals	CHROMIUM III	16065-83-1	N	ug/L																	
Metals	CHROMIUM VI	18540-29-9	N	ug/L																	
Metals	COBALT	7440-48-4	N	ug/L		1.4	0.899 J	2.48	2.1	2.09	2.05	3.65	4.2	4.22	5.16	4.9	5.07	8.02	0.1 J	0.1 J	0.087 J
Metals	COPPER	7440-50-8	N	ug/L		4.6	3.36	8.3	1.2 J	< 2 U	< 2 U	3.06	3.9	< 2 U	1 J	2.6 J	2.64 J	5.81	< 2 U	< 2 U	1.6 J
Metals	IRON	7439-89-6	N	ug/L		3020	1890	1890	1850	1520	1520	3800	3340	3210	4100	1180	1350	2430	277	241	341
Metals	LEAD	7439-92-1	N	ug/L		3	2.5	12.8	0.78 J	0.5 J	0.56 J	2.8	0.87 J	0.19 J	0.15 J	< 0.56 U	0.4 J	0.44 J	< 0.58 U	0.13 J	0.13 J
Metals	MAGNESIUM	7439-95-4	N	ug/L		2700	2880	2860	1360	1520	1540	1720	2180	1930	2670	1110	1040	1250	1990	1630	2590
Metals	MANGANESE	7439-96-5	N	ug/L		55.6	34.8	94	249	208	217	578 J	3510	3060	3850	1680	1690	2150	513	488	794
Metals	MERCURY	7439-97-6	N	ug/L		< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	0.017 J	< 0.1 UJ	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L		12.8	6.24	21	1 J	2.39	1.73 J	2.38	0.83 J	1.71 J	1.2 J	1.4 J	30	3.42	< 1.2 U	1.3 J	0.85 J
Metals	POTASSIUM	7440-09-7	N	ug/L		< 1560 U	1370	1280	667 J	735 J	728 J	820 J	422 J	553 J	576 J	757 J	662 J	701 J	574 J	500 J	456 J
Metals	SELENIUM	7782-49-2	N	ug/L		< 3 U	< 3 U	0.62 J	< 3 U	< 3 U	0.55 J	< 3 U	0.78 J	< 3 U	0.59 J	0.45 J	< 3 U	< 3 U	0.21 J	< 3 U	< 3 U
Metals	SILVER	7440-22-4	N	ug/L		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.45 J	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L		5270	4990	5600	3520	4600	4750	4420	4470	3890	4650	4240	3630	4060	5000	4430	5350
Metals	THALLIUM	7440-28-0	N	ug/L		0.05 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L		< 5.4 U	< 4 U	4.1 J	1.6 J	1.5 J	1.5 J	5.1	0.8 J	1 J	0.64 J	< 4 UJ	0.6 J	1 J	0.85 J	1.4 J	0.8 J
Metals	ZINC	7440-66-6	N	ug/L		10.4 J	8.09 J	12.8 J	< 10 U	2.1 J	1.8 J	3.5 J	< 10 U	1.9 J	1.5 J	< 10 U	2 J	1.8 J	< 10 U	1.3 J	2.4 J
Pest_PCBs	4,4-DDD	72-54-8	N	ug/L																	
Pest_PCBs	4,4-DDE	72-55-9	N	ug/L																	
Pest_PCBs	4,4-DDT	50-29-3	N	ug/L																	
Pest_PCBs	ALDRIN	309-00-2	N	ug/L																	
Pest_PCBs	ALPHA-BHC	319-84-6	N	ug/L																	
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	N	ug/L																	
Pest_PCBs	AROCLOR-1016	12674-11-2	N	ug/L																	
Pest_PCBs	AROCLOR-1221	11104-28-2	N	ug/L																	
Pest_PCBs	AROCLOR-1232	11141-16-5	N	ug/L																	
Pest_PCBs	AROCLOR-1242	53469-21-9	N	ug/L																	
Pest_PCBs	AROCLOR-1248	12672-29-6	N	ug/L																	
Pest_PCBs	AROCLOR-1254	11097-69-1	N	ug/L																	
Pest_PCBs	AROCLOR-1260	11096-82-5	N	ug/L																	
Pest_PCBs	AROCLOR-1262	37324-23-5	N	ug/L																	
Pest_PCBs	AROCLOR-1268	11100-14-4	N	ug/L																	
Pest_PCBs	BETA-BHC	319-85-7	N	ug/L																	
Pest_PCBs	DELTA-BHC	319-86-8	N	ug/L																	
Pest_PCBs	DIELDRIN	60-57-1	N	ug/L																	
Pest_PCBs	ENDOSULFAN I	959-98-8	N	ug/L																	
Pest_PCBs	ENDOSULFAN II	33213-65-9	N	ug/L																	
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	N	ug/L																	
Pest_PCBs	ENDRIN	72-20-8	N	ug/L																	
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	N	ug/L																	
Pest_PCBs	ENDRIN KETONE	53494-70-5	N	ug/L																	
Pest_PCBs	HEPTACHLOR	76-44-8	N	ug/L																	
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	N	ug/L																	

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
					Sample Date	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
					Sample Type Code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Sample ID	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814	FTA-MW-5-061814-D	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
					Screen Interval	4 - 14 ft	4 - 14 ft	4 - 14 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft
Group	Compound	CAS	Fraction	Units																	
Pest_PCBs	LINDANE	58-89-9	N	ug/L																	
Pest_PCBs	METHOXYCHLOR	72-43-5	N	ug/L																	
Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS) (a)	1336-36-3	N	ug/L																	
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L																	
Pest_PCBs	TOTAL AROCLORS FULL DL	RATotAroFLDL	N	ug/L																	
Pest_PCBs	TOXAPHENE	8001-35-2	N	ug/L																	
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	N	ug/L																	
PFC	Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	N	ug/L		< 0.018 UJ	0.0016 J	< 0.02 U	< 0.018 U	< 0.018 U	< 0.0030 U	0.22	0.18	0.14		0.016 J	0.011		0.25	0.15 J+
PFC	Perfluorooctanoic Acid (PFOA)	335-67-1	N	ug/L		0.011 J	0.015	0.24	0.28	0.26	0.3	0.036	0.026	0.021		0.027	0.022		0.016 J	0.017 J+
SVOCs_EPH	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.1 UJ	< 0.1 UJ	< 0.094 UJ	< 0.095 UJ	< 0.094 UJ	< 0.094 UJ	< 0.094 UJ	0.14 J	0.12 J	0.11 J	0.21 J	0.11 J	< 0.094 UJ	< 0.095 UJ	< 0.095 UJ	< 0.094 UJ
SVOCs_EPH	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	1,4-DIOXANE	123-91-1	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.15 UJ	< 0.15 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U
SVOCs_EPH	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	UR	< 7.1 U	< 7.1 UJ	< 7.2 U	< 7.1 U	< 7.1 UJ		< 7.1 U
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 19 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U	< 18 UJ	UR	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 UJ		< 18 U
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 UJ	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 UJ	< 0.47 U	< 0.47 U	< 0.48 UJ	< 0.48 U	< 0.47 U	< 0.48 UJ	< 0.48 U	< 0.47 U
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	0.093 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 UJ	< 7.1 U	< 7.2 U	< 7.1 UJ	< 7.1 U	< 7.1 UJ
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 0.15 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 UJ	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.095 UJ	< 0.096 U	< 0.094 U	< 0.095 UJ	< 0.095 U	< 0.094 U
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 19 U	< 0.1 U	< 0.094 U	< 18 U	< 0.094 U	< 0.094 U	< 0.094 U	< 18 U	< 0.094 U	< 0.094 U	< 18 U	< 0.096 U	< 0.094 U	< 18 U	< 0.095 U	< 0.094 U
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.77 U	< 0.76 U	< 0.71 U	< 0.71 UJ	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 UJ	< 0.71 U	< 0.71 U	< 0.71 UJ	< 0.72 U	< 0.71 U	< 0.71 UJ	< 0.71 U	< 0.71 U
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 19 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U	< 18 UJ	UR	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 UJ		< 18 U
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ACETOPHENONE	98-86-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ATRAZINE	1912-24-9	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	0.07 J	< 0.094 U	< 0.094 U	0.055 J	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZALDEHYDE	100-52-7	N	ug/L	< 7.7 UJ	< 7.6 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.2 UJ	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.2 U	< 0.1 U	< 0.094 U	< 0.18 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.18 U	< 0.096 U	< 0.094 U	< 0.18 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.1 U	< 7.6 U	< 7.1 U	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.2 U	< 7.1 U	< 0.095 U		< 7.1 U
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.1 UJ	< 7.6 U	< 7.1 U	< 0.095 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 UJ	< 7.1 U	< 7.1 U	< 0.095 UJ	< 7.2 U	< 7.1 U	< 0.095 UJ		< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.1 U	< 7.6 U	< 7.1 U	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.2 U	< 7.1 U	< 0.095 U		< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.79 U	< 0.5 UJ	< 0.47 U	0.5 J	< 0.47 UJ	< 0.47 UJ	< 0.47 U	0.72 J	< 0.47 UJ	< 0.47 U	< 0.48 U	< 0.48 UJ	< 0.47 U	< 0.48 U	< 0.48 UJ	< 0.47 U
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	CAPROLACTAM	105-60-2	N	ug/L	UR	UR	< 7.1 U	< 7.1 U	UR	UR	< 7.1 U	< 7.1 U	UR	< 7.1 UJ	< 7.1 U	UR	< 7.1 UJ	< 7.1 U		< 7.1 UJ
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 UJ	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 UJ	< 0.094 U	< 0.095 U	< 0.096 UJ	< 0.094 U	< 0.095 U	< 0.095 UJ	< 0.094 U
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.1 U	< 0.1 UJ	< 0.094 U	< 0.095 U	< 0.094 UJ	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 UJ	< 0.094 U	< 0.095 U	< 0.096 UJ	< 0.094 U	< 0.095 U	< 0.095 UJ	< 0.094 U
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	0.074 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	0.086 J	< 0.096 U	0.14 J	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.2 U	< 7.1 U	< 7.1 UJ		< 7.1 U
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	0.11 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	0.085 J
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	0.073 J	< 0.094 U	0.081 J	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 0.15 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
					Sample Date	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
					Sample Type Code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Sample ID	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814	FTA-MW-5-061814-D	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
					Screen Interval	4 - 14 ft	4 - 14 ft	4 - 14 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft
Group	Compound	CAS	Fraction	Units																	
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L		< 0.1 U	< 0.1 U	< 0.094 U	0.14 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	PHENOL	108-95-2	N	ug/L		< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	PYRENE	129-00-0	N	ug/L		< 0.1 U	< 0.1 U	< 0.094 U	0.069 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L		< 71 U	< 71 U	< 75 U	470	< 71 U	49 J	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 74 U
TPH	TPH-C11-C22 AROMATICS UNADJUSTED	-196	N	ug/L		< 71 U	< 71 U	< 75 U	470	< 71 U	49 J	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U
TPH	TPH-C19-C36 ALIPHATICS UNADJUSTED	-1255	N	ug/L		< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U
TPH	TPH-C9-C18 ALIPHATICS UNADJUSTED	-1256	N	ug/L		< 71 U	< 71 U		< 71 U	< 71 U	< 71 U		< 71 U	< 71 U		< 71 U	< 71 U		< 71 U	< 71 U	
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C5-C8 ALIPHATICS UNADJUSTED	-193	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	
TPH	TPH-C9-C10 AROMATICS UNADJUSTED	-195	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C9-C12 ALIPHATICS UNADJUSTED	-194	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U		< 75 U	< 75 U		< 75 U	< 75 U		< 75 U	< 75 U	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L		< 0.5 U			< 0.5 UJ				0.58 J			0.4 J			0.34 J		
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L		< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L		< 2.5 U	3 J	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	2.4 J	< 2.5 U	< 2.5 U	3.7 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	5.1
VOCs	BENZENE	71-43-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L		< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 UJ	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L		< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	0.63 J	< 1 U	< 1 U	< 1 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	0.58 J	0.38 J	0.62 J	0.4 J	< 0.5 U	0.4 J	0.34 J	0.24 J	< 0.5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L		< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 U	0.024 J	0.012 J	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 UJ
VOCs	TOLUENE	108-88-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L		< 0.025 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U	0.72	0.84	0.77	0.069	0.081 J	< 0.05 U	< 0.025 U	< 0.05 U	< 0.05 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L		< 1 U	< 1 U		< 1 U	< 1 U	< 1 U		< 1 U	< 1 U		< 1 U	< 1 U		< 1 U	< 1 U	

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-MW-12			FTA-MW-14					FTA-MW-203		FTA-MW-206				
				Sample Date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/27/2012	6/18/2014	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
				Sample Type Code	N	N	N	N	FD	N	N	FD	N	N	N	N	N	N	FD
				Sample ID	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712	FTA-MW-14-112712-D	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-203-112712	FTA-MW-203-061814	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
				Screen Interval	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	4 - 8 ft	4 - 8 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft
Group	Compound	CAS	Fraction	Units															
Metals	ALUMINUM	7429-90-5	F	ug/L	63.4 J	< 100 U	49 J	102 J	84.4 J	< 100 U	110 J	100 J	30.5 J	< 100 U	22.4 J		< 100 U	34 J	15 J
Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.5 U	< 0.5 U	0.37 J	< 0.5 U	< 0.5 U	< 0.5 U	0.36 J	0.24 J	< 0.5 U	< 0.5 U	< 0.5 U		0.14 J	0.14 J	0.11 J
Metals	ARSENIC	7440-38-2	F	ug/L	< 4 U	< 4 U	3 J	2.6 J	< 4 U	< 4 U	2.4 J	< 4 U	< 4 U	< 4 U	< 4.8 U		2.6 J	3.6 J	3.1 J
Metals	BARIUM	7440-39-3	F	ug/L	5.4	4.71 J	6.16	4.4 J	4.3 J	3.92 J	4.24 J	3.94 J	7.8	< 3 U	11.4		6.2	6.32	6.58
Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 U	0.049 J	< 0.2 U	< 0.2 U	< 0.2 U	0.075 J	0.051 J	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	0.074 J	0.04 J	0.03 J	< 0.2 U	0.034 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	0.042 J	0.061 J
Metals	CALCIUM	7440-70-2	F	ug/L	5870	4150	4570	9200	8510	6860	8910	8900	3490	2990	39100		38600	46800	45200
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	4.45 J	3 J	< 4 U	3.9 J	< 4 U	4.05 J	2.95 J	< 4 U	< 4 U	< 4 U		< 4 U	0.87 J	1.4 J
Metals	COBALT	7440-48-4	F	ug/L	2.5	1.47	1.29	0.58 J	0.32 J	0.23 J	0.33 J	0.28 J	0.39 J	< 0.3 U	1.4		0.989 J	0.953 J	0.882 J
Metals	COPPER	7440-50-8	F	ug/L	< 2 U	< 2 U	2.97 J	< 2 U	< 2 U	< 2 U	2.15 J	1.92 J	< 2 U	1.8 J	< 2 U		< 2 U	0.8 J	0.45 J
Metals	IRON	7439-89-6	F	ug/L	3230	539	351	1070	1010	745	1490	1460	< 80 U	< 80 U	< 80 U		< 80 U	< 80 UJ	6.4 J
Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	0.12 J	0.28 J	< 0.5 U	< 0.5 U	< 0.5 U	0.24 J	0.11 J	< 0.5 U	0.079 J	< 0.5 U		< 0.5 U	0.085 J	0.11 J
Metals	MAGNESIUM	7439-95-4	F	ug/L	1920	1410	1630	3140	2880	2430	2980	2960	1330	983	7770		8300	9130	8950
Metals	MANGANESE	7439-96-5	F	ug/L	3110	1570	1460	101	94.8	70.2	85.5	81	80.1	12.6	300		210	185	188
Metals	MERCURY	7439-97-6	F	ug/L	< 0.1 U	< 0.1 U	< 0.1 U	0.02 J	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 UJ		< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L	0.66 J	1.75 J	2.29	0.75 J	0.62 J	0.59 J	2.02 J	1.1 J	0.49 J	0.98 J	1.1 J		0.98 J	1.69 J	1.3 J
Metals	POTASSIUM	7440-09-7	F	ug/L	711 J	730 J	569 J	901 J	833 J	941 J	960 J	1050	573 J	536 J	< 2060 U		1490	1860	1850
Metals	SELENIUM	7782-49-2	F	ug/L	0.28 J	< 3 U	< 3 U	0.67 J	0.76 J	< 3 U	< 3 U	0.41 J	< 3 U	< 3 U	< 3 U		< 3 U	0.24 J	0.35 J
Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L	5370	4460	5130	8240	7700	6240	7550	7450	3600	3300	8670		7390	9160	8880
Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.11 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		0.38 J	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L	0.66 J	0.76 J	0.93 J	1.9 J	2.9 J	< 4 U	2.5 J	1.3 J	0.74 J	1.3 J	< 4 U		< 4 U	0.95 J	< 4 UJ
Metals	ZINC	7440-66-6	F	ug/L	< 10 U	4.2 J	8.29 J	14.9 J	< 10 U	< 10 U	3.3 J	5.7 J	< 10 U	2.9 J	< 10 U		< 10 U	< 10 U	< 10 U
Metals	ALUMINUM	7429-90-5	N	ug/L	116 J	269 J	91 J	504	246 J	279 J	120 J	110 J	46.6 J	< 100 U	36 J		< 100 U	< 100 UJ	37 J
Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	< 0.5 U	0.4 J	< 0.5 U	< 0.5 U	< 0.5 U	0.32 J	0.3 J	< 0.5 U	< 0.5 U	< 0.5 U		0.14 J	0.13 J	0.15 J
Metals	ARSENIC	7440-38-2	N	ug/L	2.5 J	< 4 U	3 J	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 6.6 U		2.5 J	2.4 J	2.9 J
Metals	BARIUM	7440-39-3	N	ug/L	5.8	7.67	6.15	11.6	6.1	5.82	4.76 J	4.48 J	7.4	< 3 U	11.6		7.17	9.35 J	6.24 J
Metals	BERYLLIUM	7440-41-7	N	ug/L	< 0.2 U	< 0.2 U	0.047 J	0.05 J	< 0.2 U	< 0.2 U	0.072 J	0.078 J	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	N	ug/L	0.08 J	1.6	1.34	0.05 J	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	0.043 J	0.049 J
Metals	CALCIUM	7440-70-2	N	ug/L	5960	3780	4480	8660	8220	6660	8810	8710	3330	2940	39500		41700	44400	45900
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	< 4 U	4.32 J	4.51 J	< 4 U	4 J	< 4 U	3.77 J	3.25 J	< 4 U	< 4 U	< 4 U		< 4 U	1.2 J	1.5 J
Metals	CHROMIUM III	16065-83-1	N	ug/L															
Metals	CHROMIUM VI	18540-29-9	N	ug/L															
Metals	COBALT	7440-48-4	N	ug/L	2.5	1.49	1.42	0.33 J	0.32 J	0.27 J	0.27 J	0.26 J	0.31 J	< 0.3 U	1.3		1.02	0.928 J	0.949 J
Metals	COPPER	7440-50-8	N	ug/L	< 2 U	< 2 U	2.61 J	< 2 U	< 2 U	< 2 U	6 J	1.7 J	< 2 U	< 2 U	< 2 U		< 2 U	0.52 J	0.58 J
Metals	IRON	7439-89-6	N	ug/L	3330	744	390	1050	878	827	1230	1240	50.4 J	< 80 U	< 80 U		< 80 U	8.6 J	9.8 J
Metals	LEAD	7439-92-1	N	ug/L	< 0.5 U	0.63 J	0.41 J	0.68 J	< 0.5 U	< 0.5 U	0.23 J	0.23 J	< 0.5 U	0.21 J	< 0.5 U		0.12 J	< 0.5 U	0.078 J
Metals	MAGNESIUM	7439-95-4	N	ug/L	2000	1330	1590	3000	2810	2430	2910	2900	1290	958	7540		7590	8640	8920
Metals	MANGANESE	7439-96-5	N	ug/L	3190	1500	1460	99.8	94	70	88.5	86.5	69.5	11.6	308		220	176	184
Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 1 U	< 0.1 UJ		< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L	0.62 J	1.79 J	1.85 J	0.59 J	0.62 J	0.62 J	1 J	1.2 J	0.46 J	0.71 J	1.3 J		0.84 J	1.2 J	1.3 J
Metals	POTASSIUM	7440-09-7	N	ug/L	705 J	663 J	621 J	893 J	857 J	893 J	1050	979 J	497 J	519 J	< 2150 U		1560	1680	1770
Metals	SELENIUM	7782-49-2	N	ug/L	0.43 J	< 3 U	< 3 U	0.65 J	0.27 J	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	0.26 J		< 3 U	< 3 U	< 3 U
Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L	5470	3960	4980	7400	7370	6090	7420	7120	3380	3200	8470		7850	8660	8910
Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.14 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L	0.77 J	1.6 J	1.5 J	1.6 J	3 J	< 4 U	1.8 J	1.8 J	0.64 J	1.4 J	< 4 U		0.61 J	< 4 U	0.62 J
Metals	ZINC	7440-66-6	N	ug/L	< 10 U	3.8 J	5.5 J	< 10 U	< 10 U	< 10 U	2.6 J	3.4 J	< 10 U	3.2 J	< 10 U		4.6 J	3.1 J	< 10 U
Pest_PCBs	4,4-DDD	72-54-8	N	ug/L												< 0.048 UJ			
Pest_PCBs	4,4-DDE	72-55-9	N	ug/L												< 0.048 UJ			
Pest_PCBs	4,4-DDT	50-29-3	N	ug/L												< 0.048 UJ			
Pest_PCBs	ALDRIN	309-00-2	N	ug/L												< 0.024 UJ			
Pest_PCBs	ALPHA-BHC	319-84-6	N	ug/L												< 0.024 UJ			
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	N	ug/L												< 0.024 UJ			
Pest_PCBs	AROCLOR-1016	12674-11-2	N	ug/L											< 0.24 U	< 0.24 UJ		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1221	11104-28-2	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1232	11141-16-5	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1242	53469-21-9	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1248	12672-29-6	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1254	11097-69-1	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1260	11096-82-5	N	ug/L											< 0.24 U	< 0.24 UJ		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1262	37324-23-5	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1268	11100-14-4	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	BETA-BHC	319-85-7	N	ug/L												< 0.024 UJ			
Pest_PCBs	DELTA-BHC	319-86-8	N	ug/L												< 0.024 UJ			
Pest_PCBs	DIELDRIN	60-57-1	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDOSULFAN I	959-98-8	N	ug/L												< 0.024 UJ			
Pest_PCBs	ENDOSULFAN II	33213-65-9	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDRIN	72-20-8	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDRIN KETONE	53494-70-5	N	ug/L												< 0.048 UJ			
Pest_PCBs	HEPTACHLOR	76-44-8	N	ug/L												< 0.024 UJ			
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	N	ug/L												< 0.024 UJ			

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-12			FTA-MW-14					FTA-MW-203		FTA-MW-206				
					Sample Date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/27/2012	6/18/2014	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
					Sample Type Code	N	N	N	N	FD	N	N	FD	N	N	N	N	N	N	FD
					Sample ID	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712	FTA-MW-14-112712-D	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-203-112712	FTA-MW-203-061814	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
					Screen Interval	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	4 - 8 ft	4 - 8 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft
Group	Compound	CAS	Fraction	Units																
Pest_PCBs	LINDANE	58-89-9	N	ug/L													< 0.024 UJ			
Pest_PCBs	METHOXYCHLOR	72-43-5	N	ug/L													< 0.24 UJ			
Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS) (a)	1336-36-3	N	ug/L												< 0.24 U				
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L												< 0.24 U	< 0.24 U			
Pest_PCBs	TOTAL AROCLORS FULL DL	RATotAroFLDL	N	ug/L												< 2.16 U	< 2.16 U			
Pest_PCBs	TOXAPHENE	8001-35-2	N	ug/L													< 0.48 U			
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	N	ug/L													< 0.024 UJ			
PFC	Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	N	ug/L			0.015 J	0.011	< 0.019 U	< 0.02 U	< 0.018 U	< 0.0031 UJ	0.0013 J		< 0.018 U			0.011 J	< 0.0030 U	< 0.0030 U
PFC	Perfluorooctanoic Acid (PFOA)	335-67-1	N	ug/L			< 0.0074 U	0.0056	0.48	0.41	0.43	0.35	0.35		< 0.0074 U			< 0.0075 U	0.0014 J	0.0013 J
SVOCs_EPH	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.095 UJ	< 0.11 UJ	< 0.096 UJ	< 0.097 UJ	< 0.1 UJ	< 0.094 UJ	< 0.099 UJ	< 0.097 UJ	< 0.095 UJ	< 0.094 UJ	< 0.095 UJ			< 0.094 UJ	< 0.094 UJ	< 0.094 UJ
SVOCs_EPH	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U			< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 UJ	< 0.16 UJ	< 0.14 U	< 0.14 UJ	< 0.15 UJ	< 0.14 UJ	< 0.15 U	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ		< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 7.1 UJ		< 7.2 U	< 7.3 UJ	< 7.5 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 UJ	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 UJ		< 18 U	< 18 UJ	< 19 UJ	< 18 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U			< 18 U	< 18 U	< 18 U
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 UJ	< 0.53 U	< 0.48 U	< 0.48 UJ	< 0.5 UJ	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U	< 0.48 U			< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U			< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 UJ			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U			< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U			< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	0.098 J	< 0.094 UJ
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.1 U		< 7.2 UJ	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 UJ	< 7.3 UJ	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 UJ	< 7.1 UJ
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.16 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U			< 0.14 U	< 0.14 U	< 0.14 U
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	UR			< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.095 UJ	< 0.11 U	< 0.096 U	< 0.097 UJ	< 0.1 UJ	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 UJ	< 0.094 U	UR			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 0.11 U	< 0.096 U	< 18 U	< 19 U	< 0.094 U	< 0.099 U	< 0.097 U	< 18 U	< 0.094 U	< 18 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.71 UJ	< 0.8 U	< 0.72 U	< 0.73 UJ	< 0.75 UJ	< 0.71 U	< 0.74 U	< 0.73 U	< 0.71 UJ	< 0.71 U	< 0.71 U			< 0.71 U	< 0.71 U	< 0.71 U
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U			< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 18 UJ		< 18 U	< 18 UJ	< 19 UJ	< 18 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U			< 18 U	< 18 U	< 18 U
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.8 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACETOPHENONE	98-86-2	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ATRAZINE	1912-24-9	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZALDEHYDE	100-52-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 UJ	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 UJ	< 7.1 UJ			< 7.1 UJ	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 UJ	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.17 U	< 0.11 U	< 0.096 U	< 0.17 U	< 0.1 UJ	< 0.094 U	< 0.099 U	< 0.097 U	< 0.17 U	< 0.094 U	< 0.095 UJ	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.095 U		< 7.2 U	< 0.097 U	< 0.1 U	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.095 UJ		< 7.2 U	< 0.097 UJ	< 0.1 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 UJ	< 7.1 U	< 0.095 UJ	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.095 U		< 7.2 U	< 0.097 U	< 0.1 U	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 UJ			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.48 U	< 0.53 UJ	< 0.48 U	< 0.48 U	0.97 J	< 0.47 UJ	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 UJ	< 1.5 U			< 0.47 UJ	< 0.47 U	< 0.47 U
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CAPROLACTAM	105-60-2	N	ug/L	< 7.1 U		< 7.2 UJ	< 7.3 U	< 7.5 U	UR	< 7.4 UJ	< 7.3 UJ	< 7.1 U	UR	UR			UR	< 7.1 UJ	< 7.1 UJ
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 0.095 U	< 0.11 UJ	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 UJ	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 UJ	< 0.095 U	< 1.4 U	< 0.094 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.095 U	< 0.11 UJ	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 UJ	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 UJ	< 0.095 U	< 1.4 U	< 0.094 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 7.1 UJ		< 7.2 U	< 7.3 UJ	< 7.5 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 UJ	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	0.089 J	< 0.094 UJ
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 UJ			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.16 UJ	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 UJ	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U			< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U			< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U			< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U			< 0.47 U	< 0.47 U	< 0.47 U

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-12			FTA-MW-14					FTA-MW-203		FTA-MW-206				
					Sample Date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/27/2012	6/18/2014	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
					Sample Type Code	N	N	N	N	FD	N	N	FD	N	N	N	N	N	N	FD
					Sample ID	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712	FTA-MW-14-112712-D	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-203-112712	FTA-MW-203-061814	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
					Screen Interval	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	4 - 8 ft	4 - 8 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft
Group	Compound	CAS	Fraction	Units																
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L		< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	PHENOL	108-95-2	N	ug/L		< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	PYRENE	129-00-0	N	ug/L		< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L		< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U
TPH	TPH-C11-C22 AROMATICS UNADJUSTED	-196	N	ug/L		< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U
TPH	TPH-C19-C36 ALIPHATICS UNADJUSTED	-1255	N	ug/L		< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U
TPH	TPH-C9-C18 ALIPHATICS UNADJUSTED	-1256	N	ug/L		< 71 U	< 71 U		< 71 U	< 71 U	< 71 U			< 71 U	< 71 U	< 71 U	< 71 U	< 71 U		
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U
TPH	TPH-C5-C8 ALIPHATICS UNADJUSTED	-193	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U			< 75 U	< 75 U	< 75 U		< 75 U		< 75 U
TPH	TPH-C9-C10 AROMATICS UNADJUSTED	-195	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U			< 75 U	< 75 U	< 75 U		< 75 U		< 75 U
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U
TPH	TPH-C9-C12 ALIPHATICS UNADJUSTED	-194	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U			< 75 U	< 75 U	< 75 U		< 75 U		
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L		0.43 J			< 0.5 U	< 0.5 U				< 0.5 U		18				
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L		< 2.5 UJ	< 2.5 U	3.5 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	2.3 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	2.8 J	3 J
VOCs	BENZENE	71-43-2	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L		< 1 UJ	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L		< 1 UJ	< 1 U	0.86 J	< 1 U	< 1 U	< 1 U	0.91 J	1.3 J	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L		0.43 J	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	18	26	22	22	20
VOCs	ETHYLBENZENE	100-41-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L		< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L		< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 UJ	< 0.025 U	< 0.025 U	< 0.025 UJ	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 U
VOCs	TOLUENE	108-88-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	6.9	7.5	8.2	11	9.4
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L		< 0.025 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.05 U	0.053 J	0.069	0.054 J	0.056 J	< 0.05 UJ
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L		< 1 U	< 1 U		< 1 U	< 1 U	< 1 U			< 1 U	< 1 U	< 1 U	< 1 U	< 1 U		

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-208					FTA-MW-210						FTA-MW-218			FTA-DP-35
					Sample Date	11/29/2012	6/18/2014	6/18/2014	9/21/2015	11/2/2016	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015	11/27/2012	6/18/2014	9/18/2015	9/21/2015
					Sample Type Code	N	N	FD	N	N	FD	N	FD	N	N	N	N	N	N	N
					Sample ID	FTA-MW-208-112912	FTA-MW-208-061814	FTA-MW-208-061814-D	FTA-MW-208-092115	MW208-N-110216	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115	FTA-MW-218-112712	FTA-MW-218-061814	FTA-MW-218-091815	FTA-DP-35-092115
					Screen Interval	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft		4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	6 - 10 ft	6 - 10 ft	6 - 10 ft	
Group	Compound	CAS	Fraction	Units																
Metals	ALUMINUM	7429-90-5	F	ug/L	81.5 J	< 100 U	< 100 U	16 J		29.4 J	36 J			< 100 U	< 100 U	68 J	< 140 U	110 J	15 J
Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.57 U	0.13 J	0.15 J	0.38 J		< 0.5 U	< 0.5 U			0.14 J	0.42 J	< 0.5 U	< 0.5 U	0.084 J	0.28 J
Metals	ARSENIC	7440-38-2	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U		< 4 U	< 4 U			< 4 U	3.7 J	< 4 U	< 4 U	< 4 U	9.2
Metals	BARIUM	7440-39-3	F	ug/L	11	4.67 J	4.57 J	3.48 J		10	10.5			6.01	7.84	9.4	6.5	3.82 J	2.64 J
Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 UJ	< 0.2 UJ	0.042 J		< 0.2 U	< 0.2 U			< 0.2 UJ	0.038 J	0.05 J	0.078 J	0.059 J	< 0.2 U
Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U		0.03 J	0.03 J			< 0.2 U	< 0.2 U	0.05 J	< 0.2 U	0.053 J	< 0.2 U
Metals	CALCIUM	7440-70-2	F	ug/L	10600	6120	6360	6100		35800	35000			32800	40400 J+	760	1170	536	22200
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	< 4 U	< 4 U	4.27 J		< 4 U	< 4 U			< 4 U	3.98 J	< 4 U	< 4 U	2.53 J	2.92 J
Metals	COBALT	7440-48-4	F	ug/L	1.5	< 0.3 U	< 0.3 U	0.074 J		0.26 J	0.32 J			0.26 J	0.25 J	1.8	1	0.5 J	0.11 J
Metals	COPPER	7440-50-8	F	ug/L	< 2 U	< 2 U	8.62	2.82 J		< 2 U	< 2 U			< 2 U	3.75	< 2 U	< 2 U	1.1 J	2.1 J
Metals	IRON	7439-89-6	F	ug/L	85.1 J	< 80 U	< 80 U	24 J		< 80 U	< 80 U			< 80 U	< 80 U	< 80 U	< 80 U	15 J	39 J
Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	0.33 J		< 0.5 U	< 0.5 U			< 0.5 U	0.16 J	< 0.5 U	0.077 J	0.096 J	0.21 J
Metals	MAGNESIUM	7439-95-4	F	ug/L	2870	1990	2070	2490		6350	6300			6160	7150	685	858	431	3700
Metals	MANGANESE	7439-96-5	F	ug/L	619	41.8	43.1	2 J		47.6	49.6			47	63.7	65.8	25.7	11.2	38.9
Metals	MERCURY	7439-97-6	F	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U		< 0.1 UJ	< 0.1 UJ			< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L	2.4	0.57 J	0.6 J	1 J		1.5 J	1.4 J			2.14	4.33	2.1	2.01	2.11	0.79 J
Metals	POTASSIUM	7440-09-7	F	ug/L	< 1670 U	966 J	979 J	699 J		< 1850 U	< 2070 U			1570	1960	< 500 U	160 J	55 J	2150
Metals	SELENIUM	7782-49-2	F	ug/L	< 3 U	< 3 U	< 3 U	< 3 U		< 3 U	< 3 U			< 3 U	< 3 U	0.27 J	< 3 U	0.2 J	< 3 U
Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L	20400	9000	9240	6570		9000	8760			7850	9560	6860	6910	5330	9500
Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L	< 4 U	< 4 U	< 4 U	1.4 J		< 4 U	< 4 U			< 4 U	1.4 J	1.2 J	1.1 J	0.84 J	0.73 J
Metals	ZINC	7440-66-6	F	ug/L	< 10 U	0.89 J	5.1 J	< 10 U		< 10 U	< 10 U			1.7 J	1.2 J	< 10 U	2.6 J	4.6 J	1 J
Metals	ALUMINUM	7429-90-5	N	ug/L	13400	648	619	232 J		62.8 J	66.9 J			24 J	< 100 U	235 J	276 J	130 J	41 J
Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	0.22 J	0.18 J	0.37 J		< 0.5 U	< 0.5 U			0.13 J	0.59 J	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J
Metals	ARSENIC	7440-38-2	N	ug/L	< 9.2 U	< 4 U	2.5 J	2.6 J		< 4 U	< 4 U			< 4 U	3.6 J	< 4 U	< 4 U	< 4 U	11
Metals	BARIUM	7440-39-3	N	ug/L	74.8	8.43	7.81	6.87		9.8	12.2			6.06	7.95	10.6	6.72	4.18 J	2.64 J
Metals	BERYLLIUM	7440-41-7	N	ug/L	0.71 J	< 0.2 UJ	< 0.2 UJ	0.052 J		< 0.2 U	< 0.2 U			< 0.2 U	0.038 J	0.06 J	< 0.2 U	0.058 J	0.049 J
Metals	CADMIUM	7440-43-9	N	ug/L	0.08 J	< 0.2 U	< 0.2 U	< 0.2 U		0.04 J	< 0.2 U			< 0.2 U	0.11 J	0.05 J	< 0.2 U	0.056 J	< 0.2 U
Metals	CALCIUM	7440-70-2	N	ug/L	12400	6180	6270	6210		34800	37000			33000	39900 J+	801	1150	479	23100
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	26.6	< 4 U	< 4 U	4.72 J	9.97	< 4 U	< 4 U			< 4 U	5.72	< 4 U	< 4 U	2.35 J	2.99 J
Metals	CHROMIUM III	16065-83-1	N	ug/L					5.2 J										
Metals	CHROMIUM VI	18540-29-9	N	ug/L					4.8 J										
Metals	COBALT	7440-48-4	N	ug/L	9	0.46 J	0.45 J	0.32 J		0.22 J	0.25 J			0.15 J	0.36 J	1.9	1.03	0.5 J	0.12 J
Metals	COPPER	7440-50-8	N	ug/L	22.5	2.11 J	2.18 J	3.69		< 2 U	< 2 U			4.26	2.74 J	< 2 U	< 2 U	0.6 J	1.7 J
Metals	IRON	7439-89-6	N	ug/L	16100	766	777	266		< 80 U	39.8 J			< 80 U	18 J	172	128	33 J	79 J
Metals	LEAD	7439-92-1	N	ug/L	10.2	0.56 J	0.63 J	0.64 J		< 0.5 U	< 0.5 U			< 0.5 U	3.46 J+	< 0.5 U	0.19 J	0.11 J	0.29 J
Metals	MAGNESIUM	7439-95-4	N	ug/L	7000	2150	2190	2570		6310	6520			6100	7060	744	867	412	3840
Metals	MANGANESE	7439-96-5	N	ug/L	957	53.8	52.4	10		47.3	56.3			47	87.1	75.1	28.7	11	49.3
Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U		< 0.1 UJ	< 0.1 UJ			< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L	18.5	1.54 J	1.4 J	2.33		1.3 J	1.4 J			1.86 J	3.54	2.4	1.92 J	1.3 J	0.69 J
Metals	POTASSIUM	7440-09-7	N	ug/L	3330	1090	1090	758 J		< 1810 U	< 2010 U			1540	2050	< 500 U	190 J	130 J	2320
Metals	SELENIUM	7782-49-2	N	ug/L	0.63 J	< 3 U	< 3 U	< 3 U		< 3 U	< 3 U			< 3 U	< 3 U	0.35 J	< 3 U	0.24 J	< 3 U
Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L	18800	9180	9310	6730		8710	9240			7990	9310	7160	6800	4990	10400
Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	0.065 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L	19.5	< 4 U	< 4 U	1.7 J		< 4 U	< 4 U			< 4 U	1.6 J	1 J	0.7 J	1 J	0.67 J
Metals	ZINC	7440-66-6	N	ug/L	46.6	3 J	3.5 J	2 J		< 10 U	< 10 U			4.9 J	1.4 J	< 10 U	2.7 J	3.2 J	<10 U
Pest_PCBs	4,4-DDD	72-54-8	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	4,4-DDE	72-55-9	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	4,4-DDT	50-29-3	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ALDRIN	309-00-2	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	ALPHA-BHC	319-84-6	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	AROCLOR-1016	12674-11-2	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 UJ	< 0.26 UJ		< 0.24 U				
Pest_PCBs	AROCLOR-1221	11104-28-2	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1232	11141-16-5	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1242	53469-21-9	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1248	12672-29-6	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1254	11097-69-1	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1260	11096-82-5	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 UJ	< 0.26 UJ		< 0.24 U				
Pest_PCBs	AROCLOR-1262	37324-23-5	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1268	11100-14-4	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	BETA-BHC	319-85-7	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	DELTA-BHC	319-86-8	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	DIELDRIN	60-57-1	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDOSULFAN I	959-98-8	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	ENDOSULFAN II	33213-65-9	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDRIN	72-20-8	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDRIN KETONE	53494-70-5	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	HEPTACHLOR	76-44-8	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	N	ug/L								< 0.026 UJ	< 0.026 UJ						

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-208					FTA-MW-210						FTA-MW-218			FTA-DP-35
					Sample Date	11/29/2012	6/18/2014	6/18/2014	9/21/2015	11/2/2016	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015	11/27/2012	6/18/2014	9/18/2015	9/21/2015
					Sample Type Code	N	N	FD	N	N	FD	N	FD	N	N	N	N	N	N	N
					Sample ID	FTA-MW-208-112912	FTA-MW-208-061814	FTA-MW-208-061814-D	FTA-MW-208-092115	MW208-N-110216	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115	FTA-MW-218-112712	FTA-MW-218-061814	FTA-MW-218-091815	FTA-DP-35-092115
					Screen Interval	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft		4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	6 - 10 ft	6 - 10 ft	6 - 10 ft	
Group	Compound	CAS	Fraction	Units																
Pest_PCBs	LINDANE	58-89-9	N	ug/L									< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	METHOXYCHLOR	72-43-5	N	ug/L									< 0.26 UJ	< 0.26 UJ						
Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS) (a)	1336-36-3	N	ug/L						< 0.26 U	< 0.24 U									
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U							
Pest_PCBs	TOTAL AROCLORS FULL DL	RATotAroFLDL	N	ug/L						< 2.34 U	< 2.16 U	< 2.34 U	< 2.34 U							
Pest_PCBs	TOXAPHENE	8001-35-2	N	ug/L								< 0.52 U	< 0.52 U							
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	N	ug/L								< 0.026 UJ	< 0.026 UJ							
PFC	Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	N	ug/L		< 0.018 UJ	< 0.019 UJ	< 0.0031 U						< 0.018 UJ	0.0036 J		< 0.019 U	< 0.0030 U	< 0.0031 U
PFC	Perfluorooctanoic Acid (PFOA)	335-67-1	N	ug/L		< 0.0072 UJ	< 0.0074 UJ	< 0.0021 U						0.0099 J	0.012		< 0.0074 U	0.0013 J	0.018
SVOCs_EPH	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.095 UJ	< 0.095 UJ	< 0.095 UJ	< 0.094 UJ		< 0.097 UJ	< 0.1 UJ			< 0.094 UJ	< 0.094 UJ	< 0.095 UJ	< 0.097 UJ	< 0.094 UJ	< 0.094 UJ
SVOCs_EPH	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 U		< 0.14 UJ	< 0.15 UJ			< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 U	< 18 U	< 18 U	< 18 U		< 18 U	< 19 U			< 18 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 UJ	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 UJ	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ		< 7.3 U	< 7.5 U			UR	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 UJ
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U		< 0.14 U	< 0.15 U			< 0.14 U	< 0.47 UJ	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 0.094 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 7.1 UJ	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			UR	< 0.14 U	< 0.095 UJ	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 0.095 U	< 0.095 U	< 0.094 U		< 18 U	< 19 U			< 0.094 U	< 7.1 U	< 18 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U		< 0.73 U	< 0.75 U			< 0.71 U	< 0.47 UJ	< 0.71 UJ	< 0.73 U	< 0.71 U	< 0.71 U
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 0.094 UJ	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 0.094 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 UJ	< 0.71 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 18 U	< 18 U	< 18 U	< 18 U		< 18 U	< 19 U			< 18 UJ	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 2 U	< 2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACETOPHENONE	98-86-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 UJ	< 7.1 U
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ATRAZINE	1912-24-9	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZALDEHYDE	100-52-7	N	ug/L	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	< 7.1 U		< 7.3 UJ	< 7.5 UJ			< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.3 UJ	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 UJ	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.19 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 UJ	< 0.1 UJ	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 UJ	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.095 UJ	< 7.1 U	< 7.1 U	< 7.1 U		< 0.097 UJ	< 0.1 UJ	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 0.095 UJ	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U		< 0.097 U	< 0.1 U			< 7.1 U	< 7.1 U	< 0.095 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.095 UJ	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 UJ	< 0.1 UJ			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 2 U	< 0.48 UJ	< 0.48 UJ	< 0.47 U		< 0.7 U	< 1.3 U			< 0.47 UJ	< 0.47 UJ	0.76 J	< 0.48 UJ	< 0.47 U	< 0.47 U
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CAPROLACTAM	105-60-2	N	ug/L	UR	UR	UR	< 7.1 UJ		UR	UR			UR	< 7.1 UJ	< 7.1 U	UR	< 7.1 U	< 7.1 UJ
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.095 U	< 0.095 UJ	< 0.095 UJ	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 UJ	< 0.094 UJ	< 0.095 U	< 0.097 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 UJ	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U		< 0.14 U	< 0.15 U			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 UJ	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 UJ	< 7.1 U
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U

TABLE B-2
ANALYTICAL DATA SUMMARY TABLES - 2012-2016 GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-MW-208					FTA-MW-210						FTA-MW-218			FTA-DP-35
				Sample Date	11/29/2012	6/18/2014	6/18/2014	9/21/2015	11/2/2016	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015	11/27/2012	6/18/2014	9/18/2015	9/21/2015
				Sample Type Code	N	N	FD	N	N	FD	N	FD	N	N	N	N	N	N	N
				Sample ID	FTA-MW-208-112912	FTA-MW-208-061814	FTA-MW-208-061814-D	FTA-MW-208-092115	MW208-N-110216	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115	FTA-MW-218-112712	FTA-MW-218-061814	FTA-MW-218-091815	FTA-DP-35-092115
				Screen Interval	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft		4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	6 - 10 ft	6 - 10 ft	6 - 10 ft	
Group	Compound	CAS	Fraction	Units															
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	PHENOL	108-95-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	PYRENE	129-00-0	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L	< 73 U	< 72 U	< 71 U	< 71 U		< 74 U	< 71 U	< 79 U	< 77 U	< 72 U	< 71 U	< 71 U	< 72 U	< 75 U	< 71 U
TPH	TPH-C11-C22 AROMATICS UNADJUSTED	-196	N	ug/L	< 73 U	< 72 U	< 71 U	< 75 U		< 74 U	< 71 U	< 79 U	< 77 U	< 72 U	< 75 U	< 71 U	< 72 U	< 75 U	< 75 U
TPH	TPH-C19-C36 ALIPHATICS UNADJUSTED	-1255	N	ug/L	< 73 U	< 72 U	< 71 U	< 75 U		< 74 U	< 71 U	< 79 U	< 77 U	< 72 U	< 75 U	< 71 U	< 72 U	< 75 U	< 75 U
TPH	TPH-C9-C18 ALIPHATICS UNADJUSTED	-1256	N	ug/L	< 73 U	< 72 U	< 71 U			< 74 U	< 71 U	< 79 U	< 77 U	< 72 U		< 71 U	< 72 U		
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U			< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C5-C8 ALIPHATICS UNADJUSTED	-193	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	< 75 U			< 75 U		< 75 U	< 75 U		
TPH	TPH-C9-C10 AROMATICS UNADJUSTED	-195	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	< 75 U			< 75 U		< 75 U	< 75 U		
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U			< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C9-C12 ALIPHATICS UNADJUSTED	-194	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	< 75 U			< 75 U		< 75 U	< 75 U		
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	1.4	1.5	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		0.78 J	0.82 J	1.5	1.4	1	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 0.5 U					< 0.5 U	< 0.5 U					< 0.5 U			
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 U		< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L	2.6 J	< 2.5 U	< 2.5 U	< 2.5 U		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	3.4 J	< 2.5 U	< 2.5 U	2.9 J	< 2.5 U
VOCs	BENZENE	71-43-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 1 U	< 1 UJ	< 1 UJ	< 1 U		< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 1 U	< 1 U	< 1 U	0.49 J		< 1 U	< 1 U	< 1 UJ	< 1 UJ	< 1 U	0.42 J	< 1 U	< 1 U	< 1 U	0.4 J
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U		0.014 J	0.019 J	< 0.025 U	< 0.025 U	0.011 J	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U		< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L	< 1 U	< 1 U	< 1 U			< 1 U	< 1 U	< 1 U	< 1 U	< 1 U		< 1 U	< 1 U		

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-SW-01		FTA-SW-02			FTA-SW-03	
					Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014
					Sample Type Code	N	N	N	FD	N	N	N
					Sample ID	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914
Analyte Group	Compound	CAS	Fraction	Units								
Metals	ALUMINUM	7429-90-5	F	ug/L	34.7 J	< 100 U	60.7 J	40 J	< 100 U	36.6 J	49 J
Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.5 U	0.094 J	< 0.5 U	< 0.5 U	0.11 J	< 0.5 U	0.14 J
Metals	ARSENIC	7440-38-2	F	ug/L	3.7 J	< 4 U	< 4 U	3.5 J	3.3 J	3.7 J	< 4 U
Metals	BARIUM	7440-39-3	F	ug/L	2.5 J	3.75 J	3.6 J	3.5 J	3.04 J	13.6	11.9
Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	F	ug/L	4700	7800	20200	20900	8590	7710	6660
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	COBALT	7440-48-4	F	ug/L	2.9	0.732 J	2.1	2.1	0.16 J	1.6	1.12
Metals	COPPER	7440-50-8	F	ug/L	0.98 J	2.68 J	2.2 J	2.5 J	6.6	1.3 J	4.01
Metals	IRON	7439-89-6	F	ug/L	525	157	959	907	134	695	215
Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.46 J
Metals	MAGNESIUM	7439-95-4	F	ug/L	1710	1940	2710	2760	1600	1790	1410
Metals	MANGANESE	7439-96-5	F	ug/L	113	54.9	786	811	15.4	62.2	38.3
Metals	MERCURY	7439-97-6	F	ug/L	0.02 J	< 0.1 U	0.03 J	0.01 J	< 0.1 U	0.03 J	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L	1.1 J	1 J	0.99 J	0.94 J	1.4 J	0.92 J	2.04
Metals	POTASSIUM	7440-09-7	F	ug/L	1100	927 J	800 J	836 J	1050	2000	1460
Metals	SELENIUM	7782-49-2	F	ug/L	0.67 J	< 3 U	0.31 J	0.38 J	< 3 U	0.29 J	< 3 U
Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L	3800	3670	4580	4500	3760	3960	3740
Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	ZINC	7440-66-6	F	ug/L	< 10 U	3.6 J	< 10 U	< 10 U	1.9 J	< 10 U	10.4 J
Metals	ALUMINUM	7429-90-5	N	ug/L	145 J	< 100 U	368	342	1590	257 J	120 J
Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	0.14 J	< 0.5 U	< 0.5 U	0.16 J	< 0.5 U	0.096 J
Metals	ARSENIC	7440-38-2	N	ug/L	< 4 U	< 4 U	6	4.9 J	3.6 J	< 4 U	< 4 U
Metals	BARIUM	7440-39-3	N	ug/L	4.4 J	4.44 J	6.4	6.4	11.5	17.8	12.8
Metals	BERYLLIUM	7440-41-7	N	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.04 J	< 0.2 U
Metals	CADMIUM	7440-43-9	N	ug/L	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	2.14	0.15 J	0.18 J
Metals	CALCIUM	7440-70-2	N	ug/L	4630	7880	20100	20100	8660	7620	6280
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	COBALT	7440-48-4	N	ug/L	3.4	0.851 J	2.5	2.4	1	2.2	1.24
Metals	COPPER	7440-50-8	N	ug/L	1.8 J	2.74 J	3.1	3.3	9.42	9.4	8.54
Metals	IRON	7439-89-6	N	ug/L	748	335	2110	2100	1650	946	380
Metals	LEAD	7439-92-1	N	ug/L	< 0.5 U	< 0.5 U	0.52 J	0.56 J	2.02	2.1	1.59
Metals	MAGNESIUM	7439-95-4	N	ug/L	1740	1990	2810	2760	1860	1780	1360
Metals	MANGANESE	7439-96-5	N	ug/L	124	57.4	840	835	31.1	67.8	41.3
Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L	1.5 J	0.93 J	1.4 J	1.3 J	8.09	1.6 J	2.24
Metals	POTASSIUM	7440-09-7	N	ug/L	1080	947 J	902 J	855 J	1360	2120	1490
Metals	SELENIUM	7782-49-2	N	ug/L	0.82 J	< 3 U	0.51 J	0.31 J	< 3 U	< 3 U	< 3 U
Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.1 J	0.07 J
Metals	SODIUM	7440-23-5	N	ug/L	3720	3680	4540	4560	3770	3910	3470
Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.32 J	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	ZINC	7440-66-6	N	ug/L	< 10 U	3.3 J	< 10 U	< 10 U	5.7 J	19 J	13.7 J
PCBs	AROCLOR-1016	12674-11-2	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1221	11104-28-2	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1232	11141-16-5	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1242	53469-21-9	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1248	12672-29-6	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1254	11097-69-1	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1260	11096-82-5	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1262	37324-23-5	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	AROCLOR-1268	11100-14-4	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ
PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 U

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SW-01		FTA-SW-02			FTA-SW-03		
				Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014
				Sample Type Code	N	N	N	FD	N	N	N
				Sample ID	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914
Analyte Group	Compound	CAS	Fraction	Units							
SVOCs	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.095 UJ	< 0.096 UJ	< 0.095 UJ	< 0.094 UJ	< 0.095 UJ	< 0.094 UJ	< 0.1 UJ
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.15 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 0.48 U	< 7.2 U	< 0.48 U	< 0.47 U	< 7.1 U	< 0.47 U	< 7.6 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 UJ	< 18 U	< 18 UJ	< 18 UJ	< 18 U	< 18 UJ	< 19 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U
SVOCs	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U
SVOCs	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U
SVOCs	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR
SVOCs	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U
SVOCs	2-NITROPHENOL	88-75-5	N	ug/L	< 7.3 UJ	< 7.2 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.6 U
SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U
SVOCs	2-NITROPHENOL	88-75-5	N	ug/L	< 7.3 UJ	< 7.2 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.6 U
SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 UJ	UR
SVOCs	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 0.096 U	< 18 U	< 18 U	< 0.095 U	< 18 U	< 0.1 UJ
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.71 U	< 0.72 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.76 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.3 UJ	< 7.2 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.6 U
SVOCs	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	UR
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	4-NITROANILINE	100-01-6	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ
SVOCs	4-NITROPHENOL	100-02-7	N	ug/L	< 18 UJ	< 18 U	< 18 UJ	< 18 UJ	< 18 UJ	< 18 UJ	< 19 UJ
SVOCs	ACENAPHTHENE	83-32-9	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	ACETOPHENONE	98-86-2	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	ANTHRACENE	120-12-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	ATRAZINE	1912-24-9	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	BENZALDEHYDE	100-52-7	N	ug/L	< 7.3 U	< 7.2 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.6 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.19 U	< 0.096 U	< 0.2 U	< 0.19 U	< 0.095 U	< 0.19 U	< 0.1 UJ
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.095 UJ	< 7.2 U	< 0.095 UJ	< 0.094 UJ	< 7.1 U	< 0.094 UJ	< 7.6 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.49 U	< 0.48 UJ	< 0.51 U	< 0.48 U	< 0.48 UJ	< 0.77 U	< 0.51 UJ
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	CAPROLACTAM	105-60-2	N	ug/L	< 7.3 U	UR	< 7.1 U	< 7.1 U	UR	< 7.1 U	UR
SVOCs	CARBAZOLE	86-74-8	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	CHRYSENE	218-01-9	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.095 U	< 0.096 UJ	< 0.095 U	< 0.094 U	< 0.095 UJ	< 0.094 U	< 0.1 UJ
SVOCs	DIBENZOFURAN	132-64-9	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	FLUORANTHENE	206-44-0	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U
SVOCs	FLUORENE	86-73-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ
SVOCs	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	HPAH, TOTAL (b)	RA-63	N	ug/L	< 0.19 U	< 7.2 U	< 0.2 U	< 0.19 U	< 7.1 U	0.14	< 7.6 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	0.14 J	< 0.1 UJ
SVOCs	ISOPHORONE	78-59-1	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	LPAH, TOTAL (b)	RA-64	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	NAPHTHALENE	91-20-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U
SVOCs	PAH, TOTAL (b)	RA-3502	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	0.14	< 7.6 U
SVOCs	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 UJ	< 0.51 U
SVOCs	PHENANTHRENE	85-01-8	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U
SVOCs	PHENOL	108-95-2	N	ug/L	< 0.48 U	< 7.2 U	< 0.48 U	< 0.47 U	< 7.1 U	< 0.47 U	< 7.6 U
SVOCs	PYRENE	129-00-0	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SW-01		FTA-SW-02			FTA-SW-03		
				Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014
				Sample Type Code	N	N	N	FD	N	N	N
				Sample ID	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914
Analyte Group	Compound	CAS	Fraction	Units							
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L	< 71 U	< 71 U	< 71 U	< 71 U	< 72 U	140	< 71 U
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L	< 75 U		< 75 U	< 75 U		< 75 U	
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L	< 75 U		< 75 U	< 75 U		< 75 U	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 0.5 U		< 0.5 U	< 0.5 UJ		< 0.5 U	
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 UJ
VOCs	ACETONE	67-64-1	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	2.3 J	< 2.5 UJ
VOCs	BENZENE	71-43-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 UJ	< 1 U	< 1 UJ
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 UJ
VOCs	O-XYLENE	95-47-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.43 J	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.005 U	< 0.05 U	< 0.005 U	< 0.005 U	< 0.05 U	< 0.005 U	< 0.05 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

F - Filtered sample.

FD - Field duplicate.

J - Estimated value.

HPAH - High molecular weight PAH.

LPAH - Low molecular weight PAH.

N - Normal sample.

PAH - Polycyclic Aromatic Hydrocarbon.

PCB - Polychlorinated Biphenyl.

SVOC - Semivolatile organic compound.

TPH - Total Petroleum Hydrocarbon.

ug/L - microgram per liter.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

VPH - Volatile Petroleum Hydrocarbons.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-SW-04	FTA-SW-05	FTA-SW-06			FTA-SW-07	
					Sample Date	11/27/2012	11/27/2012	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014
					Sample Type Code	N	N	N	N	FD	N	N
					Sample ID	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914
Analyte Group	Compound	CAS	Fraction	Units								
Metals	ALUMINUM	7429-90-5	F	ug/L	49.6 J	51.4 J	57.5 J	< 100 U	56 J	45.4 J	< 100 U
Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	0.099 J	0.11 J	< 0.5 U	0.21 J
Metals	ARSENIC	7440-38-2	F	ug/L	< 4 U	< 4 U	< 4 U	6.5	7.5	3.3 J	6.2
Metals	BARIUM	7440-39-3	F	ug/L	4 J	2.5 J	< 3 U	3 J	2.93 J	0.86 J	2.2 J
Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	F	ug/L	70300	83400	59900	48500	48600	66700	56600
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	COBALT	7440-48-4	F	ug/L	2.2	1	1.1	4.25	4.14	0.7 J	1.35
Metals	COPPER	7440-50-8	F	ug/L	1.2 J	1.2 J	0.98 J	< 2 U	1.99 J	< 2 U	< 2 U
Metals	IRON	7439-89-6	F	ug/L	3570	150	649	664	522	< 80 U	833
Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Metals	MAGNESIUM	7439-95-4	F	ug/L	5610	7120	4210	4360	4330	6580	5840
Metals	MANGANESE	7439-96-5	F	ug/L	1120	448	673	1010	941	349	372
Metals	MERCURY	7439-97-6	F	ug/L	< 0.1 U	0.02 J	0.02 J	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L	1.5 J	1.3 J	1.1 J	1.83 J	2.46	< 1.2 U	1.76 J
Metals	POTASSIUM	7440-09-7	F	ug/L	3570	3860	3940	1320	1270	3810	2910
Metals	SELENIUM	7782-49-2	F	ug/L	0.65 J	< 3 U	0.51 J	< 3 U	< 3 U	0.3 J	< 3 U
Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L	5480	6210	6350	3780	4040	6280	3930
Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	ZINC	7440-66-6	F	ug/L	7.8 J	< 10 U	< 10 U	2.4 J	3.7 J	< 10 U	5.6 J
Metals	ALUMINUM	7429-90-5	N	ug/L	531	54.4 J	104 J	< 100 U	97 J	68.4 J	< 110 U
Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	0.15 J	0.11 J	< 0.5 U	0.19 J
Metals	ARSENIC	7440-38-2	N	ug/L	4 J	< 3 U	3.8 J	7.9	7.9	3.6 J	7.9
Metals	BARIUM	7440-39-3	N	ug/L	20.6	3.8 J	4.2 J	17.4	20.9	0.99 J	4.29 J
Metals	BERYLLIUM	7440-41-7	N	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	N	ug/L	0.08 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	N	ug/L	73000	87800	62600	46200	54500	67700	52500
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	COBALT	7440-48-4	N	ug/L	2.5	0.93 J	1.4	5.06	5.52	0.76 J	1.38
Metals	COPPER	7440-50-8	N	ug/L	8.1	1.3 J	2.8 J	3.21	3.85	< 2 U	2.3 J
Metals	IRON	7439-89-6	N	ug/L	5620	536	1500	5890	7060	291	2340
Metals	LEAD	7439-92-1	N	ug/L	1.5	< 0.5 U	< 0.5 U	0.41 J	0.41 J	0.07 J	< 0.5 U
Metals	MAGNESIUM	7439-95-4	N	ug/L	5840	7340	4230	3990	4770	6550	5260
Metals	MANGANESE	7439-96-5	N	ug/L	1190	496	815	1080	1240	365	432
Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L	2.1	1.5 J	1.1 J	1.87 J	2.09	< 1.2 U	1.66 J
Metals	POTASSIUM	7440-09-7	N	ug/L	3570	4000	4180	1240	1310	3780	3180
Metals	SELENIUM	7782-49-2	N	ug/L	0.35 J	0.77 J	0.59 J	< 3 U	< 3 U	< 3 UJ	< 3 U
Metals	SILVER	7440-22-4	N	ug/L	0.11 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L	5580	6530	6540	3490	4030	6220	3660
Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
Metals	ZINC	7440-66-6	N	ug/L	23	< 10 U	8.3 J	4.6 J	6.3 J	< 10 U	5.4 J
PCBs	AROCLOR-1016	12674-11-2	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1221	11104-28-2	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1232	11141-16-5	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1242	53469-21-9	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1248	12672-29-6	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1254	11097-69-1	N	ug/L				0.38 J	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1260	11096-82-5	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1262	37324-23-5	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	AROCLOR-1268	11100-14-4	N	ug/L				< 0.048 U	< 0.047 UJ		< 0.047 U
PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L				0.38	< 0.047 U		< 0.047 U

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SW-04	FTA-SW-05	FTA-SW-06			FTA-SW-07	
				Sample Date	11/27/2012	11/27/2012	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014
				Sample Type Code	N	N	N	N	FD	N	N
				Sample ID	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914
Analyte Group	Compound	CAS	Fraction	Units							
SVOCs	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.096 UJ	< 0.095 UJ	< 0.096 UJ	0.082 J	< 0.097 UJ	< 0.095 UJ	< 0.094 UJ
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.11 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 7.5 U	< 7.3 U	< 0.48 U	< 7.1 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 UJ	< 18 UJ	< 18 UJ	< 19 U	< 18 U	< 18 U	< 18 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	0.22 J	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 UJ	< 7.1 U
SVOCs	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
SVOCs	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U
SVOCs	2-NITROPHENOL	88-75-5	N	ug/L	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U
SVOCs	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 18 U	< 18 U	< 0.1 U	< 0.097 U	< 18 U	< 0.094 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.72 U	< 0.71 U	< 0.72 U	< 0.75 U	< 0.73 U	< 0.71 U	< 0.71 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	4-NITROANILINE	100-01-6	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	4-NITROPHENOL	100-02-7	N	ug/L	< 18 UJ	< 18 UJ	< 18 UJ	< 19 UJ	< 18 UJ	< 18 U	< 18 UJ
SVOCs	ACENAPHTHENE	83-32-9	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	ACETOPHENONE	98-86-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	ANTHRACENE	120-12-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	ATRAZINE	1912-24-9	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.06 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	BENZALDEHYDE	100-52-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 UJ	< 7.3 UJ	< 7.1 UJ	< 7.1 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.065 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.076 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.096 UJ	< 0.19 U	< 0.22 U	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.096 UJ	< 0.095 UJ	0.052 J	< 7.5 U	< 7.3 U	< 0.095 UJ	< 7.1 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.044 J	< 0.097 U	< 0.095 UJ	< 0.094 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.95 U	< 0.52 U	< 0.82 U	< 0.5 UJ	< 0.48 UJ	< 0.48 U	< 0.47 UJ
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	CAPROLACTAM	105-60-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	UR	UR	< 7.1 U	UR
SVOCs	CARBAZOLE	86-74-8	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	CHRYSENE	218-01-9	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 UJ	< 0.097 UJ	< 0.095 U	< 0.094 UJ
SVOCs	DIBENZOFURAN	132-64-9	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.087 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	FLUORANTHENE	206-44-0	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 UJ	< 7.1 U
SVOCs	FLUORENE	86-73-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U
SVOCs	HPAH, TOTAL (b)	RA-63	N	ug/L	0.15	< 0.19 U	0.21	0.26	< 7.3 U	< 0.095 U	< 7.1 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	0.15 J	< 0.095 U	0.16 J	0.12 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	ISOPHORONE	78-59-1	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	LPAH, TOTAL (b)	RA-64	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	0.20	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	NAPHTHALENE	91-20-3	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.1 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	PAH, TOTAL (b)	RA-3502	N	ug/L	0.15	< 7.1 U	0.21	0.46	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U
SVOCs	PHENANTHRENE	85-01-8	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	0.095 J	< 0.097 U	< 0.095 U	< 0.094 U
SVOCs	PHENOL	108-95-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 7.5 U	< 7.3 U	< 0.48 U	< 7.1 U
SVOCs	PYRENE	129-00-0	N	ug/L	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SW-04	FTA-SW-05	FTA-SW-06			FTA-SW-07	
				Sample Date	11/27/2012	11/27/2012	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014
				Sample Type Code	N	N	N	N	FD	N	N
				Sample ID	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914
Analyte Group	Compound	CAS	Fraction	Units							
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 74 UJ
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U			< 0.5 U	
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L	< 2.5 U	7.3	2.3 J	7.5 J	11 J	< 2.5 U	6
VOCs	BENZENE	71-43-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 0.5 UJ	< 0.5 UJ	< 0.5 UJ	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 UJ	< 0.025 U
VOCs	TOLUENE	108-88-3	N	ug/L	1.9	< 0.5 U	0.35 J	0.86 J	1	< 0.5 U	5.1
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.005 U	< 0.005 U	< 0.005 U	< 0.05 U	< 0.05 U	< 0.005 UJ	< 0.05 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

F - Filtered sample.

FD - Field duplicate.

J - Estimated value.

HPAH - High molecular weight PAH.

LPAH - Low molecular weight PAH.

N - Normal sample.

PAH - Polycyclic Aromatic Hydrocarbon.

PCB - Polychlorinated Biphenyl.

SVOC - Semivolatile organic compound.

TPH - Total Petroleum Hydrocarbon.

ug/L - microgram per liter.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

VPH - Volatile Petroleum Hydrocarbons.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summi
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples v
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting c
limit within the sample is presented as a non-detect value. Calculated totals have a CA
beginning with "RA-".

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SW-08	
				Sample Date	11/28/2012	6/19/2014
				Sample Type Code	N	N
				Sample ID	FTA-SW08-112812	FTA-SW-08-061914
Analyte Group	Compound	CAS	Fraction	Units		
Metals	ALUMINUM	7429-90-5	F	ug/L	34.7 J	35 J
Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.09 U	0.15 J
Metals	ARSENIC	7440-38-2	F	ug/L	3.1 J	5.1
Metals	BARIUM	7440-39-3	F	ug/L	0.68 J	2.2 J
Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	F	ug/L	54000	26500
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	< 4 U
Metals	COBALT	7440-48-4	F	ug/L	0.42 J	0.608 J
Metals	COPPER	7440-50-8	F	ug/L	< 2 U	2.45 J
Metals	IRON	7439-89-6	F	ug/L	91.5 J	794
Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	< 0.5 U
Metals	MAGNESIUM	7439-95-4	F	ug/L	5490	2440
Metals	MANGANESE	7439-96-5	F	ug/L	45.7	11
Metals	MERCURY	7439-97-6	F	ug/L	< 0.1 UJ	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L	< 1.2 U	1.61 J
Metals	POTASSIUM	7440-09-7	F	ug/L	3840	755 J
Metals	SELENIUM	7782-49-2	F	ug/L	0.23 J	< 3 U
Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L	5900	2810
Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L	< 4 U	< 4 U
Metals	ZINC	7440-66-6	F	ug/L	< 10 U	4 J
Metals	ALUMINUM	7429-90-5	N	ug/L	44.2 J	< 100 U
Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	< 0.09 U
Metals	ARSENIC	7440-38-2	N	ug/L	3.3 J	5.1
Metals	BARIUM	7440-39-3	N	ug/L	1.1 J	1.8 J
Metals	BERYLLIUM	7440-41-7	N	ug/L	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	N	ug/L	0.03 J	< 0.2 U
Metals	CALCIUM	7440-70-2	N	ug/L	54900	27600
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	< 4 U	< 4 U
Metals	COBALT	7440-48-4	N	ug/L	0.49 J	0.53 J
Metals	COPPER	7440-50-8	N	ug/L	< 2.4 U	2.27 J
Metals	IRON	7439-89-6	N	ug/L	344	1250
Metals	LEAD	7439-92-1	N	ug/L	0.32 J	< 0.5 U
Metals	MAGNESIUM	7439-95-4	N	ug/L	5540	2560
Metals	MANGANESE	7439-96-5	N	ug/L	52.2	28.3
Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L	< 1.2 U	1.1 J
Metals	POTASSIUM	7440-09-7	N	ug/L	3880	810 J
Metals	SELENIUM	7782-49-2	N	ug/L	< 3 UJ	< 3 U
Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L	5940	2730
Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L	< 4 U	< 4 U
Metals	ZINC	7440-66-6	N	ug/L	< 10 U	2.2 J
PCBs	AROCLOR-1016	12674-11-2	N	ug/L		< 0.047 U
PCBs	AROCLOR-1221	11104-28-2	N	ug/L		< 0.047 U
PCBs	AROCLOR-1232	11141-16-5	N	ug/L		< 0.047 U
PCBs	AROCLOR-1242	53469-21-9	N	ug/L		< 0.047 U
PCBs	AROCLOR-1248	12672-29-6	N	ug/L		< 0.047 U
PCBs	AROCLOR-1254	11097-69-1	N	ug/L		< 0.047 U
PCBs	AROCLOR-1260	11096-82-5	N	ug/L		< 0.047 U
PCBs	AROCLOR-1262	37324-23-5	N	ug/L		< 0.047 U
PCBs	AROCLOR-1268	11100-14-4	N	ug/L		< 0.047 U
PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L		< 0.047 U

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SW-08	
				Sample Date	11/28/2012	6/19/2014
				Sample Type Code	N	N
				Sample ID	FTA-SW08-112812	FTA-SW-08-061914
Analyte Group	Compound	CAS	Fraction	Units		
SVOCs	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.095 UJ	< 0.098 UJ
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.49 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 UJ	< 0.15 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 0.48 U	< 7.4 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 U	< 18 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 U	< 0.49 U
SVOCs	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.49 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.1 UJ	< 7.4 U
SVOCs	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.49 U
SVOCs	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 0.095 U	< 7.4 U
SVOCs	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.49 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.15 U
SVOCs	2-NITROPHENOL	88-75-5	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.49 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 0.098 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.71 U	< 0.74 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 0.095 U	< 7.4 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.49 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	4-NITROANILINE	100-01-6	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	4-NITROPHENOL	100-02-7	N	ug/L	< 18 U	< 18 UJ
SVOCs	ACENAPHTHENE	83-32-9	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	ACETOPHENONE	98-86-2	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	ANTHRACENE	120-12-7	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	ATRAZINE	1912-24-9	N	ug/L	0.047 J	< 0.098 U
SVOCs	BENZALDEHYDE	100-52-7	N	ug/L	< 7.1 UJ	< 7.4 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.095 UJ	< 0.098 U
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.095 U	< 7.4 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.095 UJ	< 7.4 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.095 U	< 7.4 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.095 UJ	< 0.098 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.48 U	< 0.49 UJ
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	CAPROLACTAM	105-60-2	N	ug/L	< 7.1 U	UR
SVOCs	CARBAZOLE	86-74-8	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	CHRYSENE	218-01-9	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.095 U	< 0.098 UJ
SVOCs	DIBENZOFURAN	132-64-9	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 0.095 U	< 7.4 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	FLUORANTHENE	206-44-0	N	ug/L	< 0.095 UJ	< 7.4 U
SVOCs	FLUORENE	86-73-7	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	HPAH, TOTAL (b)	RA-63	N	ug/L	< 0.095 U	< 7.4 U
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	ISOPHORONE	78-59-1	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	LPAH, TOTAL (b)	RA-64	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	NAPHTHALENE	91-20-3	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.15 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	PAH, TOTAL (b)	RA-3502	N	ug/L	< 7.1 U	< 7.4 U
SVOCs	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 UJ	< 0.49 U
SVOCs	PHENANTHRENE	85-01-8	N	ug/L	< 0.095 U	< 0.098 U
SVOCs	PHENOL	108-95-2	N	ug/L	< 0.48 U	< 7.4 U
SVOCs	PYRENE	129-00-0	N	ug/L	< 0.095 U	< 0.098 U

TABLE B-3
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SW-08	
				Sample Date	11/28/2012	6/19/2014
				Sample Type Code	N	N
				Sample ID	FTA-SW08-112812	FTA-SW-08-061914
Analyte Group	Compound	CAS	Fraction	Units		
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L	< 71 U	< 71 U
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L	< 75 U	
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L	< 75 U	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 0.5 U	< 0.5 UJ
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 0.5 U	
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 2.5 UJ	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L	< 2.5 U	4.1 J
VOCs	BENZENE	71-43-2	N	ug/L	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 0.5 U	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 1 UJ	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 1 U	< 1 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 0.5 U	< 0.5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 0.5 U	< 0.5 UJ
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 0.025 U	< 0.025 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 0.5 U	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 0.5 U	< 0.5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.005 U	< 0.05 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L	< 1 U	< 1 U

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summi
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples w
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting c
limit within the sample is presented as a non-detect value. Calculated totals have a CAS
beginning with "RA-".

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SED-01		FTA-SED-02			FTA-SED-03	
				Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014
				Sample Type Code	N	N	N	FD	N	N	N
				Sample ID	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units								
Metals	ALUMINUM	7429-90-5	mg/kg	10600	10100 J	11500	9890	11100 J	11300	4690 J
Metals	ANTIMONY	7440-36-0	mg/kg	0.2	0.12 J	0.11	0.14	0.095 J	0.23	0.1 J
Metals	ARSENIC	7440-38-2	mg/kg	8.3	4.21 J	5.9	4.9	6.22 J	3.3	1.6 J
Metals	BARIUM	7440-39-3	mg/kg	30.5	29.3 J	35.5	31.7	22.2 J	28	15.2 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.4	0.337	0.32	0.28	0.375	0.54	0.283
Metals	CADMIUM	7440-43-9	mg/kg	0.31	0.102	0.17	0.16	0.061 J	0.46	0.226
Metals	CALCIUM	7440-70-2	mg/kg	2720	2730	6210	7040	2310	4250	1510
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	20.8	16.3 J	24.6	29.9	21.5 J	27.6	12.2 J
Metals	COBALT	7440-48-4	mg/kg	12	6.57 J	8.4	7	8.33 J	11.7	4.32 J
Metals	COPPER	7440-50-8	mg/kg	40.4	19.2 J	31.4	31.6	16	51.1	22.8 J
Metals	IRON	7439-89-6	mg/kg	15200	16200 J	17100	14900	19400 J	15600	8100 J
Metals	LEAD	7439-92-1	mg/kg	12.8	7.36 J	10.4	10.1	7.5	13.3	6.21 J
Metals	MAGNESIUM	7439-95-4	mg/kg	4880	5230 J	5730	5240	5720 J	6350	2570 J
Metals	MANGANESE	7439-96-5	mg/kg	284	298 J	415	369	354	278	116 J
Metals	MERCURY	7439-97-6	mg/kg	0.03 J	0.043	0.01 J	0.02 J	0.01 J	0.04 J	0.047
Metals	NICKEL	7440-02-0	mg/kg	27.4	14.6 J	19.4	17	19.7 J	25	10.9 J
Metals	POTASSIUM	7440-09-7	mg/kg	1010	1090 J	1040	734	1040 J	544	372 J
Metals	SELENIUM	7782-49-2	mg/kg	0.46	< 0.24 U	0.36	0.29	< 0.21 U	0.55	< 0.414 U
Metals	SILVER	7440-22-4	mg/kg	0.22	0.118	0.24	0.39	< 0.0608 U	0.23	0.164
Metals	SODIUM	7440-23-5	mg/kg	138	92.2 J	114	104	118 J	161	44.4 J
Metals	THALLIUM	7440-28-0	mg/kg	0.15	0.07 J	0.07	0.05 J	0.064 J	0.3	0.069 J
Metals	VANADIUM	7440-62-2	mg/kg	29	27.3 J	30.4	27.6	27.6	36.4	14.5 J
Metals	ZINC	7440-66-6	mg/kg	59.9	46.8 J	62.4	61.8	42.1	69.6	35.4 J
Other	PH	-9	SU	5.8		7.2	7.2		5.6	
Other	TOTAL ORGANIC CARBON	-28	mg/kg	52000		76000	62000		76000	
Other	TOTAL SOLIDS	-29	PCT	58	56	61	62	73	58	51
PestPCBs	4,4-DDD	72-54-8	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	0.015 J
PestPCBs	4,4-DDE	72-55-9	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	0.00086 J	0.00095 J
PestPCBs	4,4-DDT	50-29-3	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	0.006 J	< 0.0022 U	0.011 J
PestPCBs	ALDRIN	309-00-2	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ
PestPCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ
PestPCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.013 U	< 0.034 U	< 0.016 U	< 0.016 U	< 0.0024 U	< 0.013 U	< 0.0039 UJ
PestPCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ
PestPCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ
PestPCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ
PestPCBs	AROCLOR-1260	11096-82-5	mg/kg	1.4	1.2 J	1.3	1.3	0.079 J	0.22	0.23 J
PestPCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ
PestPCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ
PestPCBs	BETA-BHC	319-85-7	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	DELTA-BHC	319-86-8	mg/kg	< 0.0011 UJ	< 0.00029 UJ	< 0.0014 UJ	< 0.0013 UJ	< 0.0002 UJ	< 0.0011 UJ	< 0.00033 UJ
PestPCBs	DIELDRIN	60-57-1	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ
PestPCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ
PestPCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0021 U	< 0.0056 UJ	< 0.0026 U	< 0.0026 U	0.007 J	< 0.0022 U	< 0.00064 UJ
PestPCBs	ENDRIN	72-20-8	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ
PestPCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	0.0072 J
PestPCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.21 J	0.13 J	0.18 J	0.17 J	0.014 J	0.037 J	< 0.00064 UJ
PestPCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	LINDANE	58-89-9	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ
PestPCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.011 U	< 0.0029 UJ	< 0.014 U	< 0.013 U	< 0.002 UJ	< 0.011 U	< 0.0033 UJ
PestPCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.4	1.2	1.3	1.3	0.079	0.22	0.23
PestPCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.021 U	< 0.0056 UJ	< 0.026 U	< 0.026 U	< 0.004 UJ	< 0.022 U	< 0.0064 UJ
PestPCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SED-01		FTA-SED-02			FTA-SED-03	
			Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014
			Sample Type Code	N	N	N	FD	N	N	N
			Sample ID	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5
			Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units							
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.38 U	0.0089 J	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 UJ
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.38 UJ	< 0.018 UJ	< 0.4 UJ	< 0.38 UJ	< 0.012 UJ	< 0.37 UJ	< 0.019 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	0.0066 J	< 0.088 U	< 0.08 U	0.006 J	< 0.06 U	< 0.074 U	< 0.095 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	0.02 J	< 0.088 U	< 0.08 U	0.02 J	< 0.06 U	< 0.074 U	< 0.095 U
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.94 U	UR	< 0.99 U	< 0.95 U	UR	< 0.91 U	UR
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.015 U	0.027 J	0.018 J	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.076 U	< 0.088 U	< 0.08 U	< 0.077 U	< 0.06 U	< 0.074 U	< 0.095 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	0.29	< 0.44 U	< 0.016 U	0.022 J	< 0.3 U	< 0.015 U	< 0.47 U
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.076 U	< 0.088 U	< 0.08 U	< 0.077 U	< 0.06 U	< 0.074 U	< 0.095 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.38 U	0.029 J	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	0.22
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	UR
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.15 U	< 0.18 U	< 0.16 U	< 0.15 U	< 0.12 U	< 0.15 U	UR
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.94 U	< 0.018 U	< 0.99 U	< 0.95 U	< 0.012 U	< 0.91 U	UR
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.94 U	< 1.1 UJ	< 0.99 U	< 0.95 U	< 0.74 UJ	< 0.91 U	< 1.2 UJ
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	1.5	0.071	0.024 J	0.042 J	0.0028 J	< 0.015 U	< 0.019 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.38 U		< 0.4 U	< 0.38 U		< 0.37 U	
SVOCs	ANTHRACENE	120-12-7	mg/kg	1.7	< 0.44 U	0.03 J	0.063 J	< 0.3 U	0.0087 J	< 0.47 U
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.38 U	< 0.44 UJ	< 0.4 U	< 0.38 U	< 0.3 UJ	< 0.37 U	< 0.47 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	3.6	0.22	0.1 J	0.18 J	0.018 J	0.028 J	0.014 J
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	2.4	0.16	0.085	0.14	0.015 J	0.027 J	0.014 J
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	3.2	0.25	0.11 J	0.23 J	0.023 J	< 0.042 U	0.024 J
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	1.2	< 0.44 U	0.045	0.064	< 0.3 U	0.017 J	< 0.47 U
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	1.4 J	< 0.44 U	0.043 J	0.057 J	< 0.3 U	0.014 J	< 0.47 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.35 U	0.6	< 0.26 U	< 0.31 U	< 0.3 U	< 0.49 U	0.48 J
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.38 UJ	< 0.088 U	< 0.4 UJ	< 0.38 UJ	< 0.06 U	< 0.37 UJ	< 0.095 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	UR
SVOCs	CARBAZOLE	86-74-8	mg/kg	1.2	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	CHRYSENE	218-01-9	mg/kg	3.2	0.27 J	0.1 J	0.17 J	< 0.3 U	0.03 J	< 0.47 U
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.51 J	< 0.44 U	0.018 J	0.026 J	< 0.3 U	0.0058 J	< 0.47 U
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	0.79	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	FLUORANTHENE	206-44-0	mg/kg	7.3	0.46 J	0.19 J	0.37 J	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	FLUORENE	86-73-7	mg/kg	1.3	< 0.44 U	0.027 J	0.046	< 0.3 U	< 0.015 U	< 0.47 U
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U
SVOCs	HPAH, TOTAL (b)	RA-63	mg/kg	30	2.0	0.99	1.7	0.074	0.25	0.073
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	2.4	0.15	0.086	0.12	0.018 J	< 0.031 U	0.021 J
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	LPAH, TOTAL (b)	RA-64	mg/kg	12	0.48	0.20	0.45	0.0028	0.045	< 0.47 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	0.57 J	0.022 J	< 0.016 U	0.0066 J	< 0.012 U	< 0.015 U	< 0.019 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.38 U	< 0.018 UJ	< 0.4 U	< 0.38 U	< 0.012 UJ	< 0.37 U	< 0.019 UJ
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U
SVOCs	PAH, TOTAL (b)	RA-3502	mg/kg	43	2.5	1.2	2.1	0.077	0.30	0.073
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	0.028 J	< 0.088 U	< 0.08 UJ	< 0.077 UJ	< 0.06 U	< 0.074 UJ	< 0.095 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	7	0.39 J	0.12 J	0.27 J	< 0.3 U	0.036	< 0.47 U
SVOCs	PHENOL	108-95-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U
SVOCs	PYRENE	129-00-0	mg/kg	5.1	0.46 J	0.21	0.33	< 0.3 U	0.13	< 0.47 U

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SED-01		FTA-SED-02			FTA-SED-03	
				Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014
				Sample Type Code	N	N	N	FD	N	N	N
				Sample ID	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units								
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	110 J	60 J	120	110	27 J	69	280 J
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 51 U		< 42 UJ	< 36 U		< 92 UJ	
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 51 U		< 42 UJ	< 36 U		< 92 UJ	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0028 U		< 0.0038 U	< 0.004 U		< 0.0068 U	
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.014 U	< 0.018 U	< 0.019 U	< 0.02 U	< 0.014 U	< 0.034 U	< 0.022 U
VOCs	ACETONE	67-64-1	mg/kg	< 0.043 U	< 0.06 U	0.27 J	0.12 J	0.026 J	0.2	0.23 J
VOCs	BENZENE	71-43-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 U
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0055 UJ	< 0.007 U	< 0.0075 UJ	< 0.008 UJ	< 0.0055 U	< 0.014 UJ	< 0.009 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	ETHYLBENZENE	100-41-4	mg/kg	0.00093 J	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 UJ
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	0.0016 J	< 0.0035 U	< 0.0038 UJ	0.0025 J	< 0.0028 U	< 0.0068 UJ	< 0.0045 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 UJ
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.014 U	< 0.018 U	< 0.019 U	< 0.02 U	< 0.014 U	< 0.034 U	< 0.022 U
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	STYRENE	100-42-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 UJ
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	TOLUENE	108-88-3	mg/kg	0.0032 J	0.0029 J	0.029 J	0.0087 J	< 0.0028 U	0.01 J	0.0032 J
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0055 UJ	< 0.007 U	< 0.0075 UJ	< 0.008 UJ	< 0.0055 U	< 0.014 UJ	< 0.009 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0082 U	< 0.01 U	< 0.011 U	< 0.012 U	< 0.0082 U	< 0.02 U	< 0.014 UJ
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 U

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

FD - Field duplicate.

ft - feet.

J - Estimated value.

HPAH - High molecular weight PAH.

LPAH - Low molecular weight PAH.

mg/kg - milligram per kilogram.

N - Normal sample.

PAH - Polycyclic Aromatic Hydrocarbon.

PCB - Polychlorinated Biphenyl.

SVOC - Semivolatile organic compound.

TPH - Total Petroleum Hydrocarbon.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

VPH - Volatile Petroleum Hydrocarbons.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SED-04		FTA-SED-05		FTA-SED-06		
			Sample Date	11/27/2012	6/21/2014	11/27/2012	6/20/2014	11/27/2012	6/19/2014	6/19/2014
			Sample Type Code	N	N	N	N	N	N	FD
			Sample ID	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D
			Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units							
Metals	ALUMINUM	7429-90-5	mg/kg	20400	12500 J	9660	7170 J	8650 J	10400 J	4970 J
Metals	ANTIMONY	7440-36-0	mg/kg	0.21	0.2	0.34	0.576 J	0.73 J	0.54 J	0.42 J
Metals	ARSENIC	7440-38-2	mg/kg	19	8.98 J	5.6	5.03 J	4.4 J	8.25 J	4.56 J
Metals	BARIUM	7440-39-3	mg/kg	62	41.5 J	53.5	82.6 J	89.1 J	96.6 J	56.2 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.77	0.433	0.32 J	0.266 J	0.26 J	0.4 J	0.2 J
Metals	CADMIUM	7440-43-9	mg/kg	0.22	0.208	0.33	0.582 J	0.59 J	0.529 J	0.379 J
Metals	CALCIUM	7440-70-2	mg/kg	4240	8520	14800	28500 J	33700 J	26400 J	17800 J
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	33.2	24.9 J	17.3	16.6 J	17.9 J	20.8 J	12.1 J
Metals	COBALT	7440-48-4	mg/kg	19	10.5 J	6.2	4.56 J	5.8 J	7.95 J	4.01 J
Metals	COPPER	7440-50-8	mg/kg	55.8	40.2	67.5	99.3 J	108 J	97.2 J	66.9 J
Metals	IRON	7439-89-6	mg/kg	25600	20400 J	14300	12000 J	13400 J	18300 J	10700 J
Metals	LEAD	7439-92-1	mg/kg	25.6	13.3	12.4	17.5 J	16.7 J	18 J	11.6 J
Metals	MAGNESIUM	7439-95-4	mg/kg	6870	5830 J	4510	3520 J	4700 J	4820 J	2370 J
Metals	MANGANESE	7439-96-5	mg/kg	714	439	373	421 J	500 J	775 J	473 J
Metals	MERCURY	7439-97-6	mg/kg	0.04 J	0.0864	0.08 J	0.213 J	0.32 J	0.206 J	0.125 J
Metals	NICKEL	7440-02-0	mg/kg	34.5	22.6 J	17.7	15.2 J	21.1 J	19.2 J	10.5 J
Metals	POTASSIUM	7440-09-7	mg/kg	1960	1030 J	888	1020 J	701 J	1280 J	722 J
Metals	SELENIUM	7782-49-2	mg/kg	0.7	< 0.56 U	0.69 J	< 1.31 U	1 J	< 1.19 U	< 1.04 U
Metals	SILVER	7440-22-4	mg/kg	0.16	0.353	0.81	2.34 J	1.6 J	1.5 J	1.11 J
Metals	SODIUM	7440-23-5	mg/kg	150	153 J	142 J	284 J	218 J	273 J	149 J
Metals	THALLIUM	7440-28-0	mg/kg	0.16	0.087 J	0.06 J	< 0.074 U	0.06 J	0.1 J	0.049 J
Metals	VANADIUM	7440-62-2	mg/kg	46.2	32.3	21.8	17.5 J	20.6 J	21.7 J	13.1 J
Metals	ZINC	7440-66-6	mg/kg	82	78.1	120	166 J	198 J	191 J	119 J
Other	PH	-9	SU	6.6		6.6 J		6.7 J		
Other	TOTAL ORGANIC CARBON	-28	mg/kg	88000		200000 J		440000 J		
Other	TOTAL SOLIDS	-29	PCT	51	47	36	20	24	22	27
PestPCBs	4,4-DDD	72-54-8	mg/kg	< 0.003 U	0.043 J	< 0.0046 U	0.026 J	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ
PestPCBs	4,4-DDE	72-55-9	mg/kg	< 0.003 U	0.0023 J	< 0.0046 U	< 0.0016 UJ	0.0018 J	< 0.0014 UJ	< 0.001 UJ
PestPCBs	4,4-DDT	50-29-3	mg/kg	< 0.003 U	0.043 J	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	0.031 J	< 0.001 UJ
PestPCBs	ALDRIN	309-00-2	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ
PestPCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ
PestPCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.0041 U	< 0.028 U	< 0.0098 UJ	< 0.038 UJ	< 0.0088 UJ	< 0.0069 UJ
PestPCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ
PestPCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ
PestPCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ
PestPCBs	AROCLOR-1260	11096-82-5	mg/kg	2.1	0.6 J	0.76	0.44 J	0.29 J	0.63 J	1.1 J
PestPCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ
PestPCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ
PestPCBs	BETA-BHC	319-85-7	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	DELTA-BHC	319-86-8	mg/kg	< 0.0016 UJ	< 0.00035 U	< 0.0024 UJ	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	DIELDRIN	60-57-1	mg/kg	< 0.003 U	< 0.00067 U	< 0.0046 U	0.0071 J	< 0.0063 UJ	0.01 J	0.0055 J
PestPCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.0016 U	0.00073 J	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.003 U	< 0.00067 U	< 0.0046 U	0.013 J	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ
PestPCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.003 U	< 0.00067 UJ	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	0.043 J	0.026 J
PestPCBs	ENDRIN	72-20-8	mg/kg	< 0.003 U	< 0.00067 U	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ
PestPCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.003 U	< 0.00067 U	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ
PestPCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.29 J	< 0.00067 U	0.088 J	0.061 J	< 0.0063 UJ	< 0.0014 UJ	0.055 J
PestPCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	LINDANE	58-89-9	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ
PestPCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0054 UJ
PestPCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	2.1	0.60	0.76	0.44	0.29	0.63	1.1
PestPCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.03 U	< 0.0067 U	< 0.046 U	< 0.016 UJ	< 0.063 UJ	< 0.014 UJ	< 0.01 UJ
PestPCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SED-04		FTA-SED-05		FTA-SED-06		
			Sample Date	11/27/2012	6/21/2014	11/27/2012	6/20/2014	11/27/2012	6/19/2014	6/19/2014
			Sample Type Code	N	N	N	N	N	N	FD
			Sample ID	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D
			Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units							
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	0.013 J	< 0.034 UJ
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	< 1 UJ	0.013 J	< 0.17 UJ
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.42 UJ	< 0.02 UJ	< 0.66 UJ	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.084 U	< 0.1 U	< 0.13 U	0.045 J	< 0.2 UJ	0.023 J	< 0.17 UJ
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.084 U	< 0.1 U	< 0.13 U	0.02 J	< 0.2 UJ	0.017 J	< 0.17 UJ
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 1 U	UR	< 1.6 U	UR	< 2.5 UJ	UR	UR
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	0.15	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.084 U	< 0.1 U	< 0.13 U	< 0.24 UJ	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	0.33	< 0.53 UJ	0.033 J	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.084 U	< 0.1 U	< 0.13 U	< 0.24 UJ	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.42 U	< 0.1 U	< 0.66 U	0.16 J	< 1 UJ	0.34 J	0.36 J
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.017 U	< 0.02 U	< 0.026 UJ	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.17 U	< 0.2 U	< 0.26 U	< 0.48 UJ	< 0.41 UJ	< 0.45 UJ	< 0.34 UJ
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	< 1 UJ	< 0.22 UJ	< 0.17 UJ
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 1 U	< 0.02 U	< 1.6 U	< 0.048 UJ	< 2.5 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	0.12	0.0092 J	0.11	0.033 J	0.027 J	0.19 J	0.013 J
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.42 U		< 0.66 U		< 1 UJ		
SVOCs	ANTHRACENE	120-12-7	mg/kg	0.1	< 0.53 UJ	0.14	< 1.2 UJ	0.037 J	< 1.1 UJ	< 0.9 UJ
SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.22	0.055	0.34	0.16 J	0.11 J	0.42 J	0.064 J
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	0.18	0.052	0.25	0.13 J	0.09 J	0.28 J	0.053 J
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.24	0.079	0.39	0.24 J	0.14 J	0.46 J	0.1 J
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	0.078	< 0.53 UJ	0.11	< 1.2 UJ	0.044 J	< 1.1 UJ	< 0.9 UJ
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	0.091 J	< 0.53 UJ	0.12 J	< 1.2 UJ	0.048 J	< 1.1 UJ	< 0.9 UJ
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.23 U	0.89 J	< 0.59 U	2.9 J	< 0.87 U	1.4 J	1.4 J
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.42 UJ	< 0.1 U	< 0.66 UJ	< 0.24 UJ	< 1 UJ	< 0.22 UJ	< 0.17 UJ
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	CHRYSENE	218-01-9	mg/kg	0.24	< 0.53 UJ	0.32	< 1.2 UJ	0.11 J	0.52 J	< 0.9 UJ
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.038	< 0.53 UJ	0.048 J	< 1.2 UJ	0.022 J	< 1.1 UJ	< 0.9 UJ
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	< 1 UJ	< 0.22 UJ	< 0.17 UJ
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	FLUORANTHENE	206-44-0	mg/kg	0.46 J	< 0.53 UJ	0.76 J	< 1.2 UJ	< 1 UJ	0.84 J	< 0.9 UJ
SVOCs	FLUORENE	86-73-7	mg/kg	0.15	< 0.53 UJ	0.097	< 1.2 UJ	0.026 J	< 1.1 UJ	< 0.9 UJ
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	0.015 J	< 0.034 UJ
SVOCs	HPAH, TOTAL (b)	RA-63	mg/kg	2.2	0.55	3.1	0.69	0.86	3.6	0.29
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.17	0.053	0.23	0.16 J	0.1 J	0.25 J	0.076 J
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	LPAH, TOTAL (b)	RA-64	mg/kg	1.3	0.0092	0.96	0.033	0.25	1.2	0.013
SVOCs	NAPHTHALENE	91-20-3	mg/kg	0.038	< 0.02 U	0.03 J	< 0.048 UJ	< 0.041 UJ	0.074 J	< 0.034 UJ
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ
SVOCs	PAH, TOTAL (b)	RA-3502	mg/kg	3.5	0.56	4.1	0.72	1.1	4.9	0.31
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.084 UJ	< 0.1 U	< 0.13 UJ	0.078 J	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ
SVOCs	PHENANTHRENE	85-01-8	mg/kg	0.57	< 0.53 UJ	0.55	< 1.2 UJ	0.16 J	0.98 J	< 0.9 UJ
SVOCs	PHENOL	108-95-2	mg/kg	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ
SVOCs	PYRENE	129-00-0	mg/kg	0.5	0.31 J	0.58	< 1.2 UJ	0.2 J	0.86 J	< 0.9 UJ

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-SED-04		FTA-SED-05		FTA-SED-06		
				Sample Date	11/27/2012	6/21/2014	11/27/2012	6/20/2014	11/27/2012	6/19/2014	6/19/2014
				Sample Type Code	N	N	N	N	N	N	FD
				Sample ID	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units								
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	380	52	130 J	< 67 UJ	210 J	430 J	140 J
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 70 U		< 140 UJ		< 220 UJ		
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	89 J		< 140 UJ		< 220 UJ		
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0052 U		< 0.0098 UJ		< 0.016 UJ		
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.026 U	< 0.021 UJ	< 0.049 UJ	< 0.071 UJ	< 0.082 UJ	< 0.064 UJ	< 0.061 UJ
VOCs	ACETONE	67-64-1	mg/kg	0.32	0.42 J	0.38 J	3 J	1.3 J	2.2 J	2 J
VOCs	BENZENE	71-43-2	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.01 U	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.01 UJ	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	ETHYLBENZENE	100-41-4	mg/kg	0.002 J	< 0.0042 UJ	0.011 J	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	0.0039 J	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.01 U	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	0.0028 J	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.026 U	< 0.021 UJ	< 0.049 UJ	< 0.071 UJ	< 0.082 UJ	< 0.064 UJ	< 0.061 UJ
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.013 UJ
VOCs	STYRENE	100-42-5	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	TOLUENE	108-88-3	mg/kg	0.024	0.012 J	0.047 J	0.31 J	0.14 J	0.14 J	0.12 J
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.01 UJ	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.016 U	< 0.013 UJ	< 0.029 UJ	< 0.043 UJ	< 0.05 UJ	< 0.038 UJ	< 0.037 UJ
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.01 U	< 0.0085 U	< 0.02 U	< 0.028 U	< 0.033 U	< 0.026 U	< 0.024 U

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

FD - Field duplicate.

ft - feet.

J - Estimated value.

HPAH - High molecular weight PAH.

LPAH - Low molecular weight PAH.

mg/kg - milligram per kilogram.

N - Normal sample.

PAH - Polycyclic Aromatic Hydrocarbon.

PCB - Polychlorinated Biphenyl.

SVOC - Semivolatile organic compound.

TPH - Total Petroleum Hydrocarbon.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

VPH - Volatile Petroleum Hydrocarbons.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summ
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples v
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting
limit within the sample is presented as a non-detect value. Calculated totals have a CA
beginning with "RA-".

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SED-07		FTA-SED-08	
			Sample Date	11/28/2012	6/19/2014	11/28/2012	6/19/2014
			Sample Type Code	N	N	N	N
			Sample ID	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
			Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units				
Metals	ALUMINUM	7429-90-5	mg/kg	16900	5880 J	9290	10500 J
Metals	ANTIMONY	7440-36-0	mg/kg	0.14 J	0.31 J	0.15 J	0.086 J
Metals	ARSENIC	7440-38-2	mg/kg	9.3	4.3 J	7.1	7.08 J
Metals	BARIUM	7440-39-3	mg/kg	55	31.7 J	25.8	18.6 J
Metals	BERYLLIUM	7440-41-7	mg/kg	0.84 J	0.832 J	0.4 J	0.24
Metals	CADMIUM	7440-43-9	mg/kg	0.55 J	0.673 J	0.17 J	0.0701 J
Metals	CALCIUM	7440-70-2	mg/kg	9380	13400 J	9870	2740
Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	33.7	23.8 J	11.3	14.7 J
Metals	COBALT	7440-48-4	mg/kg	7.5	3.56 J	3.6	3.73 J
Metals	COPPER	7440-50-8	mg/kg	22.8	18.6 J	9	5.59
Metals	IRON	7439-89-6	mg/kg	22300	9700 J	10300	12000 J
Metals	LEAD	7439-92-1	mg/kg	9.5	5.55 J	5.2	8
Metals	MAGNESIUM	7439-95-4	mg/kg	7580	2600 J	3480	2940 J
Metals	MANGANESE	7439-96-5	mg/kg	496	378 J	427	197
Metals	MERCURY	7439-97-6	mg/kg	0.07	0.134 J	0.07 J	0.039
Metals	NICKEL	7440-02-0	mg/kg	12.2	7.55 J	7.6	9.42 J
Metals	POTASSIUM	7440-09-7	mg/kg	2500 J	430 J	380 J	531 J
Metals	SELENIUM	7782-49-2	mg/kg	3.2	5.5 J	< 1.5 U	< 0.595 U
Metals	SILVER	7440-22-4	mg/kg	0.18	0.18 J	0.06 J	< 0.033 U
Metals	SODIUM	7440-23-5	mg/kg	159 J	103 J	77.3 J	71.4 J
Metals	THALLIUM	7440-28-0	mg/kg	0.19	0.077 J	0.06 J	0.0826
Metals	VANADIUM	7440-62-2	mg/kg	43.7	16.6 J	15.8	20.4
Metals	ZINC	7440-66-6	mg/kg	76.4	35 J	25.7	28.6
Other	PH	-9	SU	6.4		6	
Other	TOTAL ORGANIC CARBON	-28	mg/kg	160000		220000	
Other	TOTAL SOLIDS	-29	PCT	42	22	38	60
PestPCBs	4,4-DDD	72-54-8	mg/kg	0.0016 J	< 0.0015 UJ	0.0096	0.0023 J
PestPCBs	4,4-DDE	72-55-9	mg/kg	< 0.0036 U	0.0017 J	0.0061 J	0.0033 J
PestPCBs	4,4-DDT	50-29-3	mg/kg	< 0.0036 U	0.0065 J	0.0058 J	0.0031 J
PestPCBs	ALDRIN	309-00-2	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.019 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.019 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.023 U	< 0.009 UJ	< 0.026 U	< 0.003 UJ
PestPCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.019 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.019 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.019 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	AROCLOR-1260	11096-82-5	mg/kg	0.066	0.16 J	< 0.022 U	0.028 J
PestPCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.019 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.019 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	BETA-BHC	319-85-7	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	DELTA-BHC	319-86-8	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	DIELDRIN	60-57-1	mg/kg	< 0.0036 U	< 0.0015 UJ	< 0.0042 U	< 0.0005 UJ
PestPCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0036 U	< 0.0015 UJ	< 0.0042 U	< 0.0005 UJ
PestPCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0036 U	< 0.0015 UJ	< 0.0042 U	< 0.0005 UJ
PestPCBs	ENDRIN	72-20-8	mg/kg	< 0.0036 U	< 0.0015 UJ	< 0.0042 U	< 0.0005 UJ
PestPCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0036 U	< 0.0015 UJ	< 0.0042 U	< 0.0005 UJ
PestPCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.0036 U	0.022 J	< 0.0042 U	< 0.0005 UJ
PestPCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	LINDANE	58-89-9	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ
PestPCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.018 U	< 0.0077 UJ	< 0.022 U	< 0.0026 UJ
PestPCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.066	0.16	< 0.026 U	0.028
PestPCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.036 U	< 0.015 UJ	< 0.042 U	< 0.005 UJ
PestPCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0018 U	< 0.00077 UJ	< 0.0022 U	< 0.00026 UJ

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SED-07		FTA-SED-08	
			Sample Date	11/28/2012	6/19/2014	11/28/2012	6/19/2014
			Sample Type Code	N	N	N	N
			Sample ID	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
			Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units				
SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.59 U	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.59 U	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.59 U	< 0.21 UJ	< 0.59 U	< 0.079 U
SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.59 UJ	< 0.042 UJ	< 0.59 UJ	< 0.016 UJ
SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	0.011 J	< 0.21 UJ	< 0.12 U	< 0.079 U
SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 1.4 U	< 2.8 UJ	< 1.4 U	< 1 UJ
SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	0.0079 J	< 0.21 UJ	< 0.12 U	< 0.079 U
SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	0.0055 J	< 1.1 UJ	< 0.024 U	< 0.42 UJ
SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.024 U	< 1.1 UJ	< 0.024 U	< 0.42 UJ
SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 1.4 U	UR	< 1.4 U	UR
SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.024 U	< 0.042 UJ	< 0.024 U	< 0.016 U
SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.59 UJ	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.59 U	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.12 UJ	< 0.21 UJ	< 0.12 U	< 0.079 U
SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.024 U	< 1.1 UJ	0.072	< 0.42 UJ
SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.12 UJ	< 0.21 UJ	< 0.12 U	< 0.079 U
SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 1.4 U	< 2.8 UJ	< 1.4 U	< 1 UJ
SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.59 U	< 0.21 UJ	< 0.59 U	< 0.079 U
SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	UR	< 0.042 UJ	< 0.024 U	< 0.016 U
SVOCs	3-NITROANILINE	99-09-2	mg/kg	UR	< 2.8 UJ	< 1.4 U	< 1 UJ
SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	UR	< 0.42 UJ	< 0.24 U	< 0.16 U
SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	UR	< 0.21 UJ	< 0.59 U	< 0.079 U
SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.59 UJ	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 1.4 U	< 0.042 UJ	< 1.4 U	< 0.016 U
SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 1.4 UJ	< 2.8 UJ	< 1.4 UJ	< 1 UJ
SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.024 U	0.037 J	0.037 J	< 0.016 U
SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.024 UJ	< 1.1 UJ	< 0.024 U	< 0.42 UJ
SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.59 U		< 0.59 U	
SVOCs	ANTHRACENE	120-12-7	mg/kg	0.0049 J	< 1.1 UJ	0.0098 J	< 0.42 UJ
SVOCs	ATRAZINE	1912-24-9	mg/kg	0.0059 J	< 0.042 UJ	< 0.024 U	< 0.016 U
SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.024 U	0.073 J	< 0.024 U	0.0078 J
SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	0.011 J	0.049 J	< 0.024 U	0.0072 J
SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.024 U	0.083 J	< 0.024 U	0.013 J
SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.024 U	< 1.1 UJ	< 0.024 U	< 0.42 UJ
SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	0.011 J	< 1.1 UJ	< 0.024 U	< 0.42 UJ
SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.024 UJ	< 0.042 UJ	< 0.024 U	< 0.016 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.12 U	< 1.1 UJ	< 0.12 U	< 0.42 UJ
SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.59 UJ	0.059 J	< 0.59 UJ	< 0.079 U
SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.59 UJ	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	CHRYSENE	218-01-9	mg/kg	0.0045 J	< 1.1 UJ	< 0.024 U	< 0.42 UJ
SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.009 J	< 1.1 UJ	< 0.024 U	< 0.42 UJ
SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.59 UJ	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.59 UJ	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.59 UJ	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.59 U	0.11 J	< 0.59 U	< 0.079 U
SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	FLUORENE	86-73-7	mg/kg	< 0.024 U	< 1.1 UJ	0.06	< 0.42 UJ
SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.024 UJ	< 0.042 UJ	< 0.024 U	< 0.016 U
SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.59 U	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	UR	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.59 U	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	HPAH, TOTAL (b)	RA-63	mg/kg	0.036	0.26	< 0.59 U	0.040
SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.028 U	0.058 J	< 0.024 U	0.012 J
SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	LPAH, TOTAL (b)	RA-64	mg/kg	0.017	0.037	0.26	< 0.42 U
SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.024 U	< 0.042 UJ	0.014 J	< 0.016 U
SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.59 U	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.024 UJ	< 0.042 UJ	< 0.024 U	< 0.016 U
SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.59 UJ	< 0.042 UJ	< 0.59 U	< 0.016 U
SVOCs	PAH, TOTAL (b)	RA-3502	mg/kg	0.052	0.30	0.26	0.040
SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.12 U	< 0.21 UJ	< 0.12 U	< 0.079 U
SVOCs	PHENANTHRENE	85-01-8	mg/kg	0.012 J	< 1.1 UJ	0.068	< 0.42 UJ
SVOCs	PHENOL	108-95-2	mg/kg	< 0.59 U	< 1.1 UJ	< 0.59 U	< 0.42 UJ
SVOCs	PYRENE	129-00-0	mg/kg	< 0.024 U	< 1.1 UJ	< 0.024 U	< 0.42 UJ

TABLE B-4
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Location ID	FTA-SED-07		FTA-SED-08	
			Sample Date	11/28/2012	6/19/2014	11/28/2012	6/19/2014
			Sample Type Code	N	N	N	N
			Sample ID	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
			Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units				
TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	40 J	110 J	60	36 J
TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 130 UJ		< 140 UJ	
TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 130 UJ		< 140 UJ	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	0.006 J		< 0.011 UJ	
VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.052 U	< 0.082 UJ	< 0.054 UJ	< 0.018 UJ
VOCs	ACETONE	67-64-1	mg/kg	0.34	2.9 J	0.88 J	0.47 J
VOCs	BENZENE	71-43-2	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.021 U	< 0.033 UJ	< 0.022 UJ	< 0.007 UJ
VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.021 UJ	< 0.033 UJ	< 0.022 UJ	< 0.007 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	0.006 J	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.021 U	< 0.033 UJ	< 0.022 UJ	< 0.007 UJ
VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.052 U	< 0.082 UJ	< 0.054 UJ	< 0.018 UJ
VOCs	O-XYLENE	95-47-6	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	STYRENE	100-42-5	mg/kg	UR	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	TOLUENE	108-88-3	mg/kg	< 0.01 U	0.012 J	0.012 J	0.011 J
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.01 U	< 0.016 UJ	< 0.011 UJ	< 0.0035 UJ
VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.021 U	< 0.033 UJ	< 0.022 UJ	< 0.007 UJ
VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.032 U	< 0.05 UJ	< 0.032 UJ	< 0.01 UJ
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.021 U	< 0.033 U	< 0.022 U	< 0.007 U

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

FD - Field duplicate.

ft - feet.

J - Estimated value.

HPAH - High molecular weight PAH.

LPAH - Low molecular weight PAH.

mg/kg - milligram per kilogram.

N - Normal sample.

PAH - Polycyclic Aromatic Hydrocarbon.

PCB - Polychlorinated Biphenyl.

SVOC - Semivolatile organic compound.

TPH - Total Petroleum Hydrocarbon.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

VPH - Volatile Petroleum Hydrocarbons.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summ
detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples v
detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting
limit within the sample is presented as a non-detect value. Calculated totals have a CA
beginning with "RA-".

TABLE B-5
ANALYTICAL DATA SUMMARY TABLES - BACKGROUND SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	sys_loc_code	A-1	A-2	A-3	A-3_OFFSET	A-4 (c)	A-5	A-6	A-7	A-7_OFFSET	A-8	A-9	A-10	A-11 (c)	-11_OFFSET (c	A-12 (b)	C-1	C-1_OFFSET	C-2
	depth_interval	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft
Compound	Units																		
ALUMINUM	mg/kg	4030	7180	8090	10600	10300	11400	18500	5520	10000	19000	20100	11500	19700	13000	7880	15200	13800	24000
ARSENIC	mg/kg	2.4	4.4	4.5 NJ	4.1 NJ	5.3 NJ	4.8 NJ	5.2 NJ	6.2 NJ	7.7 NJ	4.4 NJ	8.7 NJ	3.2 NJ		6.7 NJ	4.9 NJJ	5 NJ	26.1 NJ	9.6 NJ
CADMIUM	mg/kg	0.14 J	0.07 UJ	0.12 J	0.1 J	0.12 J	0.12 J	0.12 J	0.04 UJ	0.08 J	0.11 J	0.21 J	0.05 UJ	0.11 J	0.23	0.13 J	0.05 J	0.06 J	0.11 J
CHROMIUM, TOTAL	mg/kg	6.7 J	10.6 J	11.7 J	15.3 J	17.1 J	11.7 J	32 J	10.3 J	16 J	13.8 J	27.4 J	19.5 J	19.3 J	21 J	11.55 J	18.1 J	26.2 J	27.9 J
COBALT	mg/kg	1.2	2.3	2.4	2.2	4.4	2.1	10.9	3	3	2.3	14.1	6.8	20.2	5.1	2.55	3	6.6	6.3
IRON	mg/kg	6840	17500	19900	22500	18800	13800	39500	14800	27900	29300	20800	20600	31900	26700	18550	15500	58600	28300
LEAD	mg/kg	29.5	18.4	19.9 NJ	12.8 NJ	18.7 NJ	11.9 NJ	15.1 NJ	9.1 NJ	12 NJ	27.6 NJ	19.5 NJ	9.8 NJ			29.55 NJJ	10.7 NJ	32.9 NJ	21.5 NJ
MANGANESE	mg/kg	54.8	109	220	101	132	71.8	448	114	204	121	479	241	540	543	227.5	129	349	237
MERCURY	mg/kg	0.05	0.09	0.08	0.1	0.09	0.15	0.08	0.06	0.08	0.2	0.2	0.04	0.1	0.27	0.145	0.04 U	0.06	0.1
SELENIUM	mg/kg	0.58	0.64	0.74	0.88	0.63	1.1	0.98	0.43	1.1	2.1	2.3	0.6	0.56	0.98	0.77	0.53	0.8	1.3
THALLIUM	mg/kg	0.07 UJ	0.08 UJ	0.09 UJ	0.1 UJ	0.1 UJ	0.08 UJ	0.08 UJ	0.04 UJ	0.08 UJ	0.12 UJ	0.22 U	0.1 UJ	0.09 UJ	0.09 UJ	0.07 UJ	0.1 U	0.1 UJ	0.17 U
VANADIUM	mg/kg	17.1	59.1	46.1	52	40.7	37.3	85.4	39.8	43.3	36.8	44.5	46.5	37.5	64.5	48.65	39.3	95.2	54
ZINC	mg/kg	20.4	16.2	26.6 NJ	19.7 NJ	24.7 NJ	19.4 NJ	42.1 NJ	14.4 NJ	23.5 NJ	20.2 NJ	45.6 NJ	34.7 NJ	65.3 NJ	88.8 NJ	26.8 NJJ	20.2 NJ	31.8 NJ	36.3 NJ
BENZO[A]ANTHRACENE	ug/kg	17 J	3.2 J	5.9 J	11 J		4.2 J	30 U	3.9 J	29 U	44 U	41 U	10 J	20 J	10 J	6.05 J	27 U	30 U	4.7 J
BENZO[A]PYRENE	ug/kg	35 J	27 U	29 U	31 UJ		34 U	30 U	26 U	29 U	44 U	41 U	27 U	38	30 U	17 J	27 U	30 U	6.2 J
BENZO[B]FLUORANTHENE	ug/kg	24 J	27 U	9.4 J	29 J		34 U	30 U	26 U	29 U	44 U	41 U	27 U	45	30 U	27 U	27 U	3.7 J	8.3 J
BENZO[K]FLUORANTHENE	ug/kg	24 J	27 U	9.8 J	14 J		34 U	30 U	26 U	29 U	44 U	41 U	27 U	30	30 U	27 U	27 U	30 U	7 J
DIBENZ[A,H]ANTHRACENE	ug/kg	47 U	27 U	29 U	31 UJ		34 U	30 U	26 U	29 U	44 U	41 U	27 U	29 U	30 U	27 U	27 U	30 U	35 UJ
INDENO[1,2,3-CD]PYRENE	ug/kg	24 J	27 U	11 J	18 J		34 U	30 UJ	26 UJ	29 U	44 UJ	41 UJ	27 UJ	34 J	15 J	5.15 J	27 U	30 U	35 UJ
HPAH, TOTAL (8270 Methods) (a)	ug/kg	271	38.9	61.8	179		16.4	30 U	10.1	29 U	44 U	3.2	13.7	357	89	78.85	27 U	12.1	55.1
LPAH, TOTAL (8270 Methods) (a)	ug/kg	28	16.78	2.3	20.9		34 U	30 U	26 U	29 U	44 U	41 U	27 U	45.9	12	10.55	27 U	30 U	6.3
TOTAL AROCLORS (a)	ug/kg																		
4,4-DDT	ug/kg																		
DIELDRIN	ug/kg																		
ENDOSULFAN I	ug/kg																		
ENDOSULFAN II	ug/kg																		
ENDOSULFAN SULFATE	ug/kg																		
ENDRIN	ug/kg																		
ENDRIN ALDEHYDE	ug/kg																		
ENDRIN KETONE	ug/kg																		
HEPTACHLOR EPOXIDE	ug/kg																		
METHOXYCHLOR	ug/kg																		

Notes:
ft - feet.
J - The analyte was detected in the sample at a concentration greater than the instrument detection limit but less than the laboratory practical quantitation limit.
N - Spiked sample recovery not within control limits.
U - The analyte was not detected in the sample at a level greater than the instrument detection limit.
UJ - The analyte was analyzed for but not detected; the sample detection limit is an estimate value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
PAH - Polycyclic aromatic hydrocarbon.
N - Not detected.
mg/kg - milligram per kilogram.
ug/kg - microgram per kilogram.
(a) Total concentrations were calculated per sample by summing only the detected individual compounds concentrations. For samples without any detections of individual compounds, the maximum reporting detection limit within the sample is presented as a non-detect value.
(b) Duplicate sample. Duplicate results were resolved as described in Appendix C.
(c) Background dataset excludes arsenic and lead from sample A-11, lead from sample A-11 offset, and PAHs from sample A-4.

TABLE B-5
ANALYTICAL DATA SUMMARY TABLES - BACKGROUND SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	sys_loc_code	C-3	C-3_OFFSET	C-4	C-4_OFFSET	C-5	C-5_OFFSET	C-6	C-7	C-8	C-8_OFFSET	C-9	C-10_R (b)	HFA-1	HFA-2	HFA-3	HFA-4	HFA-5	HFA-6
	depth_interval	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft
Compound	Units																		
ALUMINUM	mg/kg	17600	22600	23100	24400	6380	12900	18700	40200	28700	17900	3440	24050						
ARSENIC	mg/kg	8 NJ	16.4 NJ	11.9	11	2.2	7.3	18.9	15.8	5.4	12.1	0.58	11.3						
CADMIUM	mg/kg	0.1 J	0.07 J	0.06 EJ	0.08 EJ	0.14 EJ	0.04 EJ	0.04 EJ	0.09 EJ	0.13 EJ	0.09 EJ	0.03 EJ	0.05 EJJ						
CHROMIUM, TOTAL	mg/kg	20.3 NJ	35.5 NJ	31 NJ	30.7 NJ	8.2 NJ	16.7 NJ	27.8 NJ	49.2 NJ	45.1 NJ	35.3 NJ	2.1 NJ	29.5 NJJ						
COBALT	mg/kg	4.2	23.9	10.1	7.2	0.8 J	3.1	9.7	9	21.3	16.7	0.11 J	8.7						
IRON	mg/kg	24200	34600	32100	26900	2790	18300	38500	37400	20100	23800	392	29300						
LEAD	mg/kg	21.6 NJ	21.4 NJ	17.4	20.8	11.7	12.6	25.6	23.7	18.2	14.2	2.9	16.8						
MANGANESE	mg/kg	200	1110	374	309	27.9	143	560	225	368	1600	33.7	338.5						
MERCURY	mg/kg	0.1	0.04 U	0.08	0.09	0.11	0.04 U	0.07	0.13	0.14	0.04 U	0.05 U	0.08						
SELENIUM	mg/kg	0.96	0.68	0.82	1.2	0.48 J	0.54	1	1.2	0.8	0.77	0.19 U	1.25						
THALLIUM	mg/kg	0.11 U	0.14 U	0.17 U	0.19 U	0.1 UJ	0.13 U	0.14 U	0.25 U	0.29	0.11 UJ	0.08 UJ	0.14 U						
VANADIUM	mg/kg	40.6	52.3	47.4 NJ	49.6 NJ	9.4 NJ	43.9 NJ	73.4 NJ	73 NJ	34.1 NJ	46 NJ	6.8 NJ	51 NJJ						
ZINC	mg/kg	31.1 NJ	58.3 NJ	49.7 NJ	42.7 NJ	6.5 NJ	17.6 NJ	36.1 NJ	70.1 NJ	70.1 NJ	51.4 NJ	1.4 NJ	39.1 NJJ						
BENZO[A]ANTHRACENE	ug/kg	3.2 J	25 U	30 U	0.76 J	39 U	28 U	28 U	35 U	32 U	4.1 J	40 U	29.5 U						
BENZO[A]PYRENE	ug/kg	5.4 J	25 UJ	30 UJ	33 U	39 U	28 U	28 U	35 U	32 U	30 U	40 U	29.5 U						
BENZO[B]FLUORANTHENE	ug/kg	31 UJ	25 UJ	30 UJ	33 U	39 U	28 U	28 U	35 U	32 U	30 U	40 U	29.5 U						
BENZO[K]FLUORANTHENE	ug/kg	31 UJ	25 UJ	30 UJ	33 U	39 U	28 U	28 U	35 U	32 U	30 U	40 U	29.5 U						
DIBENZ[A,H]ANTHRACENE	ug/kg	31 UJ	25 UJ	30 UJ	33 U	39 U	28 U	28 U	35 U	32 U	30 U	40 U	29.5 U						
INDENO[1,2,3-CD]PYRENE	ug/kg	31 UJ	25 UJ	30 UJ	33 U	39 U	28 U	28 U	35 UJ	32 UJ	30 UJ	40 UJ	29.5 U						
HPAH, TOTAL (8270 Methods) (a)	ug/kg	26.2	25 U	3.7	1.66	5.8	28 U	2.9	35 U	32 U	30.4	40 U	7.8						
LPAH, TOTAL (8270 Methods) (a)	ug/kg	30 U	25 U	30 U	33 U	39 U	28 U	28 U	35 U	32 U	30 U	40 U	0.58						
TOTAL AROCLORS (a)	ug/kg													ND	ND	ND	ND	ND	ND
4,4-DDT	ug/kg													0.46 U	0.45 U	0.53 U	0.41 U	0.38 U	0.4 U
DIELDRIN	ug/kg													ND	ND	ND	ND	ND	ND
ENDOSULFAN I	ug/kg													ND	ND	ND	ND	ND	ND
ENDOSULFAN II	ug/kg													ND	ND	ND	ND	ND	ND
ENDOSULFAN SULFATE	ug/kg													ND	ND	ND	ND	ND	ND
ENDRIN	ug/kg													ND	ND	ND	ND	ND	ND
ENDRIN ALDEHYDE	ug/kg													ND	ND	ND	ND	ND	ND
ENDRIN KETONE	ug/kg													ND	ND	ND	ND	ND	ND
HEPTACHLOR EPOXIDE	ug/kg													ND	ND	ND	ND	ND	ND
METHOXYCHLOR	ug/kg													ND	ND	ND	ND	ND	ND

Notes:
ft - feet.
J - The analyte was detected in the sample at a concentration greater t
N - Spiked sample recovery not within control limits.
U - The analyte was not detected in the sample at a level greater than
UJ - The analyte was analyzed for but not detected; the sample detecti
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
PAH - Polycyclic aromatic hydrocarbon.
N - Not detected.
mg/kg - milligram per kilogram.
ug/kg - microgram per kilogram.
(a) Total concentrations were calculated per sample by summing only t
samples without any detections of individual compounds, the maximum
a non-detect value.
(b) Duplicate sample. Duplicate results were resolved as described in A
(c) Background dataset excludes arsenic and lead from sample A-11, le

TABLE B-5
ANALYTICAL DATA SUMMARY TABLES - BACKGROUND SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	sys_loc_code	HFA-7	HFA-8	HFA-9	HFA-10	HFA-11	HFA-12	HFA-13	HFA-14	HFA-15	HFA-16	HFA-17	HFA-18	HFA-19	HFA-20 (b)
	depth_interval	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft
Compound	Units														
ALUMINUM	mg/kg														
ARSENIC	mg/kg														
CADMIUM	mg/kg														
CHROMIUM, TOTAL	mg/kg														
COBALT	mg/kg														
IRON	mg/kg														
LEAD	mg/kg														
MANGANESE	mg/kg														
MERCURY	mg/kg														
SELENIUM	mg/kg														
THALLIUM	mg/kg														
VANADIUM	mg/kg														
ZINC	mg/kg														
BENZO[A]ANTHRACENE	ug/kg														
BENZO[A]PYRENE	ug/kg														
BENZO[B]FLUORANTHENE	ug/kg														
BENZO[K]FLUORANTHENE	ug/kg														
DIBENZ[A,H]ANTHRACENE	ug/kg														
INDENO[1,2,3-CD]PYRENE	ug/kg														
HPAH, TOTAL (8270 Methods) (a)	ug/kg														
LPAH, TOTAL (8270 Methods) (a)	ug/kg														
TOTAL AROCLORS (a)	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4-DDT	ug/kg	0.47 U	0.48 U	0.39 U	0.42 U	0.43 U	0.42 UJ	0.53 U	0.5 U	0.53 U	0.39 U	0.43 J	0.42 U	0.4 U	0.42 U
DIELDRIN	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDOSULFAN I	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDOSULFAN II	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDOSULFAN SULFATE	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDRIN	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDRIN ALDEHYDE	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ENDRIN KETONE	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
HEPTACHLOR EPOXIDE	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
METHOXYCHLOR	ug/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
ft - feet.
J - The analyte was detected in the sample at a concentration greater t
N - Spiked sample recovery not within control limits.
U - The analyte was not detected in the sample at a level greater than
UJ - The analyte was analyzed for but not detected; the sample detecti
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
PAH - Polycyclic aromatic hydrocarbon.
N - Not detected.
mg/kg - milligram per kilogram.
ug/kg - microgram per kilogram.
(a) Total concentrations were calculated per sample by summing only t
samples without any detections of individual compounds, the maximum
a non-detect value.
(b) Duplicate sample. Duplicate results were resolved as described in A
(c) Background dataset excludes arsenic and lead from sample A-11, le

TABLE B-6
ANALYTICAL DATA SUMMARY TABLES - BACKGROUND SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	sys_loc_code	SD-R04 (a)	SD-R05	SD-R06
	depth_interval	1 ft	0.5 - 1 ft	0.5 - 1 ft
Compound	Units			
ARSENIC	mg/kg	5.6	8.2	4.4
BARIUM	mg/kg	32.6	60.2	16.9
BERYLLIUM	mg/kg	0.59	0.64	0.29
CHROMIUM	mg/kg	26.5	3305	26.7
COBALT	mg/kg	5.4	9.1	7.6
COPPER	mg/kg		29.8	3.9 J
IRON	mg/kg	10800	20700	23900
MANGANESE	mg/kg	341	406	345
MERCURY	mg/kg	0.12	0.09	0.01 U
NICKEL	mg/kg	11.7	23.5	15.5
SELENIUM	mg/kg	2.7	0.75	0.9 J
SILVER	mg/kg	0.11 J	0.08 J	0.01 UJ
ZINC	mg/kg	61.7	69.6	38.1
BENZO[A]ANTHRACENE	ug/kg	20 U	11 J	7J
BENZO[A]PYRENE	ug/kg	20 U	19 U	18 U
DIBENZ[A,H]ANTHRACENE	ug/kg	4 J	19 U	18 U
INDENO[1,2,3-CD]PYRENE	ug/kg	20 U	6.8 J	18 U
PAH, TOTAL	ug/kg	19.8 J	78.9 J	7 J

Notes:
ft - feet.
J - Quantitation approximate.
U - Not detected.
PAH - Polycyclic aromatic hydrocarbon.
mg/kg - milligram per kilogram.
ug/kg - microgram per kilogram.
(a) Background dataset excludes copper from sample SD-R04.

TABLE B-7
ANALYTICAL DATA SUMMARY TABLES - BACKGROUND SURFACE WATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	sys_loc_code	SW-R04	SW-R05	SW-R06
	depth_interval	1 ft	0.5 - 1 ft	0.5 - 1 ft
Compound	Units			
TOTAL ALUMINUM	ug/L	16500	126000	34600
TOTAL BARIUM	ug/L	431	696	318
TOTAL CADMIUM	ug/L	0.51 J	4.9 J	0.94 J
TOTAL IRON	ug/L	178000	314000	48100
TOTAL MANGANESE	ug/L	4310	12300	7970
TOTAL SELENIUM	ug/L	4 UJ	11.2 J	4 UJ
TOTAL SILVER	ug/L	0.25 UJ	0.86 J	0.25 UJ
DISSOLVED BARIUM	ug/L	4.5	3.8	5.6
DISSOLVED IRON	ug/L	1180	1320	236
DISSOLVED MANGANESE	ug/L	333	186	441

Notes:
ft - feet.
J - Quantitation approximate.
U - Not detected.
ug/L - microgram per liter.

TABLE B-8
ANALYTICAL DATA SUMMARY TABLES - CHROMIUM SEDIMENT
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample ID Sample Date	FTA-SED-07-N-110216 11/2/2016
Test Category	Analytic Method	Compound	CAS	Units	
Metals	6020A	CHROMIUM, TOTAL	7440-47-3	mg/kg	17.2 J
Metals	7196A	CHROMIUM III	16065-83-1	mg/kg	17
Metals	7196A	CHROMIUM VI	18540-29-9	mg/kg	< 10 U
Solids	2540G	TOTAL SOLIDS	-29	%	11

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

J - Estimated value.

U - Not detected.

mg/kg - milligram per kilogram.

Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE B-9
ANALYTICAL DATA SUMMARY TABLES - CHROMIUM SOIL
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample ID	FTA-AREAA-02-SS-N-110216	FTA-AREAB-02-SS-D-110216	FTA-AREAB-02-SS-N-110216	FTA-SB-201-SS-N-110216	FTA-SB-203-SS-N-110216
				Sampe Date	11/2/2016	11/2/2016	11/2/2016	11/2/2016	11/2/2016
Test Category	Analytic Method	Compound	CAS	Units					
Metals	6020A	CHROMIUM, TOTAL	7440-47-3	mg/kg	23.2 J	29.8 J	23.6 J	18.7 J	24.7 J
Metals	7196A	CHROMIUM III	16065-83-1	mg/kg	23	30	24	R	25
Metals	7196A	CHROMIUM VI	18540-29-9	mg/kg	< 0.74 U	< 0.69 U	< 0.72 U	R	< 0.31 U
Solids	2540G	TOTAL SOLIDS	-29	%	80	86	83	24	90

				Sample ID	FTA-SB-204-SS-N-110216	FTA-SB-205-SS-N-110216	FTA-SB-208-SS-N-110216	FTA-SB-212-SS-N-110216	FTA-SB-214-SS-N-110216
				Sampe Date	11/2/2016	11/2/2016	11/2/2016	11/2/2016	11/1/2016
Test Category	Analytic Method	Compound	CAS	Units					
Metals	6020A	CHROMIUM, TOTAL	7440-47-3	mg/kg	20.8 J	22.0 J	23.4 J	29.0 J	19.5 J
Metals	7196A	CHROMIUM III	16065-83-1	mg/kg	21	22	23	29	20
Metals	7196A	CHROMIUM VI	18540-29-9	mg/kg	< 0.38 U	< 0.32 U	< 1.6 U	< 0.32 U	< 0.33 U
Solids	2540G	TOTAL SOLIDS	-29	%	78	90	75	90	88

				Sample ID	FTA-SB-215-SS-D-110216	FTA-SB-215-SS-N-110216	FTA-SB-220-SS-N-110216
				Sampe Date	11/2/2016	11/2/2016	11/2/2016
Test Category	Analytic Method	Compound	CAS	Units			
Metals	6020A	CHROMIUM, TOTAL	7440-47-3	mg/kg	32.9 J	23.6 J	24.0 J
Metals	7196A	CHROMIUM III	16065-83-1	mg/kg	33	24	24
Metals	7196A	CHROMIUM VI	18540-29-9	mg/kg	< 0.32 U	< 0.32 U	< 0.77 U
Solids	2540G	TOTAL SOLIDS	-29	%	89	89	78

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

J - Estimated value.

U - Not detected.

mg/kg - milligram per kilogram.

(a) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE B-10
ANALYTICAL DATA SUMMARY TABLES - CHROMIUM GROUNDWATER
SITE 1, FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample ID Sample Date	MW208-N-110216 11/2/2016
Test Category	Analytic Method	Compound	CAS	Units	
Metals	6020A	CHROMIUM, TOTAL	7440-47-3	ug/L	9.97
Metals	7196A	CHROMIUM III	16065-83-1	mg/L	0.0052 J
Metals	7196A	CHROMIUM VI	18540-29-9	mg/L	0.0048 J

Notes:

CAS - Chemical Abstracts Service.

J - Estimated value.

ug/L - Microgram per liter.

(a) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

Data Validation Report

Project:	Cutler FTA	
Laboratory:	Katahdin Laboratories	
Service Request:	Navy Clean	
Analyses/Method:	Lead by Inductively Coupled Plasma (ICP)/SW-846 6010C; MA-EPH; MA-VPH; PCBs SW8082; Volatiles by SW8260; Semivolatiles by SW8270 SIM	
Validation Level:	Limited	
AECOM Project Number:	60285299	
Prepared by:	Devon Chicoine/AECOM Technical Services, Inc.	Completed on: November 5, 2015
Reviewed by:		File Name: CutlerWE31-3_memo

SUMMARY

The samples listed as follows were collected by AECOM Technical Services, Inc. (AECOM) from Cutler, Maine (Cutler) Fire Training Area in September 2015.

Table of Samples Analyzed

SDG	Sample ID	Lab Sample ID	Matrix/Sample Type
S15145	FTA-TB-091515	SI7223-1	Trip Blank
S15145	FTA-MW-9-091515	SI7223-2	Ground Water
S15145	FTA-MW-1-091815	SI7375-001	Ground Water
S15145	FTA-MW-5-091815	SI7375-004	Ground Water
S15145	FTA-MW-218-091815	SI7375-006	Ground Water
S15145	FTA-MW-206-091815	SI7375-008	Ground Water
S15145	FTA-MW-206-091815-D	SI7375-010	Ground Water (Field Duplicate)
S15145	FTA-MW-210-092115	SI7420-002	Ground Water and MS/MSD
S15145	FTA-MW-12-092115	SI7420-004	Ground Water
S15145	FTA-MW-14-092115	SI7420-006	Ground Water
S15145	FTA-MW-10-092115	SI7420-008	Ground Water
S15145	FTA-MW-208-092115	SI7420-010	Ground Water
S15145	FTA-DP-35-092115	SI7420-012	Ground Water
S15145	FTA-MW-11-092115	SI7420-014	Ground Water
S15145	FTA-MW-14-092115-D	SI7420-016	Ground Water (Field Duplicate)
S15145	FTA-TB-092115	SI7420-1	Trip Blank

Notes:
ID – identification
SDG – sample delivery group

Quality control (QC) validation criteria were derived from the Tier I Sampling And Analysis Plan (SAP) Naval Computer and Telecommunications Area Master Station Atlantic Detachment Cutler, Maine, AECOM, Revision 0, June 2015; the *DoD Quality Systems Manual for Environmental Laboratories, Version 5.0* (July 2013); and USEPA publication: *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846*, (Final Update III, December 1996), specifically SW-846 methods 6010C and 7470 for mercury and SW-846 Methods 5035A/8000B. Validation actions were derived primarily from *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008) and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010* and AECOM professional judgment were also considered.

REVIEW ELEMENTS

The data were evaluated based on the following parameters (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC)/sample integrity
- ✓ Holding times and sample preservation
- ✓ Instrument tuning
- ✓ Initial calibration/continuing calibration verification (specific to methods 8330A
- ✓ Laboratory blanks/trip blanks (VOCs)/equipment blanks
- ✓ Surrogate spike recoveries (specific to methods 8330A)
- ✓ ICP Interference Check Sample (ICSA/ICSAB) (specific to method 6010C)
- ✓ Matrix spike (MS/matrix spike duplicate (MSD) results
- ✓ Laboratory duplicate results (specific to method 6010C)
- ✓ Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- ✓ Serial Dilution (specific to method 6010C)
- ✓ Field duplicates
- ✓ Internal Standards
- ✓ Sample results/reporting issues

Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

Based on the scope of the validation, the data are valid as reported and may be used for decision making purposes. Selected data points were estimated and/or negated due to nonconformances of certain QC criteria (see discussion below). No data were rejected as a result of data validation.

ORGANICS RESULTS

1.0 VOLATILES

1.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

1.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 14-day holding time for the preserved samples. The QC acceptance criteria were met.

1.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

1.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

Trace results for the following samples were blank-qualified as estimated and non-detected (UJ) at the reported concentrations due to sample results less than ten-times the concentrations reported in the associated method blanks: no analytes were detected in trip blanks or method blanks.

1.5 Surrogate Spike Recoveries

Sample FTA-MW-5-091815, FTA-MW-1-091815, and FTA-MW-14-092115-D had high recoveries of the surrogate dibromofluoromethane (SW8260 SIM) which exceeded the acceptance limit of 130%. Since a high recovery which indicated a high bias and there were no target analytes detected above the MDL, no qualification is necessary.

FTA-MW-14-092115, FTA-MW-10-092115, FTA-MW-208-092115, FTA-MW-12-092115, and FTA-DP-35-092115 had high recoveries of the surrogates 1,2-dichloroethane-d4 and dibromofluoromethane (SW8260) which exceeded the acceptance limit of 130%. Since a high recovery which indicated a high bias and there were no target analytes detected above the MDL, no qualification is necessary.

1.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria. MS and MSD %Rs were not applicable for samples when native concentrations exceeded 4x the spiked amount. Organic MS/MSD %Rs must both be outside of QC limits in order for organic results to be qualified based on matrix. If organic matrix effect was not confirmed (either MS or MSD was compliant), data did not require qualification. MS/MSD %Rs

from non-project samples were considered, but were not utilized to qualify project samples since matrix similarity to project samples could not be guaranteed.

Sample FTA-MW-210-092115 had high MS/MSD recoveries in isopropylbenzene; however, the LCS was acceptable. No qualification is necessary.

1.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met except for tetrachloroethene in samples FTA-MW-11-092115 and FTA-MW-14-092115-D. Samples were flagged J.

1.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

1.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

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SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-14-092115 (S17420-6)	FTA-MW-14-092115-D (S17420-16)	Qualifier	RPD Limit
WE31-3	8260	UG_L	Acetone	5	—	ND	2.3	UJ/J	35
WE31-3	8260	UG_L	Toluene	1	—	0.3	ND	UJ/J	35
SDG	**Method**	**Unit**	**Analyte**	**LOQ**	**RPD**	**FTA-MW-206-091815 (S17375-8)**	**FTA-MW-206-091815-D (S17375-10)**	**Qualifier**	**RPD Limit**
WE31-3	8260	UG_L	Cis-1,2-Dichloroethene	1	9.5	22	20	none	35
WE31-3	8260	UG_L	Trichloroethene	1	15	11	9.4	None	35
WE31-3	8260_SIM	UG_L	Vinyl chloride	0.1	—	0.056	ND	J/UJ	35

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2.0 MA VPH

2.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

2.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 28-day holding time for the preserved samples. The QC acceptance criteria were met.

2.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

2.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation

was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

2.5 Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

2.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria.

2.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

2.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for soil matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

2.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

ORGANICS RESULTS

3.0 SEMIVOLATILES

3.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

3.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 40-day holding time for the preserved samples. The QC acceptance criteria were met.

3.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

3.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and

above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

3.5 Surrogate Spike Recoveries

Samples FTA-MW-1-091815, FTA-MW-218-091815 had recoveries for two or more surrogates that were outside the acceptance criteria. The samples were re-extracted within hold time, analyzed, and had similar surrogate deviations. The first set of data was used.

3.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria except for 2-METHYLPHENOL and CAPROLACTAM (method SW8270) and 1,1'-BIPHENYL, 2-CHLOROPHENOL, 3,3'-DICHLOROBENZIDINE, BIS(2-ETHYLHEXYL) PHTHALATE, CRESOLS, M & P, DIBENZO(A,H)ANTHRACENE, INDENO(1,2,3-CD)PYRENE, and N-NITROSO-DI-N-PROPYLAMINE in sample FTA-MW-210-092115. These analytes were qualified J.

3.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met except for 2-methylphenol and caprolactam (method SW8270) in samples FTA-DP-35-092115, FTA-MW-10-092115, FTA-MW-1-091815, FTA-MW-12-092115, FTA-MW-14-092115, FTA-MW-14-092115-D, FTA-MW-206-091815, FTA-MW-206-091815-D, and FTA-MW-218-091815. All QC acceptance criteria were met except for 1,1'-biphenyl (method SW8270_SIM) in samples FTA-DP-35-092115, FTA-MW-10-092115, FTA-MW-1-091815, FTA-MW-12-092115, FTA-MW-14-092115, FTA-MW-14-092115-D, FTA-MW-206-091815, FTA-MW-206-091815-D, FTA-MW-218-091815, FTA-MW-5-091815, and FTA-MW-9-091515. Samples were flagged J.

3.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were

not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

3.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

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SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-206-091815 (S17375-8)	FTA-MW-206-091815-D (S17375-10)	Qualifier	RPD Limit
WE31-3	8270_SIM	UG_L	2-methylnaphthalene	0.19	—	ND	0.098	UJ/J	35
WE31-3	8270_SIM	UG_L	Hexachlorocyclopentadiene	0.19	—	0.089	ND	J/UJ	35

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4.0 MA EPH

4.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

4.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 40-day holding time for the preserved samples. The QC acceptance criteria were met.

4.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

4.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation

was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

4.5 Surrogate Spike Recoveries

Sample FTA-MW-14-092115, FTA-MW-14-092115-D, and FTA-DP-35-092115 had low recoveries for the extraction surrogate 5-alpha androstane. The samples were re-extracted within hold time with similar deviations confirming a matrix effect. The first set of data was used.

4.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria.

4.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

4.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

4.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance

with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

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5.0 POLYCHLORINATED BIPHENYLS

5.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

5.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 40-day holding time for the preserved samples. The QC acceptance criteria were met.

5.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

5.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation

was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

5.5 Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

5.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria.

5.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

5.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

5.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

INORGANIC RESULTS

6.0 METALS (6010C)

6.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

6.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria, preserved with HNO3 to pH <2. All the samples were analyzed within the 180-day holding time (28 days for Hg) for the preserved samples. The QC acceptance criteria were met.

6.3 ICP Performance Checks

The data were reviewed to ensure that the Inductively Coupled Plasma (ICP) tune was performed at the correct frequency and that the method acceptance criteria were met. The Percent Relative Standard Deviation (%RSD) of the absolute signal for all 6010C analytes in the tuning solution were < 5%. The QC acceptance criteria were met.

6.4 Laboratory Blanks/Equipment Blanks

Laboratory method blanks and equipment rinsate blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method and equipment rinsate results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were or if qualification of sample results was not required.

6.5 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within SAP specified

QC limits of 80-120% for metal analytes, or MS/MSD data met the following requirements, except calcium (FTA-MW-210-ground water092115); flagged J+.

6.6 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

6.7 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for groundwater matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted.

6.8 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

The post-digestion spiked sample recovery of lead in sample FTA-MW-210-092115 was not within control limits. The sample was flagged J+.

SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-14-092115 (S17420-6)	FTA-MW-14-092115-D (S17420-16)	Qualifier	RPD Limit
WE31-3	6010C	UG/L	Calcium, total	100	1.1	8810	8710	none	35
WE31-3	6010C	UG/L	Copper, total	3	111	6	1.7	J	35
WE31-3	6010C	UG/L	Iron, total	100	0.8	1230	1240	none	35
WE31-3	6010C	UG/L	Magnesium, total	100	0.3	2910	2900	none	35
WE31-3	6010C	UG/L	Manganese, total	5	2.3	86.5	88.5	none	35
WE31-3	6010C	UG/L	Potassium, total	1000	7.0	1050	979	none	35
WE31-3	6010C	UG/L	Sodium, total	100	4.1	7420	7120	none	35
WE31-3	6010C	UG/L	Calcium, dissolved	100	0.1	8910	8900	none	35
WE31-3	6010C	UG/L	Iron, dissolved	100	2.0	1490	1460	none	35
WE31-3	6010C	UG/L	Magnesium, dissolved	100	0.67	2980	2960	none	35
WE31-3	6010C	UG/L	Manganese, dissolved	5	5.4	81.0	85.5	none	35
WE31-3	6010C	UG/L	Nickel, dissolved	2	59	2.02	1.1	J	35
WE31-3	6010C	UG/L	Potassium, dissolved	1000	9.0	960	1050	none	35
WE31-3	6010C	UG/L	Sodium, total	100	1.3	7550	7450	none	35
SDG	**Method**	**Unit**	**Analyte**	**LOQ**	**RPD**	**FTA-MW-206-091815 (S17375-8)**	**FTA-MW-206-091815-D (S17375-10)**	**Qualifier**	**RPD Limit**
WE31-3	6010C	UG/L	Aluminum, total	300	—	ND	37	J/UJ	35
WE31-3	6010C	UG/L	Barium, total	5	40	9.35	6.24	J	35
WE31-3	6010C	UG/L	Calcium, total	100	3.3	44400	45900	none	35
WE31-3	6010C	UG/L	Magnesium, total	100	3.2	8640	8920	none	35
WE31-3	6010C	UG/L	Manganese, total	5	4.4	176	184	none	35
WE31-3	6010C	UG/L	Potassium, total	1000	5.2	1680	1770	none	35
WE31-3	6010C	UG/L	Sodium, total	100	2.8	8660	8910	none	35
WE31-3	6010C	UG/L	Barium, dissolved	5	4.0	6.32	6.58	none	35

SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-206-091815 (S17375-8)	FTA-MW-206-091815-D (S17375-10)	Qualifier	RPD Limit
WE31-3	6010C	UG/L	CALCIUM, DISSOLVED	100	3.5	46800	45200	none	35
WE31-3	6010C	UG/L	IRON, DISSOLVED	100	—	ND	6.4	UJ/J	35
WE31-3	6010C	UG/L	MAGNESIUM, DISSOLVED	100	2.0	9130	8950	none	35
WE31-3	6010C	UG/L	MANGANESE, DISSOLVED	5	1.6	185	188	none	35
WE31-3	6010C	UG/L	POTASSIUM, DISSOLVED	1000	0.54	1860	1850	none	35
WE31-3	6010C	UG/L	SODIUM, TOTAL	100	3.1	9160	8880	none	35
WE31-3	6010C	UG/L	VANADIUM, TOTAL	5	—	0.95	ND	J/UJ	35

7.0 PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT

7.1 Precision

Precision is the measure of variability between individual sample measurements. Field precision was determined by comparison of field duplicate sample results (where applicable). Laboratory precision was determined by examination of laboratory duplicate results. MS/MSD pairs measure both field and laboratory precision. Evaluation of duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. RPD limits referenced SAP published QC limits. Data that required qualification based calculated field duplicate RPDs, are discussed in **Section 1.0**. Overall field and laboratory precision is acceptable since majority of the data is unqualified and no data is rejected based on these measurements.

7.2 Accuracy

Field accuracy, a measure of the sampling bias, was determined by reviewing field blank and trip blank results for evidence of sample contamination stemming from sampling activities and/or sample transport/bottle contamination. Laboratory accuracy is a measure of the system bias, and was measured by evaluating laboratory control sample/laboratory control sample duplicate (LCS/LCSD), matrix spike/matrix spike duplicate (MS/MSD), and organic system monitoring compounds (surrogate) percent recoveries (%Rs). LCS/LCSD %Rs, which demonstrated the overall performance of the analytical procedure, were compared to published or recommended SAP QC limits. MS/MSD %Rs, which provided information on sample matrix interferences were compared to SAP published QC limits or laboratory control charted limits. System monitoring compound or surrogate recoveries, which measured system performance and efficiency during organic analysis, were compared to SAP published QC limits. Data that required qualification based on surrogate, matrix spike, or other outliers are discussed in **Section 1.0**. Overall field and laboratory accuracy is acceptable since majority of the data is unqualified and no data is rejected based on these measurements.

7.3 Compliance

For this sample set, method compliance was determined by evaluating sample integrity, preservation, holding time, laboratory blanks and calibration against method specified requirements, while applying EPA data validation guidelines. No data require qualification based on method compliance measurements and overall method compliance is acceptable based on the data reported.

7.4 Completeness

Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Completeness goals are set at 90-100%. Determination of completeness included a review of chain of custody records, laboratory analytical methods and detection limits,

laboratory case narratives and project requirements. Completeness also included 100% review of the laboratory sample data results and electronic data deliverables (EDDs).

All reported data was usable with qualification and the completeness of the data set was calculated to be within the set goal of 90% -100% and determined to be acceptable.

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

APPENDIX C

BACKGROUND EVALUATION

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TABLE OF CONTENTS

TABLES

ATTACHMENTS

1.0 INTRODUCTION

This appendix presents an evaluation of chemicals of potential concern (COPCs), identified based on the Ecological Risk Assessment (ERA) and/or the Human Health Risk Assessment (HHRA) for the Fire Training Area (Site 1) located at the Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det) in Cutler, Maine, in available background media samples. This background evaluation was conducted using the following guidance:

- Navy Guidance for Environmental Background Analysis, Volume I: Soil (Naval Facilities Engineering Command [NAVFAC], 2002)
- Navy Guidance for Environmental Background Analysis, Volume II: Sediment (NAVFAC, 2003)

The ERA and/or HHRA determined several COPCs that warrant an evaluation for consistency with background conditions. Surface soil, surface water, and surface sediment COPCs that may pose potential risk to plants, invertebrates, and/or wildlife are summarized in **Table 10** in the ERA. Surface soil, subsurface soil, groundwater, surface water, and surface sediment COPCs that may pose potential risk to human health receptors are shown in **Table 2.7** in the HHRA. The COPCs identified in **Table 10** in the ERA and **Table 2.7** in the HHRA were evaluated for consistency with background conditions with the exception of the following parameters that were not measured in background samples:

- Acetone, 1,1-biphenyl, bis(2-ethylhexylphthalate), carbazole, carbon disulfide, dibenzofuran, dichlorodifluoromethane, and methyl acetate in surface soil.
- Vinyl chloride in subsurface soil.
- COPCs in groundwater.
- Total polychlorinated biphenyls (PCB) (aroclors), benzo(b)fluoranthene, thallium, 4,4-dichlorodiphenyldichloroethane (DDD), 4,4-dichlorodiphenyldichloroethylene (DDE), 4,4-dichlorodiphenyltrichloroethane (DDT), dieldrin, endosulfan sulfate, endrin aldehyde, endrin ketone, 1,4-dioxane, 2,4-nitrotoluene, bis(2-ethylhexyl)phthalate, carbazole, dibenzofuran, acetone, cis-1,2-dichloroethene, methyl cyclohexane, and toluene in sediment.
- Total arsenic, total copper, total thallium, total PCB (aroclors), 1,2,4,5-tetrachlorobenzene, benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, bis(2-chloroethyl)ether, indeno(1,2,3-cd)pyrene, and toluene in surface water.

This document is organized as follows:

- Section 2.0 – A summary of the background data available that were included in this evaluation for each media type.
- Section 3.0 – For each media type, the methodology for comparing site to background is presented.
- Section 4.0 – The results of the background comparisons are presented for each media type and when applicable, each exposure area of the site.
- Section 5.0 – The conclusions of the background evaluation are presented.

2.0 SUMMARY OF BACKGROUND DATA

The following is a summary of the background soil, sediment, and surface water data that were used in this evaluation.

2.1 Soil

Background soils data (0-1 ft below ground surface [bgs]) collected as part of the Background Study for Remedial Investigations for Installation Restoration Sites at NCTAMS LANT Det in Cutler, Maine ("Background Study"; Battelle, 2005) were included in this evaluation. The Background Study included samples collected and analyzed for metals and polycyclic aromatic hydrocarbons (PAHs) at 15 locations in each of the two primary soil types (glacial till and glacio-marine sediments) and for PCBs (as aroclors), pesticides, and herbicides at 20 locations in the high frequency antenna area that are used to represent background conditions. Analytical methods used for the Background Study (Battelle, 2005) are consistent with those used for site soil. Analytical results for background soils are presented in **Appendix A** of the RI Report and summary statistics for the COPCs that were measured in background soils are presented in **Table 1**.

For metals except arsenic, copper, and lead, all background soils data were used. Per the Background Study (Battelle, 2005), the following arsenic, copper, and lead results were excluded:

- Arsenic results from location A-11
- Copper results from locations A-11 and A-11 Offset
- Lead results from locations A-11 and A-11 Offset

The Background Study (Battelle, 2005) concluded the metals concentrations in these samples were unusually high relative to other background samples and recommended the sample results should be excluded.

For PAHs, all background soils data were used except sample A-4. Per the Background Study (Battelle, 2005), several PAHs from sample A-4 were elevated compared to other samples and should be excluded. For PCBs, pesticides, and herbicides all background soils data were used.

Background soil data for PAHs and pesticides COPCs were compiled from the Background Study (Battelle, 2005) for use in the background evaluation. During data compilation duplicates were resolved as follows: 1) where both the sample and the duplicate are not detected, the resulting value is the average of the limits of detection; 2) where both the sample and the duplicate are detected, the resulting value is the average of the detected results; and 3) where one of the pair is reported as not detected and the other is detected, the detected concentration is used. PAHs from the Background Study were also summed to calculate total high molecular weight (HMW) and low molecular weight (LMW) PAHs as follows:

- For samples with at least one detect, only the detected results were summed to calculate the total concentration.
- Where a sample does not have any detections of individual chemicals, then the total concentration was considered a non-detect with a limit of detection equal to the maximum limit of detection of the individual chemicals.

2.2 Sediment

Sediment samples collected from within the top 0-1 ft bgs as part of the Salvage Yard Area remedial investigation were identified as background sediment samples. Background sediment samples SD-R04, SD-R05, and SD-R06 were included in this evaluation. Copper results from SD-R04 were not included per the June 2, 2014 letter from Tetra Tech to Maine Department of Environmental Protection (DEP) providing the final meeting notes from a conference call held on February 26, 2014 among Maine DEP, United States Environmental Protection Agency (USEPA), Tetra Tech, and the Navy in regard to appropriate selection of background sediment samples for the Very Low Frequency area of NCTAMS LANT Det. Analytical results for background sediments are presented in **Appendix A** of the RI Report and summary statistics for the COPCs that were measured in background sediment are presented in **Table 2**.

2.3 Surface Water

Background surface water samples SW-R04, SW-R05, and SW-R06 were collected as part of the Salvage Yard Area remedial investigation and were identified as background surface water samples for this evaluation. Analytical results for background surface water are presented in **Appendix A** of the RI Report and summary statistics for the COPCs that were measured in background surface water are presented in **Table 3**.

3.0 BACKGROUND EVALUATION METHODOLOGY

3.1 Soil

Both site surface soil, defined as 0-2 ft bgs, and site subsurface soil, defined as >2 ft bgs, were compared to the background soils data collected from 0-1 ft bgs. For surface soil, site concentrations of COPCs were compared to background concentrations using three separate site datasets. The first dataset includes site surface soil samples collected from Exposure Area 1, the second dataset includes site surface soil samples collected from Exposure Area 2, and the third dataset combines all site surface soil samples. Surface soil COPCs based on the HHRA are by exposure area, where as surface soil COPCs based on the ERA are site-wide.

For surface and subsurface soil, site and background data were compared using statistical techniques when adequate data were available, and using graphical comparisons for data sets with few samples or low frequency of detection. When either the background and site datasets had frequencies of detection less than 60%, consistency between site and background concentrations was evaluated only based on graphical comparisons. In cases where all background concentrations were not detected for a particular COPC, no evaluation was conducted.

Concentrations for all valid comparisons (i.e., there were detections in the background data) were first evaluated graphically (see **Attachments 1** to **6** for graphs of surface soil and **Attachments 7** to **10** for graphs of subsurface soil) with boxplots, histograms, and cumulative percentage plots. Boxplots and cumulative percentage plots were used to compare both concentrations and natural log transformed concentrations. Cumulative percentage plots were also used to compare detection limits in the site and background datasets. On the cumulative percentage plots detected concentrations are shown with a different symbol than non detected concentrations.

A statistical comparison between site and background surface soil data was then conducted using USEPA's ProUCL software, version 5.1.002 (USEPA, 2016a). Per the Navy Guidance for Environmental Background Analysis (NAVFAC, 2002 & NAVFAC, 2003) the t-test is only appropriate if less than 15% of measurements are below detection and the Gehan and WMW tests are only appropriate if no more than 40% of both the site and background dataset are non detects. As a result two-sample hypothesis tests were only run on concentrations if both background and site datasets had frequencies of detection greater than 60%.

A two-sample hypothesis test was conducted to compare the mean or median of site and background datasets. The null hypothesis (H_O) and alternative hypothesis (H_A) of this test are:

H_O = Mean/Median of Site Concentrations <= Background Concentrations

H_A = Mean/Median of Site Concentrations > Background Concentrations

The statistical tests selected for each COPC was determined by the distributions of the site and background soil datasets. Tests were conducted using untransformed data only; log- or other transformations were not considered in the statistical tests. This is consistent with the ProUCL Version 5.1.002 Technical Guidance (USEPA, 2016b) which recommends that a t-test not be used on log-transformed data sets on the basis that a t-test on log transformed datasets tests the equality of medians and not the equality of means. The normality of the distributions was determined using Goodness-of-Fit Statistics (Shapiro-Wilk test when available otherwise Lilliefors test, significance level 0.05, normal regression on order statistic estimates for non-detects) in ProUCL 5.1.002. If both datasets were all detected samples with normal distributions, then a t-test was selected. If either datasets were not normally distributed or both datasets were normally distributed, however, not all samples had detected concentrations, then the non-parametric Wilcoxon-Mann Whitney (WMW) or Gehan test was selected. The WMW test was selected in cases of datasets including all detected samples (with not normal distributions), or in cases of datasets with non-detected concentrations where the detection limits were equal. The Gehan test was selected in the case of datasets that included non-detected samples with unequal detection limits.

If the p-value of the two-sample hypothesis test was greater than alpha (0.05), then the null hypothesis was not rejected and it was concluded that site concentrations are less than or equal to background concentrations. If the p-value was less than alpha (0.05), then the null hypothesis was rejected and the alternative hypothesis was accepted: site concentrations are greater than background concentrations.

3.2 Sediment and Surface Water

For sediment and surface water, there were only three background samples available for each. At least 10 site and background samples are required to run a statistical comparison (USEPA, 2016b). As a result, site and background concentrations were evaluated graphically by showing a boxplot for site data adjacent to a stacked dotplot of background data (see **Attachment 11** for graphs of sediment and **Attachment 12** for graphs of surface water). Where all background concentrations were not detected, no graphical comparison was conducted.

4.0 BACKGROUND EVALUATION RESULTS

The following section presents the results of the background evaluation for each media type. The results of the statistical comparisons are presented in tabular form. The graphical comparisons are presented in **Attachments 1-12**. The ProUCL output is presented in **Attachment 13**.

4.1 Surface Soil – Exposure Area 1

Table 4 shows Exposure Area 1 site surface soil and background soil frequencies of detection along with the two-sample hypothesis test results and graphical comparisons are presented in **Attachments 1-2**. Frequencies of detection in **Table 4** show that total PCB (aroclors) were not

detected in background, but were a COPC in Exposure Area 1. Therefore, a comparison of site and background total PCB (aroclors) in surface soil was not conducted for Exposure Area 1.

4.1.1 Quantitative Evaluation of Surface Soil COPCs – Exposure Area 1

The two-sample hypothesis test results comparing site surface soil and background soil concentrations are presented in **Table 4** for the seven COPCs in Exposure Area 1 with adequate data to conduct quantitative comparisons:

- Aluminum, arsenic, total chromium, cobalt, iron, manganese, and vanadium.

The remaining two site surface soil COPCs that were measured in background samples had frequencies of detection less than 60% in site and/or background surface soil, and therefore, quantitative comparisons were not conducted for:

- Thallium and benzo(a)pyrene.

Based on the Shapiro-Wilk test, the distributions of site surface soil datasets are normal except cobalt, iron, and manganese. For background soil datasets four COPCs were normally distributed (aluminum, total chromium, iron, and vanadium). The remaining three COPCs were not normally distributed (arsenic, cobalt, and manganese) in background.

Datasets that included 100% frequency of detection (with not normal distributions) or where detection limits (> 60% detect) were equal were evaluated using the WMW test. Five COPCs were evaluated using the WMW test. The results of the WMW tests are as follows:

- Null hypothesis not rejected: site concentrations of arsenic, total chromium, and iron are less than or equal to background concentrations.
- Null hypothesis rejected: site concentrations of cobalt and manganese are greater than background concentrations.

Aluminum and vanadium concentrations were all detected with normal distributions in both the site and background datasets. As a result the t-test was run with the following results:

- Null hypothesis not rejected: site concentrations of aluminum and vanadium are less than or equal to background concentrations.

Attachment 1 includes graphs for the COPCs which were evaluated with two-sample hypothesis tests. The graphs of COPCs which were evaluated with two-sample hypothesis tests support the test results.

4.1.2 Qualitative Evaluation of Surface Soil COPCs – Exposure Area 1

Qualitative evaluations (i.e., graphical comparisons) were conducted for those COPCs in Exposure Area 1 with low frequency of detection. **Attachment 2** presents graphs for the following COPCs that had <60% frequency of detection:

- Thallium and benzo(a)pyrene.

The cumulative percentage plots of thallium show that background concentrations (red dots) were not detected except in one sample, while site concentrations (blue dots) were detected in all samples. The cumulative percentage plots also show that background detection limits are higher than detected site concentrations. Given the elevated detection limits in background samples, conclusions based on a qualitative evaluation cannot be drawn.

The cumulative percentage plots of benzo(a)pyrene show low frequencies of detection in site and background concentrations. The cumulative percentage plots also show that detection limits are higher in background concentrations than site concentrations.

4.2 Surface Soil – Exposure Area 2

Table 4 shows Exposure Area 2 site surface soil and background soil frequencies of detection along with the two-sample hypothesis test results and graphical comparisons are presented in **Attachments 3-4**. Frequencies of detection in **Table 4** show that the following five COPCs were not detected in background, but were detected in Exposure Area 2:

- Dieldrin, endrine ketone, heptachlor epoxide, total PCBs (aroclors), and dibenz(a,h)anthracene.

For these COPCs, no evaluations were conducted.

4.2.1 Quantitative Evaluation of Surface Soil COPCs – Exposure Area 2

The two-sample hypothesis test results comparing site surface soil and background soil concentrations are presented in **Table 4** for the seven COPCs in Exposure Area 2 with adequate data to conduct quantitative comparisons:

- Aluminum, arsenic, total chromium, cobalt, iron, manganese, and vanadium.

The remaining six site surface soil COPCs that were measured in background samples had frequencies of detection less than 60% in site and/or background surface soil, and therefore, quantitative comparisons were not conducted for:

- Thallium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and indeno(1,2,3-cd)pyrene.

Based on the Shapiro-Wilk test, the distributions of site surface soil datasets are normal. For background soil datasets four COPCs were normally distributed (aluminum, total chromium, iron, and vanadium). The remaining three COPCs were not normally distributed (arsenic, cobalt, and manganese) in background.

Datasets that included 100% frequency of detection (with not normal distributions) or where detection limits (> 60% detect) were equal were evaluated using the WMW test. Three COPCs were evaluated using the WMW test. The results of the WMW tests are as follows:

- Null hypothesis not rejected: site concentrations of arsenic are less than or equal to background concentrations.
- Null hypothesis rejected: site concentrations of cobalt and manganese are greater than background concentrations.

Datasets that were all detected samples with normal distributions in both the site and background datasets were evaluated using the t-test. Four COPCs were evaluated using the t-test. The results of the t-tests are as follows:

- Null hypothesis not rejected: site concentrations of aluminum, iron, and vanadium are less than or equal to background concentrations; and
- Null hypothesis rejected: site concentrations of total chromium are greater than background concentrations.

Attachment 3 includes graphs for the COPCs which were evaluated with two-sample hypothesis tests. The graphs of COPCs which were evaluated with two-sample hypothesis tests support the test results.

4.2.2 Qualitative Evaluation of Surface Soil COPCs – Exposure Area 2

Qualitative evaluations (i.e., graphical comparisons) were conducted for those COPCs in Exposure Area 2 with low frequency of detection. **Attachment 4** presents graphs for the following COPCs that had <60% frequency of detection:

- Thallium, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and indeno(1,2,3-cd)pyrene.

The cumulative percentage plots of thallium show that background concentrations (red dots) were not detected except in one sample, while site concentrations (blue dots) were detected in all but one sample. The cumulative percentage plots also show that background detection limits are higher than detected site concentrations. Given the elevated detection limits in background samples, conclusions based on a qualitative evaluation cannot be drawn.

The cumulative percentage plots of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene and indeno(1,2,3-cd)pyrene show low frequencies of detection in site and background concentrations. The cumulative percentage plots also show that detection limits are higher in background concentrations than site concentrations for these COPCs except benzo(k)fluoranthene. Detection limits are higher in site concentrations than background concentrations for benzo(k)fluoranthene.

The graphs of benzo(a)anthracene show low frequencies of detection in site and background concentrations. The range of site surface soil concentrations overlaps with background soil concentrations, but detected site surface soil concentrations are higher than detected background concentrations.

4.3 Surface Soil – Site-Wide

Table 4 shows site-wide surface soil and background soil frequencies of detection along with the two-sample hypothesis test results and graphical comparisons are presented in **Attachments 5-6**. Frequencies of detection in **Table 4** show that the following 10 COPCs were not detected in background, but were detected on site:

- Dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, endrin aldehyde, endrine ketone, heptachlor epoxide, methoxychlor, and total PCBs (aroclors).

For these COPCs no evaluations were conducted.

4.3.1 Quantitative Evaluation of Surface Soil COPCs – Site-Wide

The two-sample hypothesis test results comparing site surface soil and background soil concentrations are presented in **Table 4** for the 10 site-wide COPCs with adequate data to conduct quantitative comparisons:

- Cadmium, total chromium, cobalt, lead, manganese, mercury, selenium, vanadium, zinc, and total HMW PAHs.

The remaining two site surface soil COPCs that were measured in background samples had frequencies of detection less than 60% in site and/or background surface soil, and therefore, quantitative comparisons were not conducted for:

- 4,4-DDT and total LMW PAHs.

Based on the Shapiro-Wilk test, the distributions of site surface soil datasets are not normal except total chromium, vanadium, and zinc. For background soil datasets six COPCs were normally distributed (cadmium, total chromium, lead, mercury, vanadium, and zinc). The remaining four

COPCs were not normally distributed (cobalt, manganese, selenium, and total HMW PAHs) in background.

Datasets that included 100% frequency of detection (with not normal distributions) or where detection limits (> 60% detect) were equal were evaluated using the WMW test. Four COPCs were evaluated using the WMW test. The results of the WMW tests are as follows:

- Null hypothesis not rejected: site concentrations of lead are less than or equal to background concentrations.
- Null hypothesis rejected: site concentrations of total chromium, cobalt, and manganese are greater than background concentrations.

Datasets that included 100% frequency of detection with normal distributions in both the site and background datasets were evaluated using the t-test. Two COPCs were evaluated using the t-test. The results of the t-tests are as follows:

- Null hypothesis not rejected: site concentrations of vanadium are less than or equal to background concentrations; and
- Null hypothesis rejected: site concentrations of zinc are greater than background concentrations.

Datasets that included non-detected samples with unequal detection limits were evaluated using the Gehan test. Four COPCs were evaluated using the Gehan test. The results of the Gehan tests are as follows:

- Null hypothesis not rejected: site concentrations of cadmium, mercury, and selenium are less than or equal to background concentrations.
- Null hypothesis rejected: site concentrations of total HMW PAHs are greater than background concentrations.

Attachment 5 includes graphs for the COPCs which were evaluated with two-sample hypothesis tests. The graphs of COPCs which were evaluated with two-sample hypothesis tests support the test results.

4.3.2 Qualitative Evaluation of Surface Soil COPCs – Site-Wide

Qualitative evaluations (i.e., graphical comparisons) were conducted for those COPCs with low frequency of detection. **Attachment 6** presents graphs for the following COPCs that had <60% frequency of detection:

4,4-DDT and total LMW PAHs.

The cumulative percentage plots of 4,4-DDT show that background concentrations (red dots) were not detected except in one sample, while site concentrations (blue dots) were detected in ten samples. The cumulative percentage plots also show that detection limits are higher in site concentrations than background concentrations.

The cumulative percentage plots of total LMW PAH show low frequencies of detection in site and background concentrations. The cumulative percentage plots also show that detection limits are higher in site concentrations than background concentrations.

4.4 Subsurface Soil – Exposure Area 1

Table 5 shows Exposure Area 1 subsurface soil and background soil frequencies of detection along with the two-sample hypothesis test results and graphical comparisons are presented in **Attachments 7-8**.

4.4.1 Quantitative Evaluation of Subsurface Soil COPCs – Exposure Area 1

The two-sample hypothesis test results comparing site subsurface soil and background soil concentrations are presented in **Table 5** for the following seven COPCs in Exposure Area 1 with adequate data to conduct quantitative comparisons:

- Aluminum, arsenic, total chromium, cobalt, iron, manganese, and vanadium.

The remaining COPC that was measured in background samples, thallium, had a frequency of detection less than 60% in site and/or background subsurface soil, and therefore, quantitative comparisons were not conducted for thallium.

Based on the Shapiro-Wilk test, the distributions of site subsurface soil datasets are normal except manganese and vanadium. For background soil datasets four COPCs were normally distributed (aluminum, total chromium, iron, and vanadium). The remaining three COPCs were not normally distributed (arsenic, cobalt, and manganese) in background.

Datasets that included 100% frequency of detection (with not normal distributions) or where detection limits (> 60% detect) were equal were evaluated using the WMW test. Five COPCs were evaluated using the WMW test. The results of the WMW tests are as follows:

- Null hypothesis not rejected: site concentrations of arsenic and vanadium are less than or equal to background concentrations.
- Null hypothesis rejected: site concentrations of total chromium, cobalt, and manganese are greater than background concentrations.

Datasets that included 100% frequency of detection with normal distributions in both the site and background datasets were evaluated using the t-test. Two COPCs were evaluated using the t-test. The results of the t-tests are as follows:

- Null hypothesis not rejected: site concentrations of aluminum and iron are less than or equal to background concentrations.

Attachment 7 includes graphs for the COPCs which were evaluated with two-sample hypothesis tests. The graphs of COPCs which were evaluated with two-sample hypothesis tests support the test results.

4.4.2 Qualitative Evaluation of Subsurface Soil COPCs – Exposure Area 1

Qualitative evaluations (i.e., graphical comparisons) were conducted for those COPCs in Exposure Area 1 with low frequency of detection. **Attachment 8** presents graphs for the following COPC in Exposure Area 1 that had <60% frequency of detection:

- Thallium.

The cumulative percentage plots of thallium show that background concentrations (red dots) were not detected except in one sample, while site concentrations (blue dots) were detected in all but one sample. The cumulative percentage plots also show that background detection limits are higher than detected site concentrations. Given the elevated detection limits in background samples, conclusions based on a qualitative evaluation cannot be drawn.

4.5 Subsurface Soil – Exposure Area 2

Table 5 shows Exposure Area 2 subsurface soil and background soil frequencies of detection along with the two-sample hypothesis test results and graphical comparisons are presented in **Attachments 9-10**. Frequencies of detection in **Table 5** show that the following two COPCs were not detected in background, but were detected in Exposure Area 2:

- Total PCBs (aroclors) and dibenz(a,h)anthracene.

For these COPCs no evaluations were conducted.

4.5.1 Quantitative Evaluation of Subsurface Soil COPCs – Exposure Area 2

The two-sample hypothesis test results comparing site subsurface soil and background soil concentrations are presented in **Table 5** for the seven COPCs in Exposure Area 2 with adequate data to conduct quantitative comparisons:

- Aluminum, arsenic, total chromium, cobalt, iron, manganese, and vanadium.

The remaining two site subsurface soil COPCs that were measured in background samples had frequencies of detection less than 60% in site and/or background subsurface soil, and therefore, quantitative comparisons were not conducted for:

- Thallium and benzo(a)pyrene.

Based on the Shapiro-Wilk test, the distributions of site subsurface soil datasets are not normal. For background soil datasets four COPCs were normally distributed (aluminum, total chromium, iron, and vanadium). The remaining three COPCs were not normally distributed (arsenic, cobalt, and manganese) in background.

Datasets that included 100% frequency of detection (with not normal distributions) or where detection limits (> 60% detect) were equal were evaluated using the WMW test. All seven COPCs were evaluated using the WMW test. The results of the WMW tests are as follows:

- Null hypothesis not rejected: site concentrations of aluminum, iron, and vanadium are less than or equal to background concentrations.
- Null hypothesis rejected: site concentrations of arsenic, total chromium, cobalt, and manganese are greater than background concentrations.

Attachment 9 includes graphs for the COPCs which were evaluated with two-sample hypothesis tests. The graphs of COPCs which were evaluated with two-sample hypothesis tests support the test results.

4.5.2 Qualitative Evaluation of Subsurface Soil COPCs – Exposure Area 2

Qualitative evaluations (i.e., graphical comparisons) were conducted for those COPCs in Exposure Area 2 with low frequency of detection. **Attachment 10** presents graphs for the following COPCs in Exposure Area 2 that had <60% frequency of detection:

- Thallium and benzo(a)pyrene.

The cumulative percentage plots of thallium show that background concentrations (red dots) were not detected except in one sample, while site concentrations (blue dots) were detected in all but one sample. The cumulative percentage plots also show that the detection limits of non-detected background concentrations overlap detected site concentrations.

The cumulative percentage plots of benzo(a)pyrene show low frequencies of detection in site and background concentrations. The cumulative percentage plots also show that detection limits are higher in background concentrations than site concentrations.

4.6 Sediment

The background graphical comparisons for sediment are presented in **Attachment 11.** Combined stacked dots (presenting background concentrations) and boxplot (presenting site concentrations) graphs were prepared for inorganic COPCs, including arsenic, barium, beryllium, total chromium, cobalt, copper, iron, manganese, mercury, nickel, selenium, silver, and zinc, and organic COPCs including total PAHs, benzo(a)anthracene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. A graphical comparison for benzo(a)pyrene was not conducted given that background concentrations were not detected.

Inorganic COPCs were detected in all background samples with the exception of mercury and silver, which were detected in two out of the three samples. Maximum concentrations of arsenic, barium, beryllium, chromium, cobalt, iron, mercury, nickel, and selenium in background sediment samples fall in the same range as the 75^{th} to 90^{th} percentile of site sediment concentrations. Maximum concentrations of copper, manganese, and zinc in background sediment fall in the same range as the median of site sediment concentrations. Maximum background concentrations of silver fall between the 10^{th} and 25^{th} percentiles of site sediment concentrations.

For organic COPCs, only total PAHs was detected in all three background sediment samples; benzo(a)anthracene was detected in two out of three samples and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene were detected in one out of three samples. Maximum concentrations of total PAHs, benzo(a)anthracene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene in background sediment samples fall within the same range as the 10^{th} to 25^{th} percentile of site sediment concentrations.

4.7 Surface Water

The background graphical comparisons for surface water are presented in **Attachment 12.** Combined stacked dots (presenting background concentrations) and boxplot (presenting site concentrations) graphs were prepared for dissolved barium, total barium, dissolved iron, total iron, dissolved manganese, total manganese, total aluminum, total cadmium, and total selenium. Metals were detected in all three background surface water samples except selenium and silver, which were detected in one out of the three background samples. Total silver was only detected in three of 14 site surface water samples and therefore, a boxplot could not be used to summarize site concentrations. As a result both site and background concentrations for total silver were presented using stacked dots. Total mercury was identified as a COPC for the ecological risk assessment; however, a graph comparing site and background concentrations was not prepared because it was not detected in site surface water samples.

All concentrations of total aluminum, total barium, total iron, total manganese, and total selenium in background surface water samples fall above the range of site surface water concentrations. Maximum concentrations of total cadmium and total silver in background surface water samples fall

above the range of site surface water concentrations. Maximum concentrations of dissolved barium, dissolved iron, and dissolved manganese in background surface water fall in the same range as the 75th to 90th percentile, 90th percentile, and 50th to 75th percentile, respectively, of site surface water concentrations.

5.0 CONCLUSIONS

Several COPCs in surface soil, subsurface soil, sediment, and surface water were evaluated for consistency with background conditions. The results of the quantitative and qualitative comparisons of site and background datasets are provided below.

Surface Soil

The results of the evaluation were as follows for surface soil in Exposure Area 1:

Surface Soil – Exposure Area 1 COPC	**Quantitative Comparison Result**	**Qualitative Comparison Result**
Aluminum	Site ≤ Background	Site ≤ Background
Arsenic	Site ≤ Background	Site ≤ Background
Total Chromium	Site ≤ Background	Site ≤ Background
Cobalt	Site > Background	Site > Background
Iron	Site ≤ Background	Site ≤ Background
Manganese	Site > Background	Site > Background
Thallium	-	Conclusions Cannot Be Drawn
Vanadium	Site ≤ Background	Site ≤ Background
Benzo(a)pyrene	-	Higher Detection Limits in Background Data

The results of the evaluation were as follows for surface soil in Exposure Area 2:

Surface Soil – Exposure Area 2 COPC	**Quantitative Comparison Result**	**Qualitative Comparison Result**
Aluminum	Site ≤ Background	Site ≤ Background
Arsenic	Site ≤ Background	Site ≤ Background

Total Chromium	Site > Background	Site > Background
Cobalt	Site > Background	Site > Background
Iron	Site ≤ Background	Site ≤ Background
Manganese	Site > Background	Site > Background
Thallium	-	Conclusions Cannot Be Drawn
Vanadium	Site ≤ Background	Site ≤ Background
Benzo(a)anthracene	-	Site > Background
Benzo(a)pyrene	-	Higher Detection Limits in Background Data
Benzo(a)fluoranthene	-	Higher Detection Limits in Background Data
Benzo(k)fluoranthene	-	Higher Detection Limits in Site Data
Indeno (1,2,3-cd)pyrene	-	Higher Detection Limits in Background Data

The results of the evaluation were as follows for site-wide surface soil:

Surface Soil – Site-Wide COPC	**Quantitative Comparison Result**	**Qualitative Comparison Result**
Cadmium	Site ≤ Background	Site ≤ Background
Total Chromium	Site > Background	Site > Background
Cobalt	Site > Background	Site > Background
Lead	Site ≤ Background	Site ≤ Background
Manganese	Site > Background	Site > Background
Mercury	Site ≤ Background	Site ≤ Background
Selenium	Site ≤ Background	Site ≤ Background
Vanadium	Site ≤ Background	Site ≤ Background
Zinc	Site > Background	Site > Background
4,4-DDT	-	Higher Detection Limits in Site Data

Total HMW PAHs	Site > Background	Site > Background
Total LMW PAHs	-	Higher Detection Limits in Site Data

Subsurface Soil

The results of the evaluation for subsurface soil in Exposure Area 1 were as follows:

Subsurface Soil – Exposure Area 1 COPC	**Quantitative Comparison Result**	**Qualitative Comparison Result**
Aluminum	Site ≤ Background	Site ≤ Background
Arsenic	Site ≤ Background	Site ≤ Background
Total Chromium	Site > Background	Site > Background
Cobalt	Site > Background	Site > Background
Iron	Site ≤ Background	Site ≤ Background
Manganese	Site > Background	Site > Background
Thallium	-	Conclusions Cannot Be Drawn
Vanadium	Site ≤ Background	Site ≤ Background

The results of the evaluation for subsurface soil in Exposure Area 2 were as follows:

Subsurface Soil – Exposure Area 2 COPC	**Quantitative Comparison Result**	**Qualitative Comparison Result**
Aluminum	Site ≤ Background	Site ≤ Background
Arsenic	Site > Background	Site > Background
Total Chromium	Site > Background	Site > Background
Cobalt	Site > Background	Site > Background
Iron	Site ≤ Background	Site ≤ Background
Manganese	Site > Background	Site > Background

Thallium	-	Site and Background Overlap
Vanadium	Site $\leq$ Background	Site $\leq$ Background
Benzo(a)pyrene	-	Higher Detection Limits in Background Data

Sediment

The combined stacked dot/boxplots comparing background and site concentrations show that maximum concentrations in background fall near the 90th, 75th, or 50th percentile of site concentrations for inorganic COPCs except silver.

- The maximum concentration of silver in background sediment is less than the 25th percentile of site sediment concentrations.

Therefore, for all inorganic COPCs except silver, site sediment concentrations are less than or consistent with background.

Concentrations of total PAHs, benzo(a)anthracene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene in background sediment samples are less than the 25th percentile of site sediment concentrations. Therefore, site sediment concentrations of these COPCs are greater than background concentrations.

Surface Water

The combined stacked dot/boxplots comparing background and site surface water concentrations, respectively, show that all maximum concentrations in background fall above site concentrations for all COPCs except dissolved barium, dissolved iron, and dissolved manganese, which fall in the same range as the 75th to 90th percentile, 90th percentile, and 50th to 75th percentile, respectively, of site surface water concentrations. Therefore, site surface water concentrations of all COPCs are less than or consistent with background.

6.0 REFERENCES

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TABLES

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TABLE 1
SUMMARY STATISTICS FOR COPCS IN BACKGROUND SOIL (0-1 FT BGS)
REMEDIAL INVESTIGATION
FTA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	Unit	FOD	FOD Percent	Detected Concentrations		
				Minimum	Mean	Maximum
ALUMINUM	mg/kg	30:30	100%	3440	15659	40200
ARSENIC	mg/kg	29:29	100%	0.58	8.1	26.1
CADMIUM	mg/kg	27:30	90%	0.03	0.10	0.23
CHROMIUM, TOTAL	mg/kg	30:30	100%	2.1	21.6	49.2
COBALT	mg/kg	30:30	100%	0.11	7.1	23.9
IRON	mg/kg	30:30	100%	392	24006	58600
LEAD	mg/kg	28:28	100%	2.9	18.1	32.9
MANGANESE	mg/kg	30:30	100%	27.9	320	1600
MERCURY	mg/kg	25:30	83%	0.04	0.11	0.27
SELENIUM	mg/kg	29:30	97%	0.43	0.92	2.3
THALLIUM	mg/kg	1:30	3%	0.29	0.29	0.29
VANADIUM	mg/kg	30:30	100%	6.8	47.2	95.2
ZINC	mg/kg	30:30	100%	1.4	35.0	88.8
BENZO[A]ANTHRACENE	mg/kg	14:29	48%	0.00076	0.0075	0.020
BENZO[A]PYRENE	mg/kg	5:29	17%	0.0054	0.020	0.038
BENZO[B]FLUORANTHENE	mg/kg	6:29	21%	0.0037	0.020	0.045
BENZO[K]FLUORANTHENE	mg/kg	5:29	17%	0.0070	0.017	0.030
DIBENZ[A,H]ANTHRACENE	mg/kg	0:29	0%	-	-	-
INDENO[1,2,3-CD]PYRENE	mg/kg	6:29	21%	0.0052	0.018	0.034
TOTAL HMW PAHs	mg/kg	20:29	69%	0.0017	0.063	0.357
TOTAL LMW PAHs	mg/kg	9:29	31%	0.0006	0.016	0.0459
TOTAL PCB (AROCLORS)	mg/kg	0:20	0%	-	-	-
4,4'-DDT	mg/kg	1:20	5%	0.00043	0.00043	0.00043
DIELDRIN	mg/kg	0:20	0%	-	-	-
ENDOSULFAN I	mg/kg	0:20	0%	-	-	-
ENDOSULFAN II	mg/kg	0:20	0%	-	-	-
ENDOSULFAN SULFATE	mg/kg	0:20	0%	-	-	-
ENDRIN	mg/kg	0:20	0%			
ENDRIN ALDEHYDE	mg/kg	0:20	0%	-	-	-
ENDRIN KETONE	mg/kg	0:20	0%	-	-	-
HEPTACHLOR EPOXIDE	mg/kg	0:20	0%	-	-	-
METHOXYCHLOR	mg/kg	0:20	0%	-	-	-

Notes:
The calculation of the summary statistics is based on detected concentrations only.
Summary statistics exclude arsenic and lead from sample A-11, lead from sample A-11 offset, and PAHs from sample A-4.
Vinyl chloride is a COPC in subsurface soil in exposure area 1 based on the human health risk assessment, however, this COPC was not analyzed in the background study.
1,1-biphenyl, acetone, bis(2-ethylhexyl)phthalate, carbazole, carbon disulfide, dibenzofuran, dichlorodifluoromethane, and methyl acetate are COPCs in surface soil based on the ecological risk assessment, however, these COPCs were not analyzed in the background study.

COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
PAHs - Polycyclic Aromatic Hydrocarbons.

TABLE 2
SUMMARY STATISTICS FOR COPCS IN BACKGROUND SEDIMENT
REMEDIAL INVESTIGATION
FTA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	Unit	FOD	FOD Percent	Detected Concentrations		
				Minimum	Mean	Maximum
INORGANIC						
ARSENIC	mg/kg	3:3	100%	4.4	6.1	8.2
BARIUM	mg/kg	3:3	100%	16.9	36.6	60.2
BERYLLLIUM	mg/kg	3:3	100%	0.29	0.51	0.64
CHROMIUM, TOTAL	mg/kg	3:3	100%	26.5	28.9	33.5
COBALT	mg/kg	3:3	100%	5.4	7.4	9.1
COPPER	mg/kg	2:2	100%	3.9	16.9	29.8
IRON	mg/kg	3:3	100%	10800	18467	23900
MANGANESE	mg/kg	3:3	100%	341	364	406
MERCURY	mg/kg	2:3	67%	0.09	0.11	0.12
NICKEL	mg/kg	3:3	100%	11.7	16.9	23.5
SELENIUM	mg/kg	3:3	100%	0.75	1.5	2.7
SILVER	mg/kg	2:3	67%	0.08	0.095	0.11
ZINC	mg/kg	3:3	100%	38.1	56.5	69.6
ORGANIC						
BENZO(A)ANTHRACENE	mg/kg	2:3	67%	0.007	0.009	0.011
BENZO(A)PYRENE	mg/kg	0:3	0%	-	-	-
DIBENZO(A,H)ANTHRACENE	mg/kg	1:3	33%	0.004	0.004	0.004
INDENO(1,2,3-CD)PYRENE	mg/kg	1:3	33%	0.0068	0.0068	0.0068
TOTAL PAHs	mg/kg	3:3	100%	0.007	0.035	0.079

Notes:
The calculation of the summary statistics is based on detected concentrations only.
Summary statistics for all COPCs except copper are based on samples SD-R04, SD-R05, and SD-R06.
Summary statistics for copper are based on samples SD-R05 and SD-R06.
Thallium, total PCBs, 4,4-DDD, 4,4-DDE, 4,4-DDT, dieldrin, endosulfan sulfate, endrin aldehyde, endrin ketone, 1,4-dioxane, 2,4-dinitrotoluene, bis(2-ethylhexyl)phthalate, carbazole, dibenzofuran, acetone, cis-1,2-dicholorethene, methyl cyclohexane, and toluene are COPCs in sediment based on the ecological risk assessment, however, these COPCs were not analyzed in the background freshwater sediment samples.
Total PCBs and benzo(b)fluoranthene are COPCs in sediment based on the human health risk assessment, however, these COPCs were not analyzed in the background freshwater sediment samples.

COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
PAH - Polycyclic Aromatic Hydrocarbons.

TABLE 3
SUMMARY STATISTICS FOR COPCS IN BACKGROUND SURFACE WATER
REMEDIAL INVESTIGATION
FTA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	Fraction	Unit	FOD	FOD Percent	Detected Concentrations		
					Minimum	Mean	Maximum
ALUMINUM	TOTAL	ug/l	3:3	100%	16500	59033	126000
BARIUM	DISSOLVED	ug/l	3:3	100%	3.8	4.6	5.6
BARIUM	TOTAL	ug/l	3:3	100%	318	482	696
CADMIUM	TOTAL	ug/l	3:3	100%	0.51	2.1	4.9
IRON	DISSOLVED	ug/l	3:3	100%	236	912	1320
IRON	TOTAL	ug/l	3:3	100%	48100	180033	314000
MANGANESE	DISSOLVED	ug/l	3:3	100%	186	320	441
MANGANESE	TOTAL	ug/l	3:3	100%	4310	8193	12300
SELENIUM	TOTAL	ug/l	1:3	33%	11.2	11.2	11.2
SILVER	TOTAL	ug/l	1:3	33%	0.86	0.86	0.86

Notes:
The calculation of the summary statistics is based on detected concentrations only.
Total arsenic, total copper, total thallium, total PCBs (aroclors), benzo(a)anthracene, benzo(a)pyrene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, toluene, 1,2,4,5-tetrachlorobenzene, and bis(2-chloroethyl)ether are COPCs in surface water based on the ecological risk assessment and/or human health risk assessment, however, these COPCs were not analyzed in the background surface water samples.
Total mercury is a COPC in surface water based on the ecological risk assessment, however, this COPC was not detected in site surface water samples, and therefore was not included in the background evaluation.

COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
PCB - Polychlorinated Biphenyl.

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TABLE 4
COMPARISON OF SOIL CHEMICAL CONCENTRATIONS IN BACKGROUND (0-1 FT BGS) AND SITE SURFACE SOIL (0-2 FT BGS)
REMEDIAL INVESTIGATION
FTA, NCTAMS LANT DEL CUTLER
CUTLER, MAINE

		Site Surface Soil (0-2 FT BGS)				Background Soil (0-1 FT BGS)					Distribution (b)		Median of Detected Concentrations (mg/kg)		Two-Sample Hypothesis Test (c)			
Area	COPC	Number of detects	Total number of samples	FOD	Range of Detection Limits (mg/kg)	Number of detects	Total number of samples	FOD	Range of Detection Limits (mg/kg)	Run Tests (a)	Site	Background	Site	Background	Test	p-value	Reject Null Hypothesis ?	Is Site > Background
AREA 1	ALUMINUM	10	10	100%	-	30	30	100%	-	Y	Normal	Normal	13750	14500	t	0.946	No	No
	ARSENIC	10	10	100%	-	29	29	100%	-	Y	Normal	Not Normal	6.8	6.2	WMW	0.462	No	No
	CHROMIUM, TOTAL	14	15	93%	10.6 - 10.6	30	30	100%	-	Y	Normal	Normal	24.05	19.4	WMW	0.217	No	No
	COBALT	10	10	100%	-	30	30	100%	-	Y	Not Normal	Not Normal	10.95	4.75	WMW	0.004	Yes	Yes
	IRON	10	10	100%	-	30	30	100%	-	Y	Not Normal	Normal	19650	23150	WMW	0.927	No	No
	MANGANESE	10	10	100%	-	30	30	100%	-	Y	Not Normal	Not Normal	561.5	226.3	WMW	<0.001	Yes	Yes
	THALLIUM	10	10	100%	-	1	30	3%	0.04 - 0.25	N	-	-	-	-	-	-	-	-
	VANADIUM	10	10	100%	-	30	30	100%	-	Y	Normal	Normal	30.45	46.05	t	1	No	No
	TOTAL PCBs (AROCLORS)	6	10	60%	0.0097 - 0.012	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	BENZO(A)PYRENE	3	10	30%	0.01 - 0.066	5	29	17%	0.025 - 0.044	N	-	-	-	-	-	-	-	-
AREA 2	ALUMINUM	27	27	100%	-	30	30	100%	-	Y	Normal	Normal	13400	14500	t	0.885	No	No
	ARSENIC	27	27	100%	-	29	29	100%	-	Y	Normal	Not Normal	7.9	6.2	WMW	0.0976	No	No
	CHROMIUM, TOTAL	33	33	100%	-	30	30	100%	-	Y	Normal	Normal	27.7	19.4	t	0.003	Yes	Yes
	COBALT	27	27	100%	-	30	30	100%	-	Y	Normal	Not Normal	11.2	4.75	WMW	<0.001	Yes	Yes
	IRON	27	27	100%	-	30	30	100%	-	Y	Normal	Normal	22800	23150	t	0.656	No	No
	MANGANESE	27	27	100%	-	30	30	100%	-	Y	Normal	Not Normal	498	226.3	WMW	<0.001	Yes	Yes
	THALLIUM	27	27	100%	0.4 - 0.4	1	30	3%	0.04 - 0.25	N	-	-	-	-	-	-	-	-
	VANADIUM	27	27	100%	-	30	30	100%	-	Y	Normal	Normal	34.8	46.05	t	0.999	No	No
	DIELDRIN	11	27	41%	0.00032 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	ENDRIN KETONE	22	27	81%	0.0017 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	HEPTACHLOR EPOXIDE	3	27	11%	0.00014 - 0.495	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	TOTAL PCBs (AROCLORS)	97	83	117%	0.02 - 0.02	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	BENZO(A)ANTHRACENE	16	27	59%	0.0088 - 0.012	14	29	48%	0.025 - 0.044	N	-	-	-	-	-	-	-	-
	BENZO(A)PYRENE	12	27	44%	0.0088 - 0.012	5	29	17%	0.025 - 0.044	N	-	-	-	-	-	-	-	-
	BENZO(B)FLUORANTHENE	14	27	52%	0.0088 - 0.012	6	29	21%	0.025 - 0.044	N	-	-	-	-	-	-	-	-
	BENZO(K)FLUORANTHENE	1	27	4%	0.22 - 0.29	5	29	17%	0.025 - 0.044	N	-	-	-	-	-	-	-	-
	DIBENZ(A,H)ANTHRACENE	6	27	22%	0.0088 - 0.27	0	29	0%	0.025 - 0.047	N	-	-	-	-	-	-	-	-
	INDENO(1,2,3-CD)PYRENE	14	27	52%	0.0088 - 0.012	6	29	21%	0.025 - 0.044	N	-	-	-	-	-	-	-	-
SITE	CADMIUM	37	37	100%	-	27	30	90%	0.04 - 0.07	Y	Not Normal	Normal	0.0826	0.1	Gehan	0.49	No	No
	CHROMIUM, TOTAL	47	48	98%	10.6 - 10.6	30	30	100%	-	Y	Normal	Normal	26.7	19.4	WMW	0.0066	Yes	Yes
	COBALT	37	37	100%	-	30	30	100%	-	Y	Not Normal	Not Normal	11.2	4.75	WMW	<0.001	Yes	Yes
	LEAD	37	37	100%	-	28	28	100%	-	Y	Not Normal	Normal	11.2	18.3	WMW	1	No	No
	MANGANESE	37	37	100%	-	30	30	100%	-	Y	Not Normal	Not Normal	503	226.3	WMW	<0.001	Yes	Yes
	MERCURY	29	37	78%	0.014 - 0.018	25	30	83%	0.04 - 0.05	Y	Not Normal	Normal	0.01	0.09	Gehan	1	No	No
	SELENIUM	25	37	68%	0.21 - 4	29	30	97%	0.19 - 0.19	Y	Not Normal	Not Normal	0.23	0.8	Gehan	1	No	No
	VANADIUM	37	37	100%	-	30	30	100%	-	Y	Normal	Normal	33.7	46.05	t	1	No	No
	ZINC	37	37	100%	-	30	30	100%	-	Y	Normal	Normal	49	31.45	t	0	Yes	Yes
	4,4-DDT	10	30	33%	0.00033 - 0.935	1	20	5%	0.00038 - 0.00053	N	-	-	-	-	-	-	-	-
	DIELDRIN	11	30	37%	0.00032 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	ENDOSULFAN I	2	30	7%	0.00014 - 0.495	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	ENDOSULFAN II	2	30	7%	0.00027 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	ENDOSULFAN SULFATE	7	30	23%	0.00027 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	ENDRIN	5	30	17%	0.00027 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	ENDRIN ALDEHYDE	1	30	3%	0.0003 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	ENDRIN KETONE	25	30	83%	0.0017 - 0.935	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	HEPTACHLOR EPOXIDE	3	30	10%	0.00014 - 0.495	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	METHOXYCHLOR	6	30	20%	0.0014 - 4.95	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	TOTAL PCBs (AROCLORS)	103	107	96%	0.0097 - 0.02	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	TOTAL HMW PAHs	26	37	70%	0.22 - 0.29	20	29	69%	0.025 - 0.044	Y	Not Normal	Not Normal	0.063	0.0213	Gehan	0.0112	Yes	Yes
	TOTAL LMW PAHs	9	37	24%	0.22 - 1.6	9	29	31%	0.025 - 0.044	N	-	-	-	-	-	-	-	-

Notes:
(a) Two-sample hypothesis tests were only run on concentrations if both background and site datasets had frequencies of detect greater than 60%.
(b) The distribution of the Site and Background datasets were determined using Goodness of Fit Statistics (significance level 0.05) in ProUCL 5.1.
(c) A two-sample hypothesis test was conducted. An unequal variance t-test was used when both Site and Background datasets were all detected samples with normal distributions. If either datasets were not normally distributed or both datasets were normally distributed, however, not all samples had detected concentrations, then the WMW test or the Gehan test was used depending on if detection limits were equal for all non-detected samples (WMW) or if they were not equal (Gehan).
The null hypothesis is Mean/Median of Site Surface Soil <= Mean/Median of Background Soil. The alternative hypothesis is Mean/Median of Site Surface Soil > Mean/Median of Background Soil.
If the p-value of the two-sample hypothesis test is < alpha (0.05), then the null hypothesis is rejected.

COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
PAH - Polycyclic Aromatic Hydrocarbon.
WMW - Wilcoxon-Mann-Whitney test.

TABLE 5
COMPARISON OF SOIL CHEMICAL CONCENTRATIONS IN BACKGROUND (0-1 FT BGS) AND SITE SUBSURFACE SOIL (>2 FT BGS)
REMEDIAL INVESTIGATION
FTA, NCTAMS LANT DEL CUTLER
CUTLER, MAINE

		Site Subsurface Soil (>2 FT BGS)				Background Soil (0-1 FT BGS)					Distribution (b)		Median of Detected Concentrations (mg/kg)		Two-Sample Hypothesis Test (c)			
Area	COPC	Number of detects	Total number of samples	FOD	Range of Detection Limits (mg/kg)	Number of detects	Total number of samples	FOD	Range of Detection Limits (mg/kg)	Run Tests (a)	Site	Background	Site	Background	Test	p-value	Reject Null Hypothesis ?	Is Site > Background
AREA 1	ALUMINUM	11	11	100%	-	30	30	100%	-	Y	Normal	Normal	14400	14500	t	0.848	No	No
	ARSENIC	11	11	100%	-	29	29	100%	-	Y	Normal	Not Normal	8.0	6.2	WMW	0.238	No	No
	CHROMIUM, TOTAL	10	11	91%	18.9 - 18.9	30	30	100%	-	Y	Normal	Normal	31.35	19.4	WMW	0.0133	Yes	Yes
	COBALT	11	11	100%	-	30	30	100%	-	Y	Normal	Not Normal	10.6	4.75	WMW	0.0235	Yes	Yes
	IRON	11	11	100%	-	30	30	100%	-	Y	Normal	Normal	22500	23150	t	0.696	No	No
	MANGANESE	11	11	100%	-	30	30	100%	-	Y	Not Normal	Not Normal	521	226.3	WMW	<0.001	Yes	Yes
	THALLIUM	10	11	91%	0.05 - 0.05	1	30	3%	0.04 - 0.25	N	-	-	-	-	-	-	-	-
	VANADIUM	11	11	100%	-	30	30	100%	-	Y	Not Normal	Normal	38.1	46.05	WMW	0.998	No	No
AREA 2	ALUMINUM	43	43	100%	-	30	30	100%	-	Y	Not Normal	Normal	14300	14500	WMW	0.473	No	No
	ARSENIC	43	43	100%	-	29	29	100%	-	Y	Not Normal	Not Normal	9.2	6.2	WMW	0.00134	Yes	Yes
	CHROMIUM, TOTAL	43	43	100%	-	30	30	100%	-	Y	Not Normal	Normal	27.4	19.4	WMW	0.00102	Yes	Yes
	COBALT	43	43	100%	-	30	30	100%	-	Y	Not Normal	Not Normal	11.7	4.75	WMW	<0.001	Yes	Yes
	IRON	43	43	100%	-	30	30	100%	-	Y	Not Normal	Normal	25000	23150	WMW	0.121	No	No
	MANGANESE	43	43	100%	-	30	30	100%	-	Y	Not Normal	Not Normal	544	226.3	WMW	<0.001	Yes	Yes
	THALLIUM	42	43	98%	0.3 - 0.3	1	30	3%	0.04 - 0.25	N	-	-	-	-	-	-	-	-
	VANADIUM	43	43	100%	-	30	30	100%	-	Y	Not Normal	Normal	35.5	46.05	WMW	1	No	No
	TOTAL PCBs (AROCLORS)	63	106	59%	0.002 - 0.0215	0	20	0%	Not Available	N	-	-	-	-	-	-	-	-
	BENZO(A)PYRENE	3	42	7%	0.0085 - 0.016	5	29	17%	0.025 - 0.044	N	-	-	-	-	-	-	-	-
	DIBENZ(A,H)ANTHRACENE	3	42	7%	0.0085 - 0.3	0	29	0%	0.025 - 0.047	N	-	-	-	-	-	-	-	-

Notes:
(a) Two-sample hypothesis tests were only run on concentrations if both background and site datasets had frequencies of detect greater than 60%.
(b) The distribution of the Site and Background datasets were determined using Goodness of Fit Statistics (significance level 0.05) in ProUCL 5.1.
(c) A two-sample hypothesis test was conducted. An unequal variance t-test was used when both Site and Background datasets were all detected samples with normal distributions. If either datasets were not normally distributed or both datasets were normally distributed, however, not all samples had detected concentrations, then the WMW test or the Gehan test was used depending on if detection limits were equal for all non-detected samples (WMW) or if they were not equal (Gehan).
The null hypothesis is Mean/Median of Site Subsurface Soil <= Mean/Median of Background Soil. The alternative hypothesis is Mean/Median of Site Subsurface Soil > Mean/Median of Background Soil.
If the p-value of the two-sample hypothesis test is < alpha (0.05), then the null hypothesis is rejected.

COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
WMW - Wilcoxon-Mann-Whitney test.

ATTACHMENT 1

GRAPHICAL COMPARISONS OF SITE SURFACE SOIL-EXPOSURE AREA 1 AND BACKGROUND SOILS FOR COPCS EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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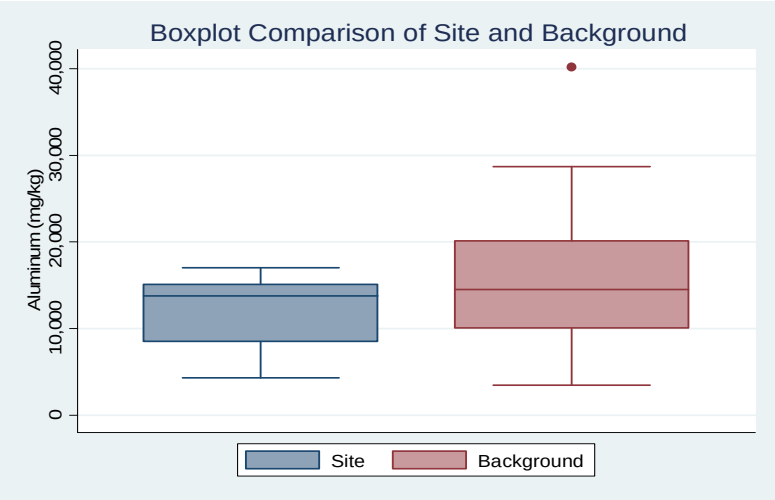
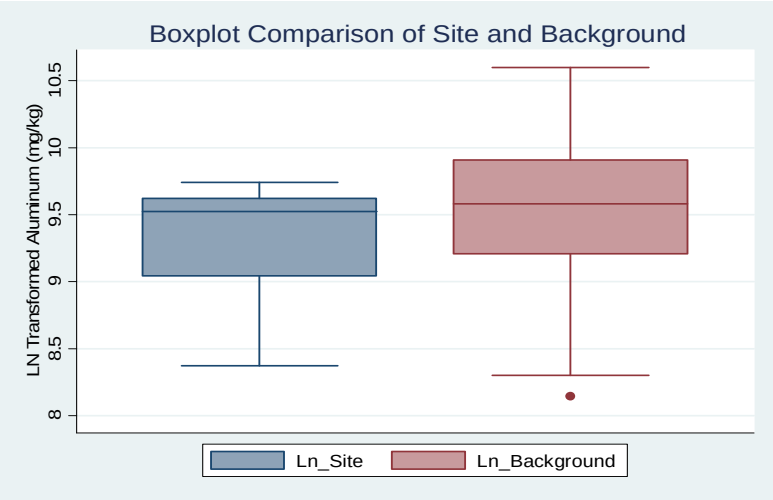
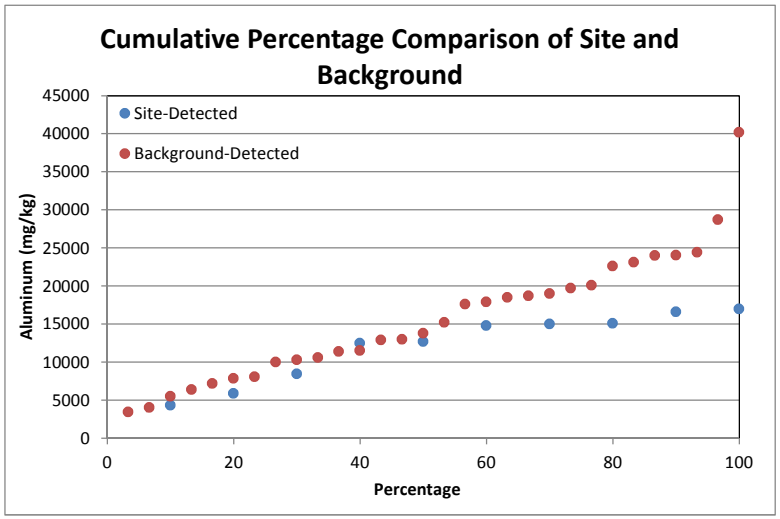
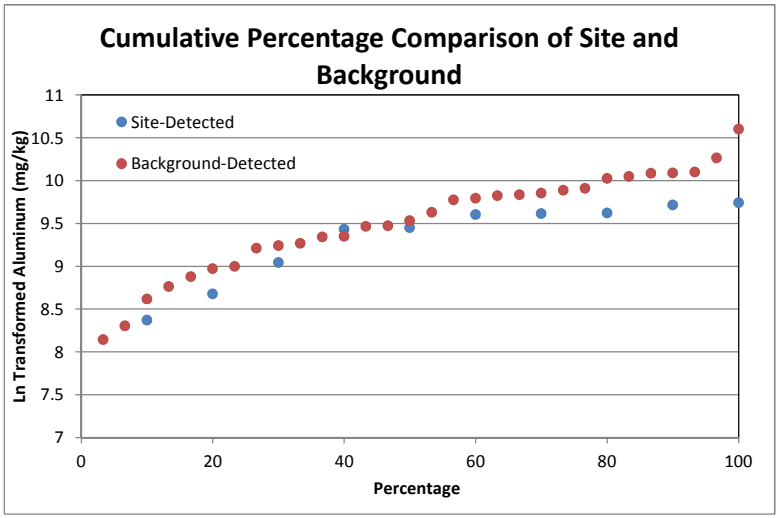
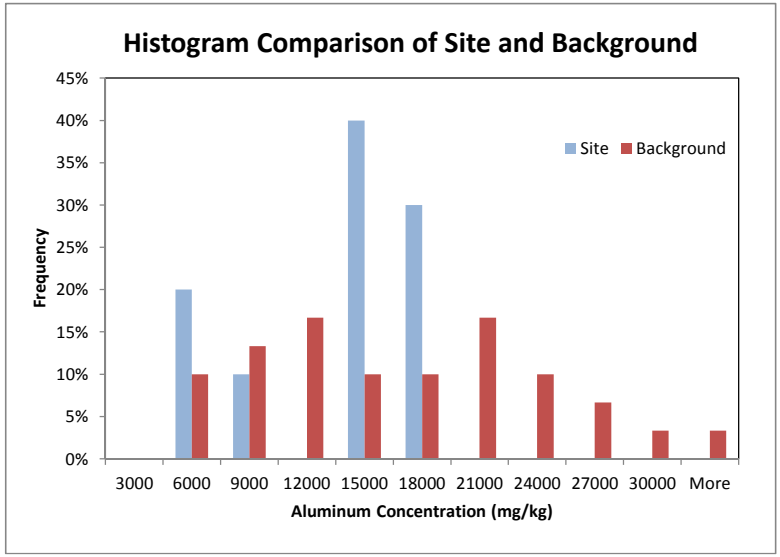
Surface Soil Exposure Area 1 - Aluminum



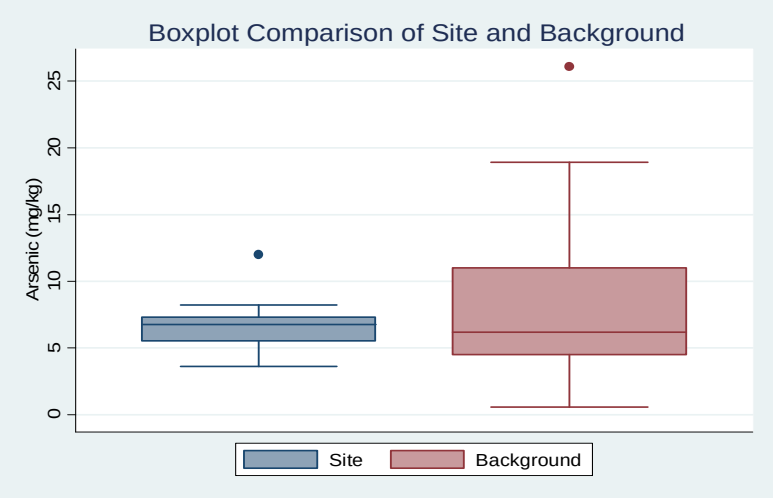


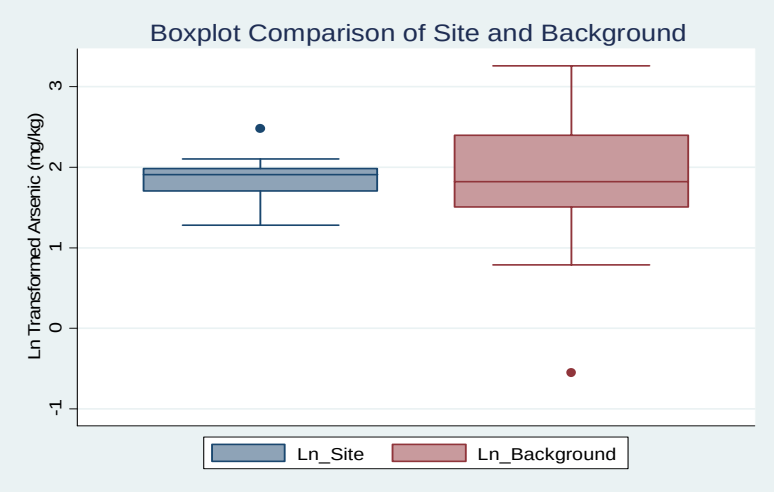


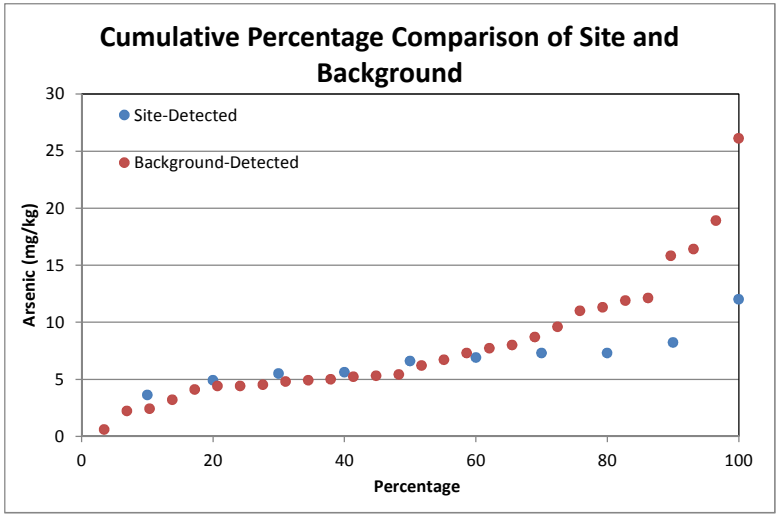


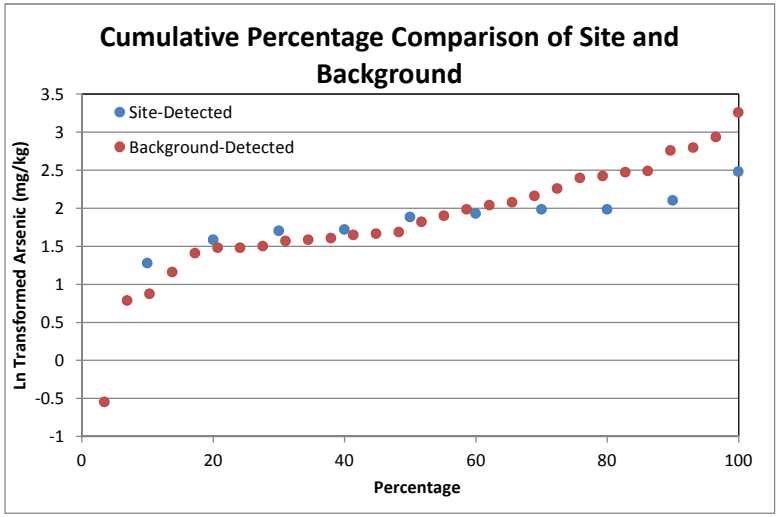

Histogram Comparison of Site and Background
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
3000
6000
9000
12000
15000
18000
21000
24000
27000
30000
More
Aluminum Concentration (mg/kg)

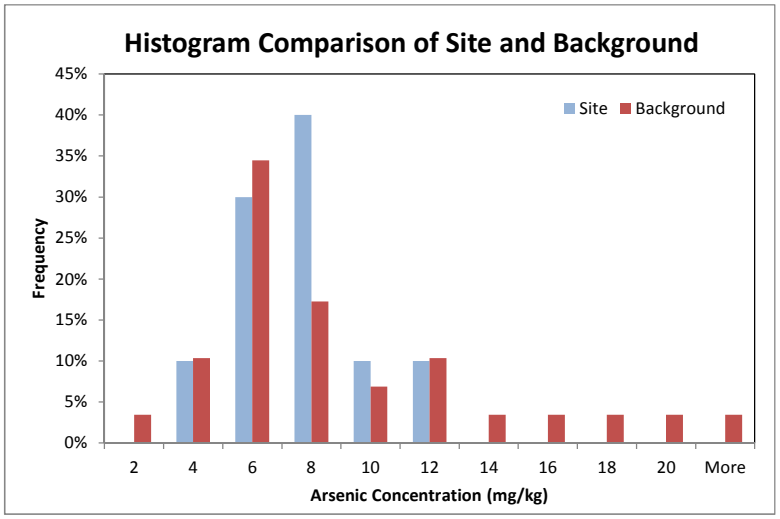
Surface Soil Exposure Area 1 - Arsenic



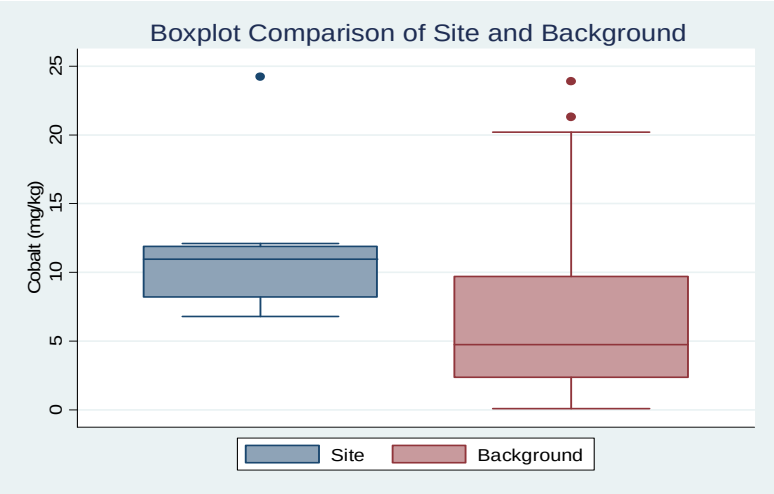


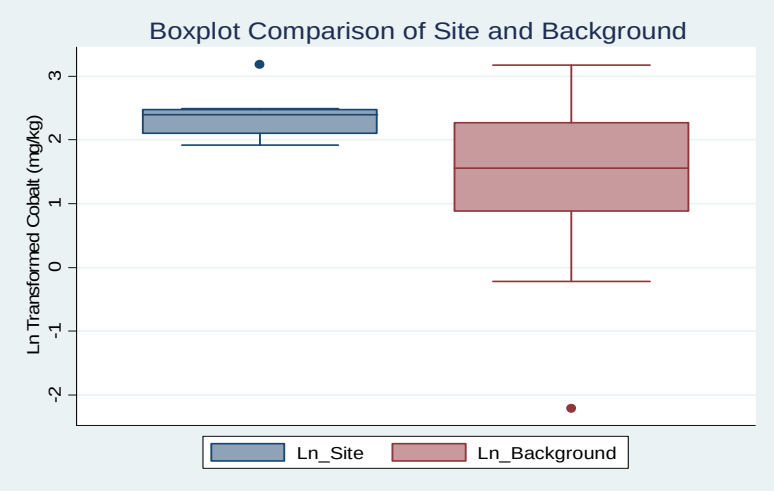


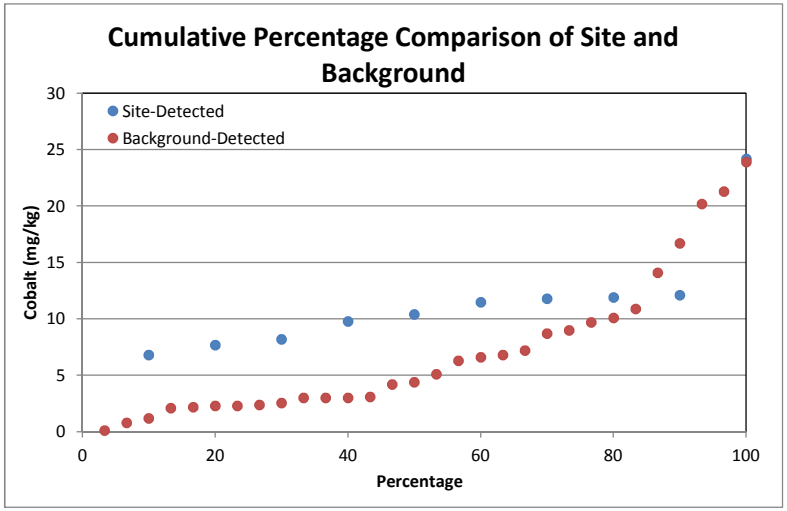


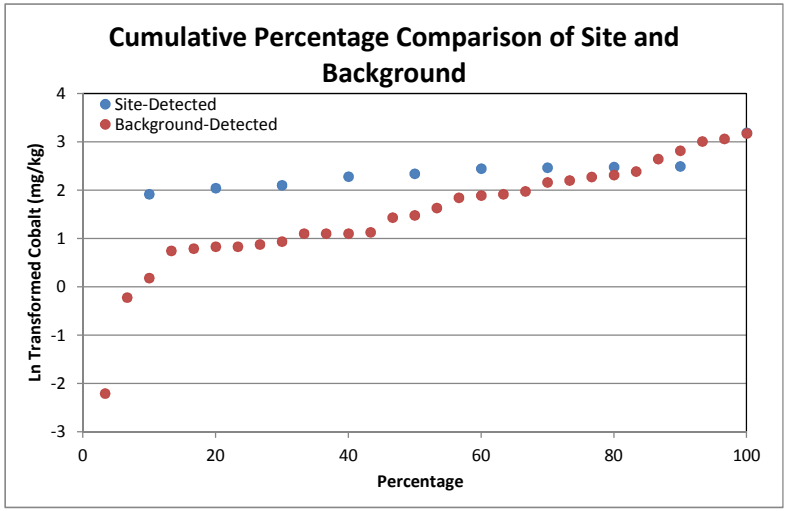

Histogram Comparison of Site and Background
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2
4
6
8
10
12
14
16
18
20
More
Arsenic Concentration (mg/kg)

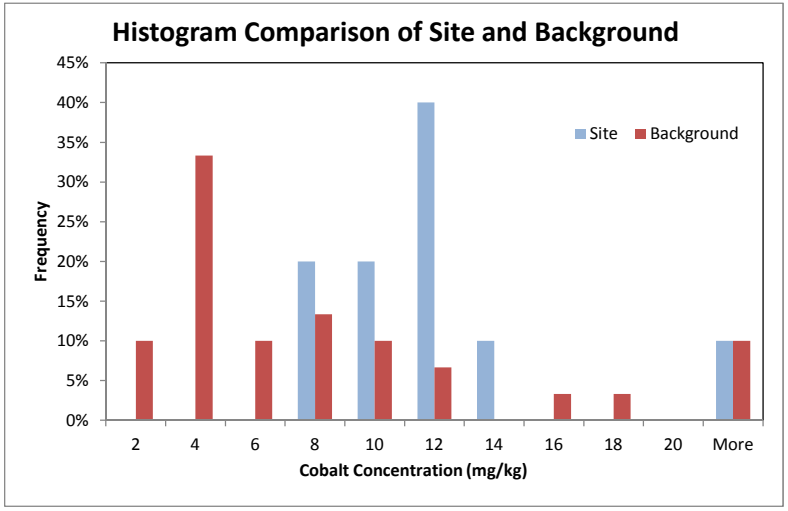
Surface Soil Exposure Area 1 - Cobalt



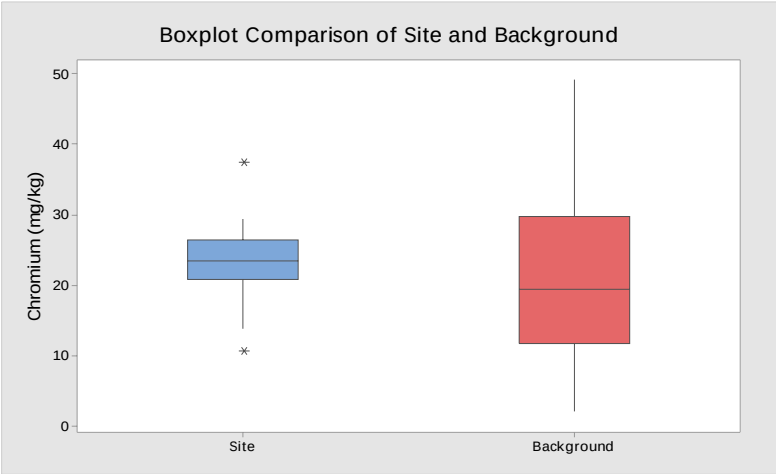


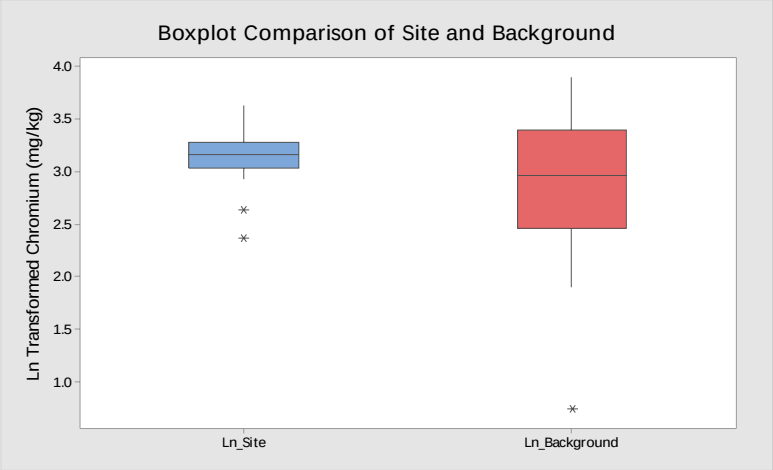


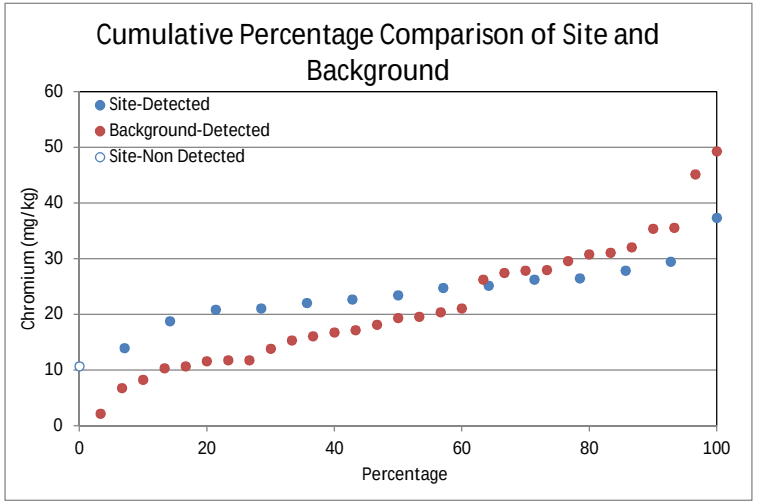


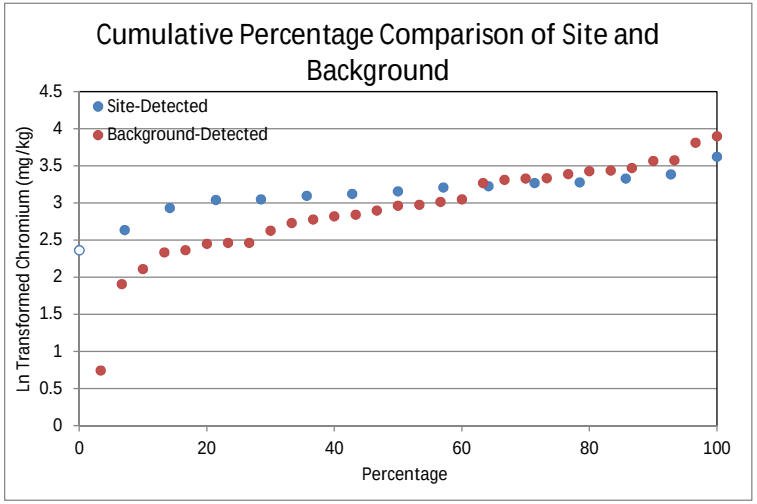

Histogram Comparison of Site and Background
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2
4
6
8
10
12
14
16
18
20
More
Cobalt Concentration (mg/kg)

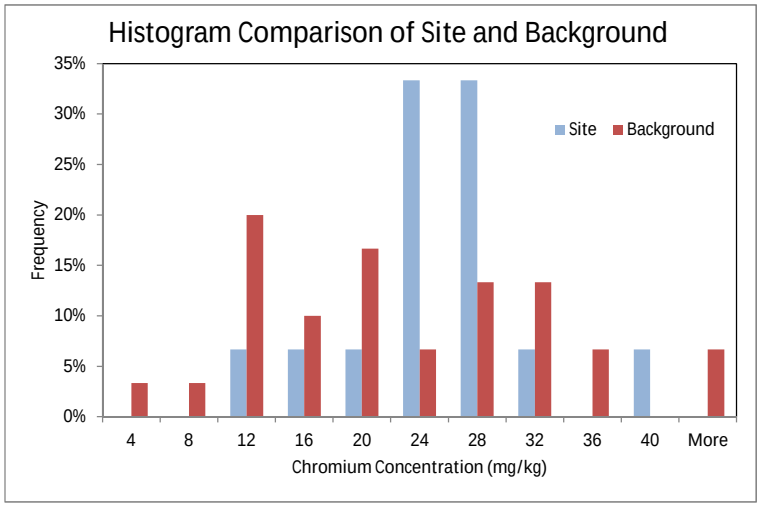
Surface Soil Exposure Area 1 - Chromium



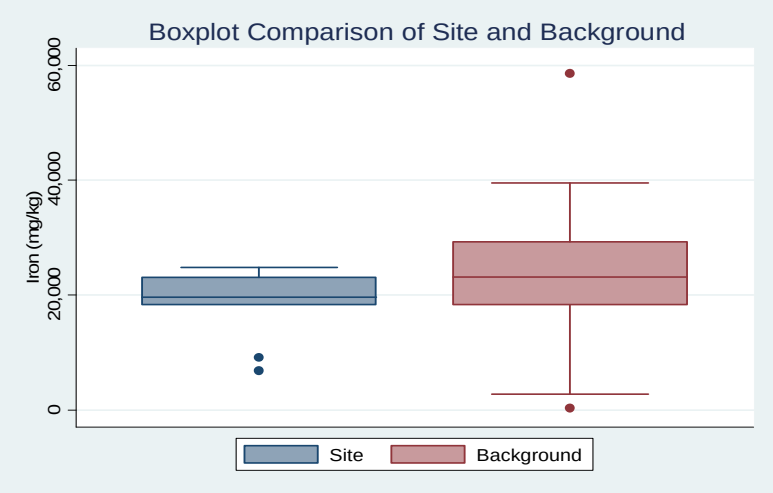


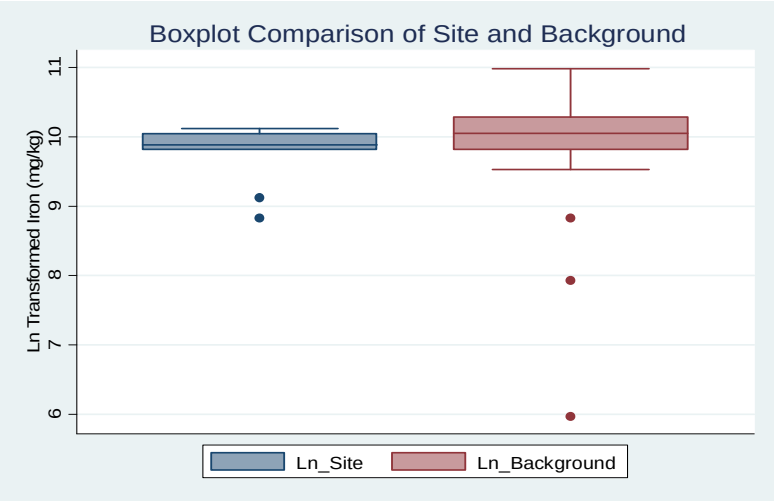


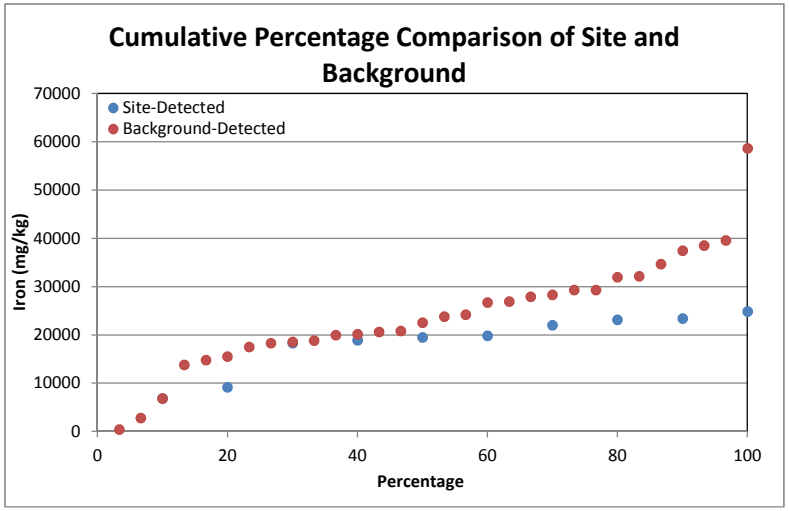


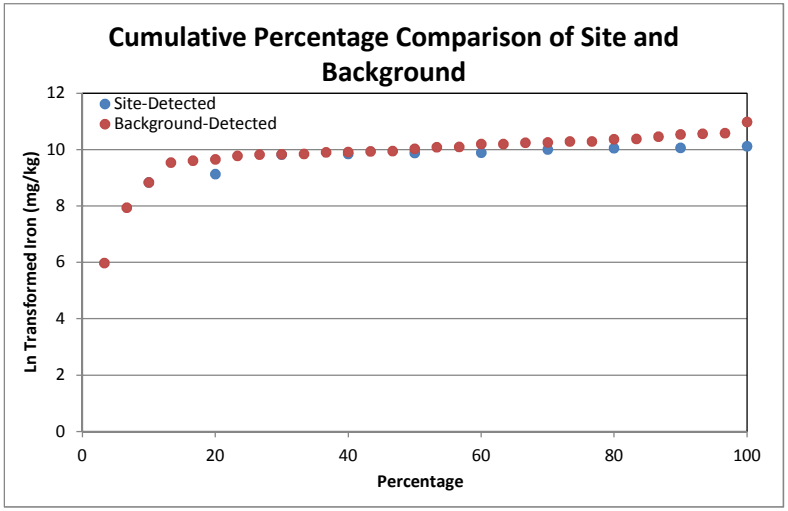

Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
4
8
12
16
20
24
28
32
36
40
More
Chromium Concentration (mg/kg)

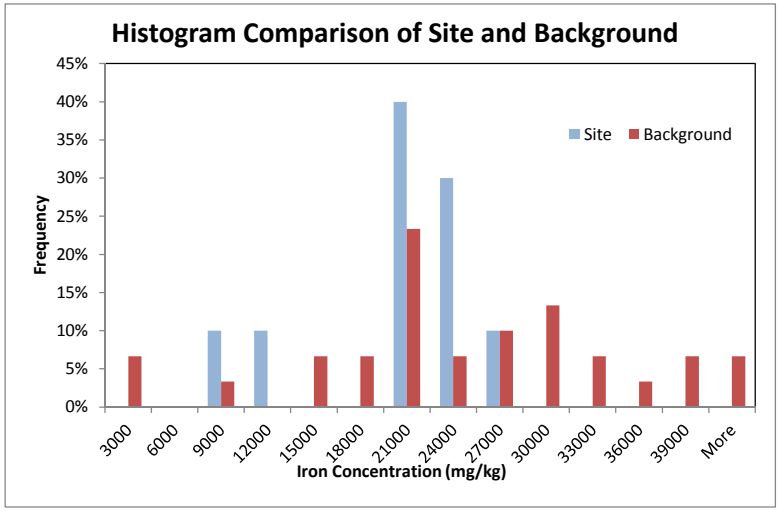
Surface Soil Exposure Area 1 - Iron



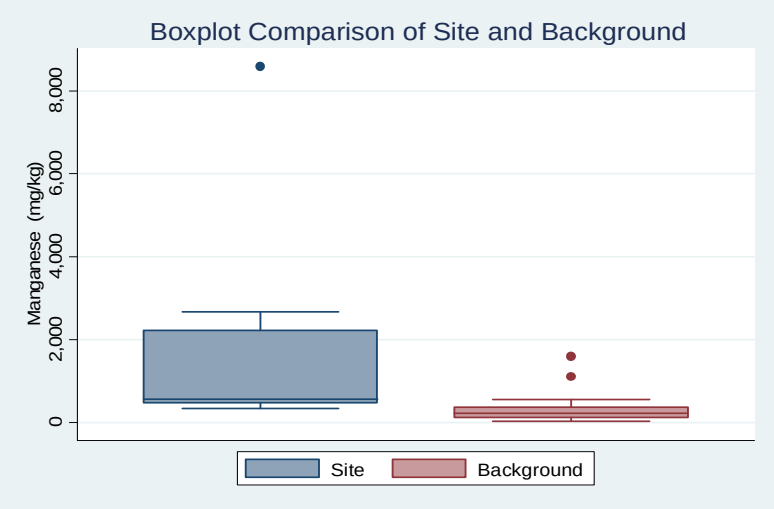


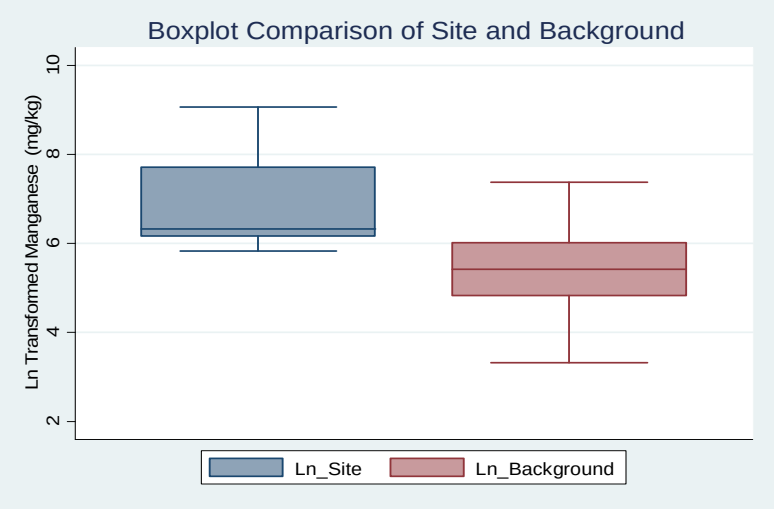


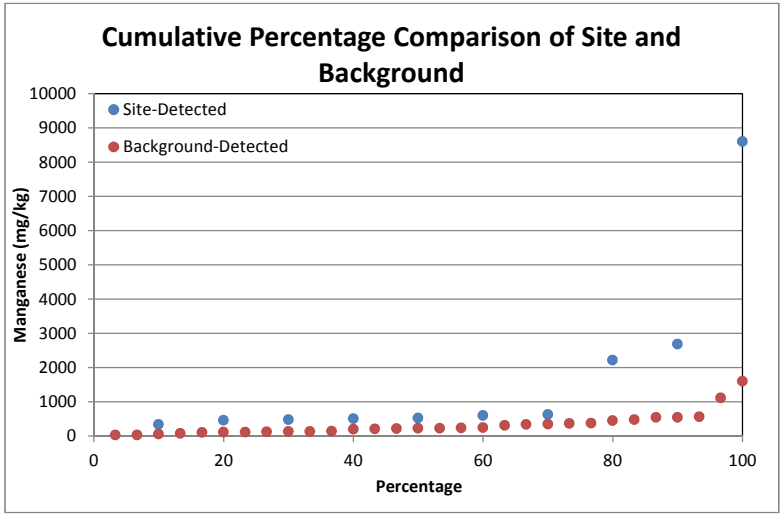


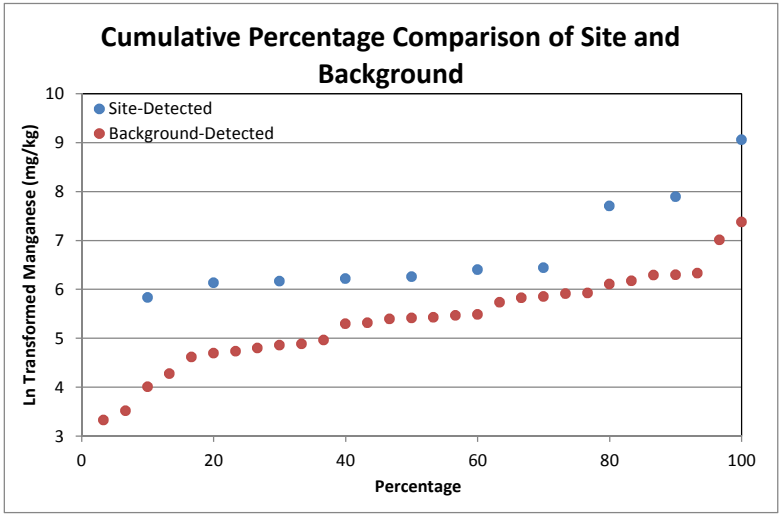

Histogram Comparison of Site and Background
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
3000
6000
9000
12000
15000
18000
21000
24000
27000
30000
33000
36000
39000
More
Iron Concentration (mg/kg)

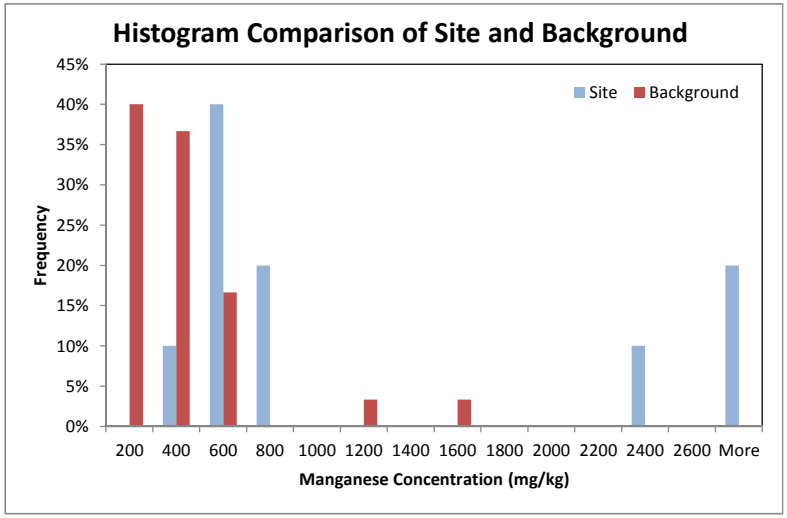
Surface Soil Exposure Area 1 - Manganese



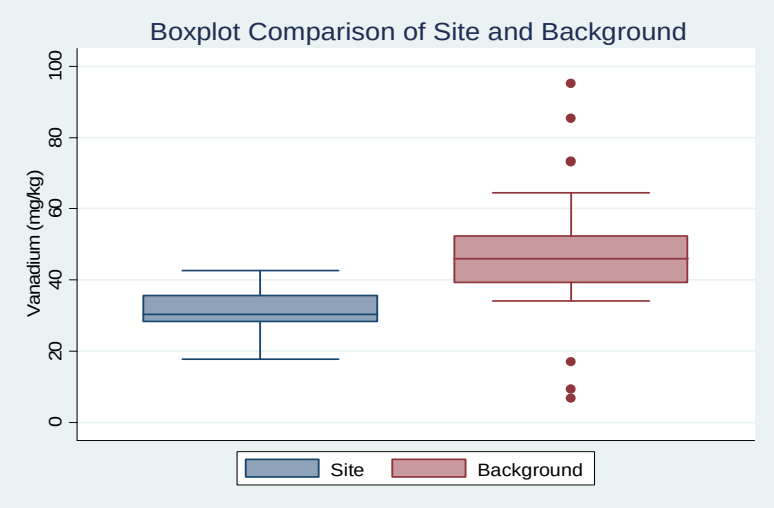


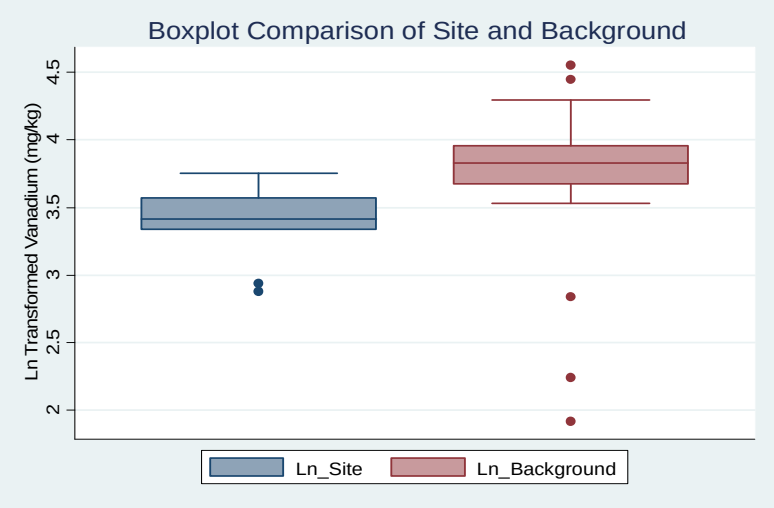


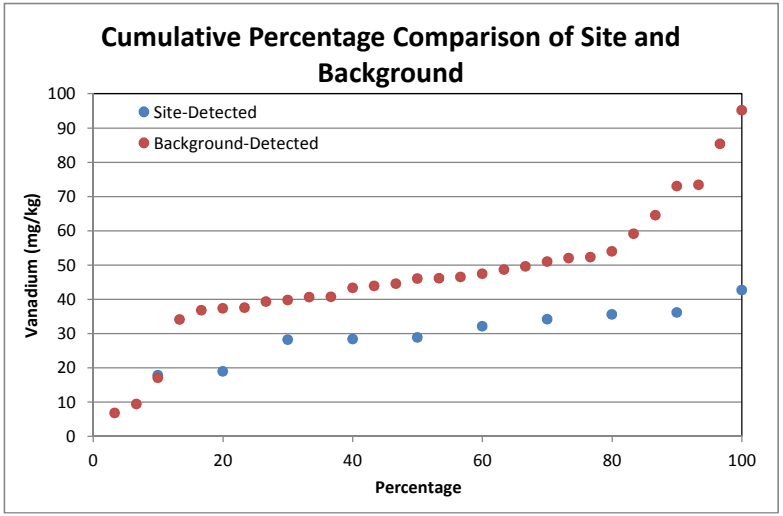


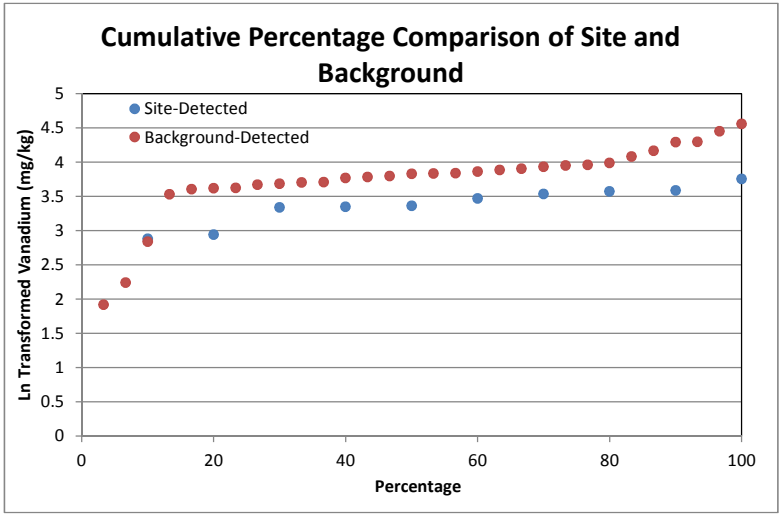

Histogram Comparison of Site and Background
Site
Background
Frequency
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
2600
More
Manganese Concentration (mg/kg)

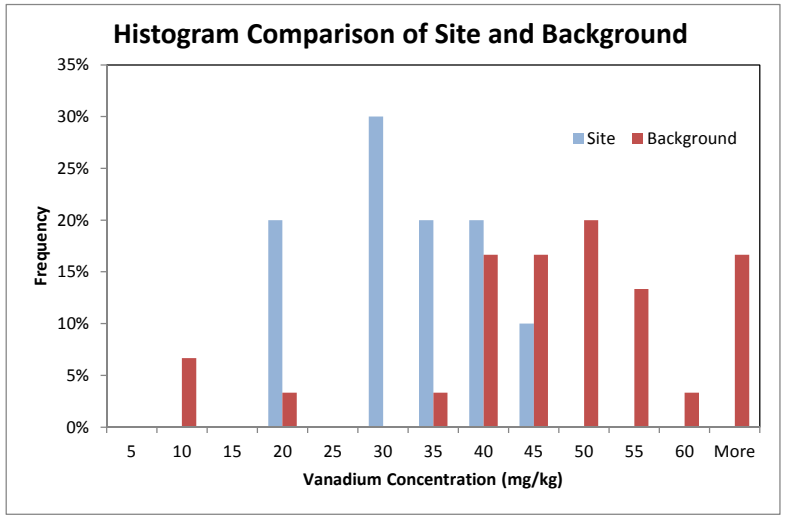
Surface Soil Exposure Area 1 - Vanadium










Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
5
10
15
20
25
30
35
40
45
50
55
60
More
Vanadium Concentration (mg/kg)

ATTACHMENT 2

GRAPHICAL COMPARISONS OF SITE SURFACE SOIL-EXPOSURE AREA 1 AND BACKGROUND SOILS FOR COPCS NOT EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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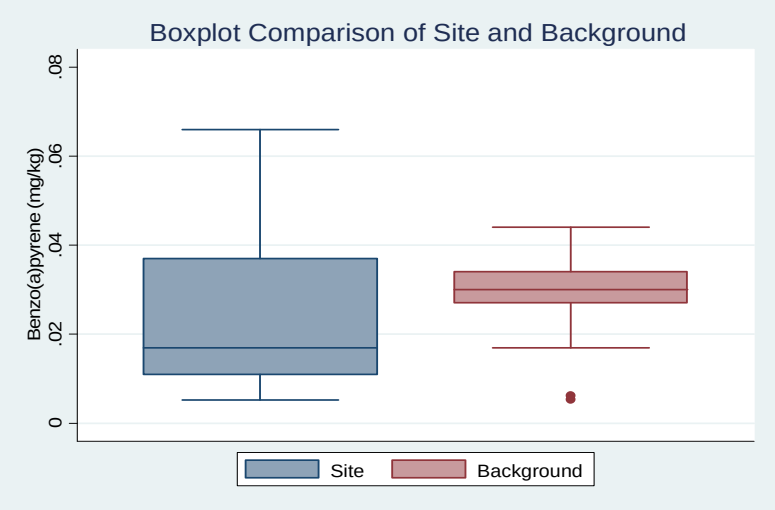
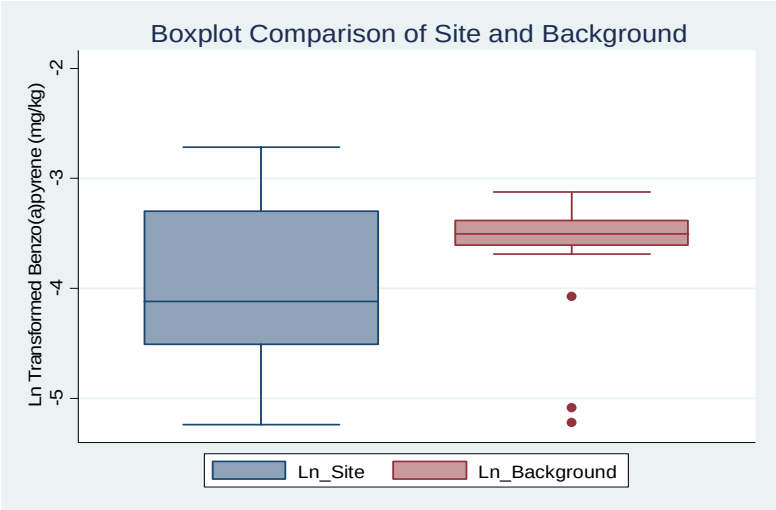
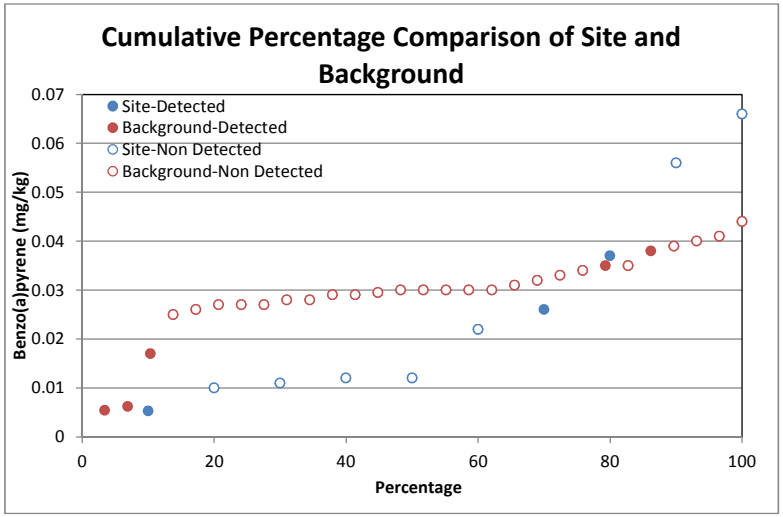
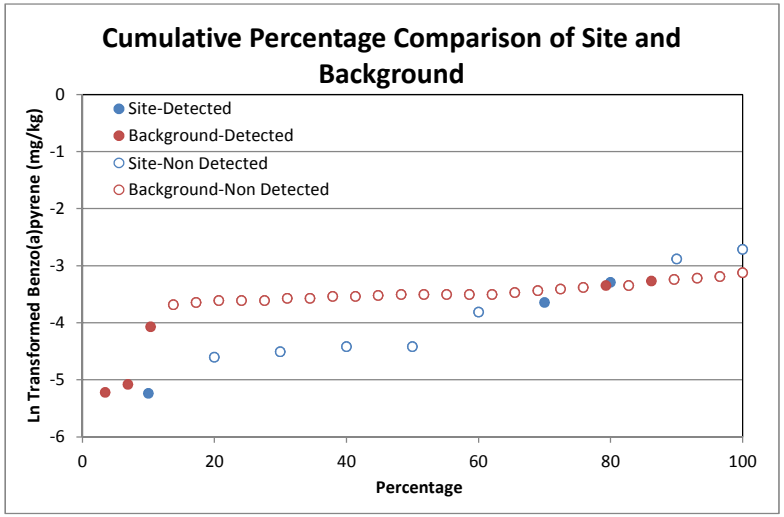
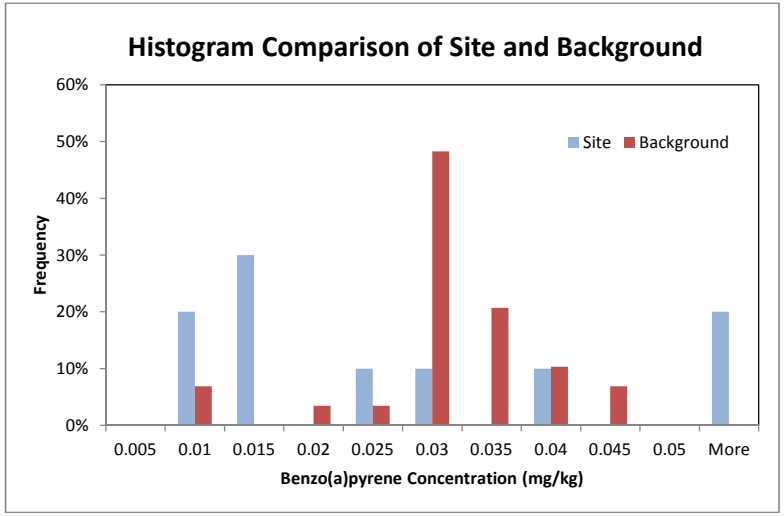
Surface Soil Exposure Area 1 - Benzo(a)pyrene



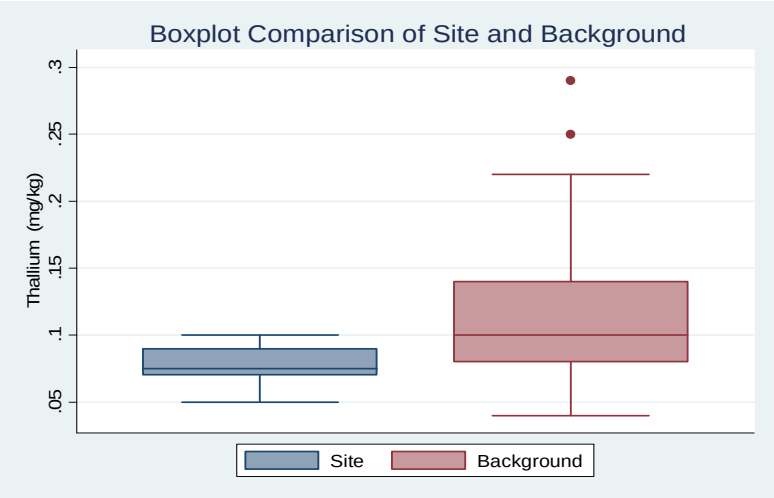


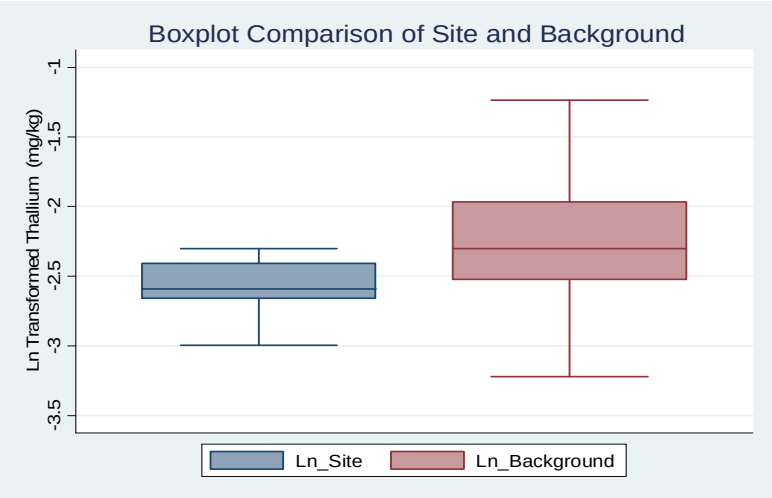


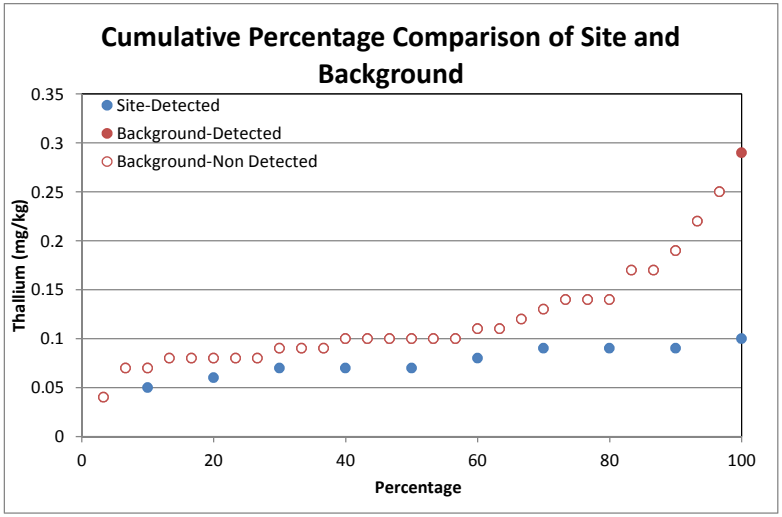


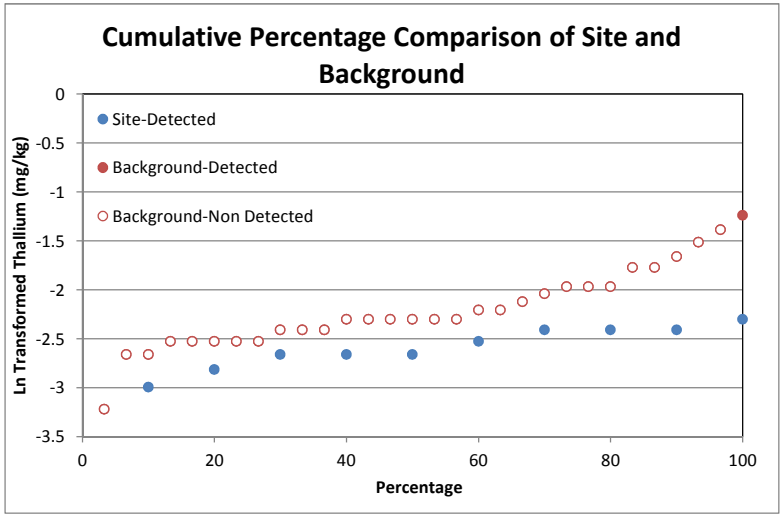

Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.005
0.01
0.015
0.02
0.025
0.03
0.035
0.04
0.045
0.05
More
Benzo(a)pyrene Concentration (mg/kg)

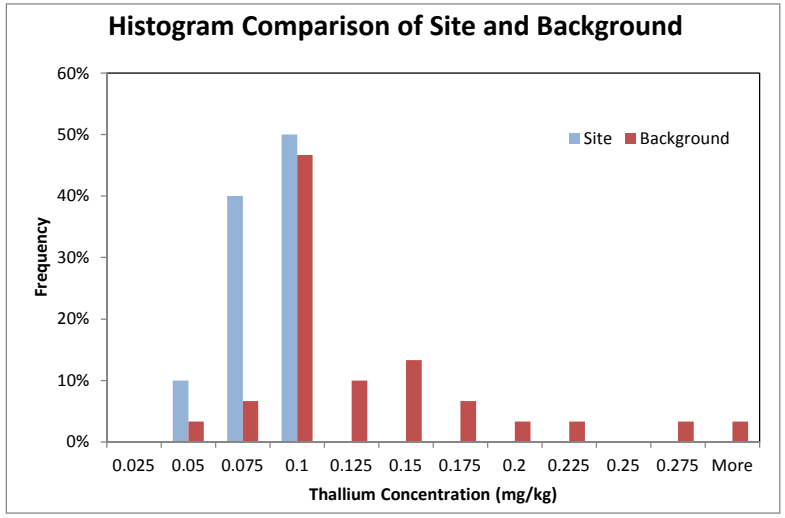
Surface Soil Exposure Area 1 - Thallium










Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.025
0.05
0.075
0.1
0.125
0.15
0.175
0.2
0.225
0.25
0.275
More
Thallium Concentration (mg/kg)

ATTACHMENT 3

GRAPHICAL COMPARISONS OF SITE SURFACE SOIL-EXPOSURE AREA 2 AND BACKGROUND SOILS FOR COPCS EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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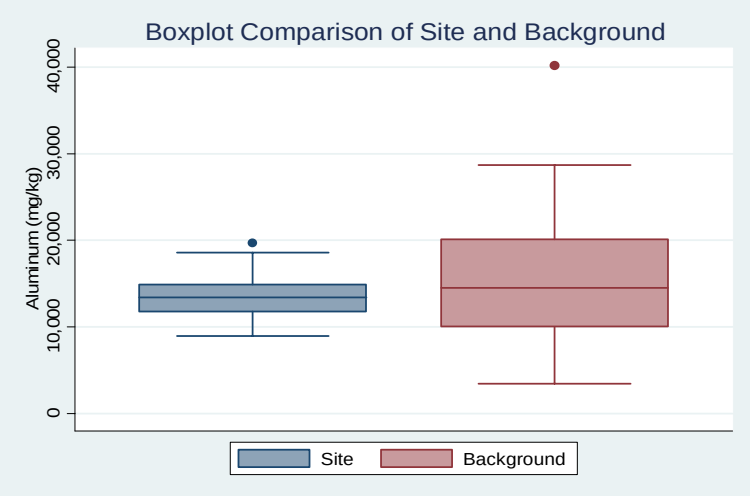
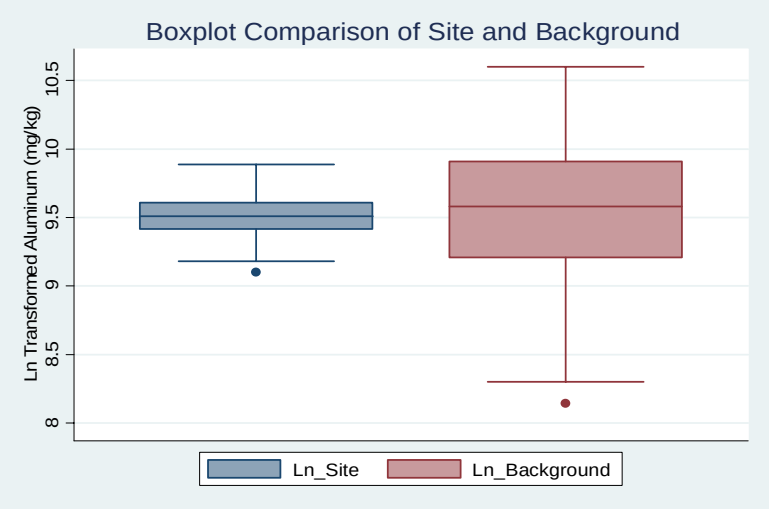
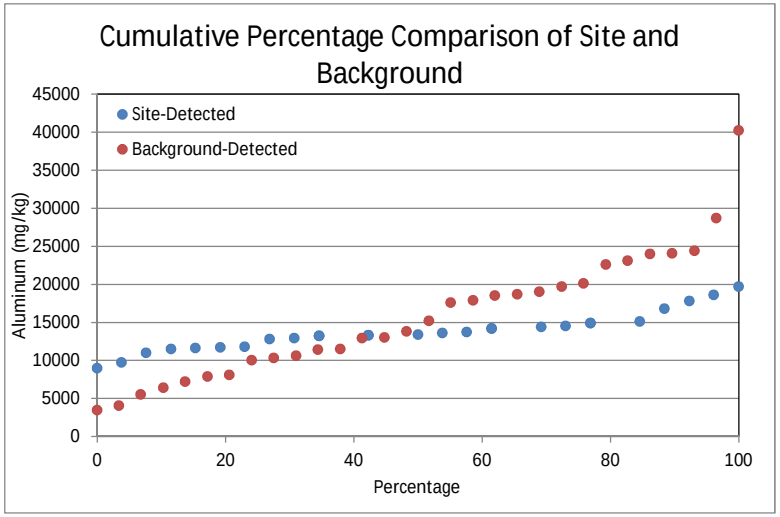
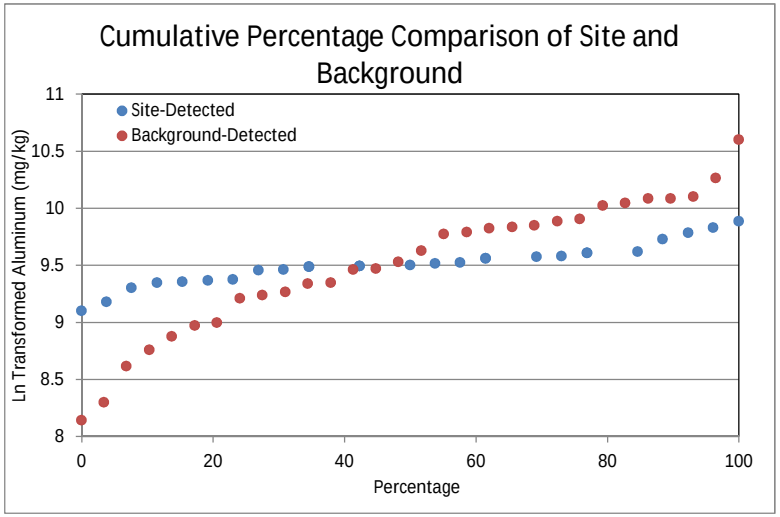
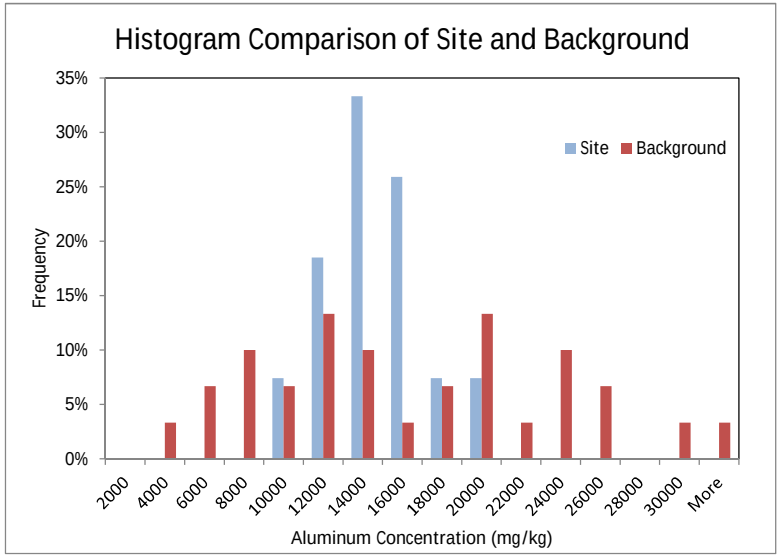
Surface Soil Exposure Area 2 - Aluminum



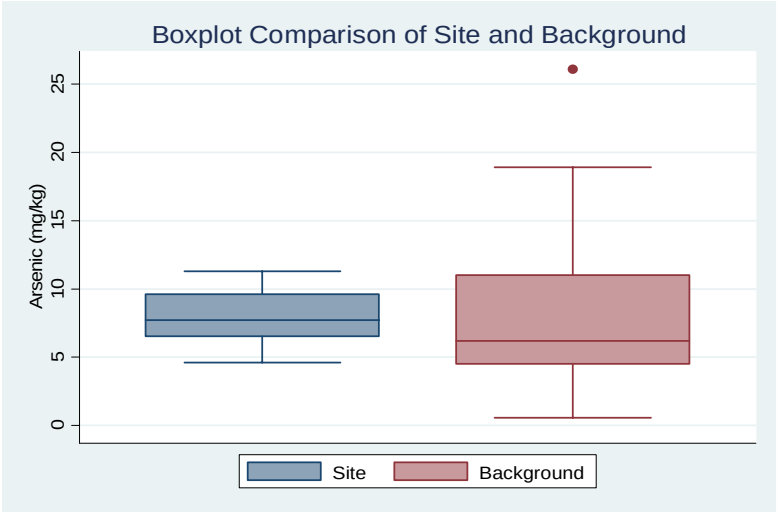


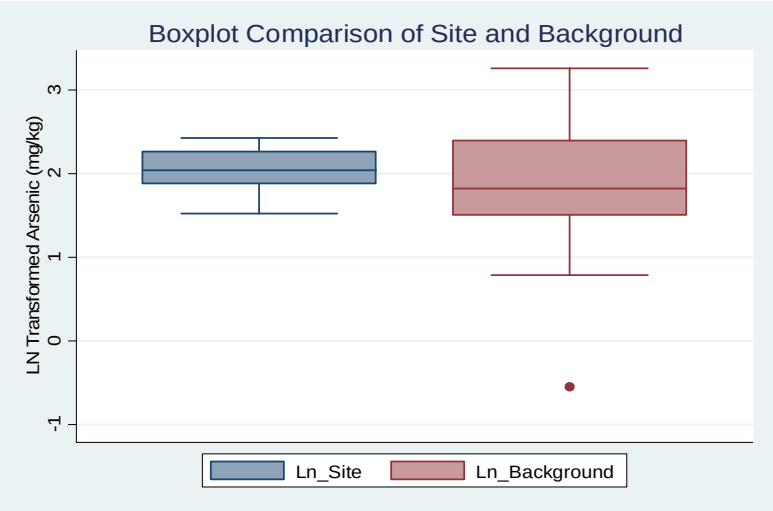


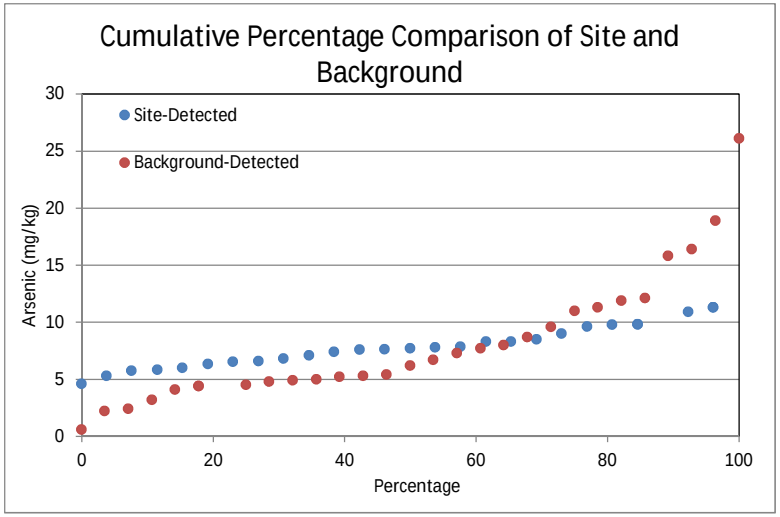


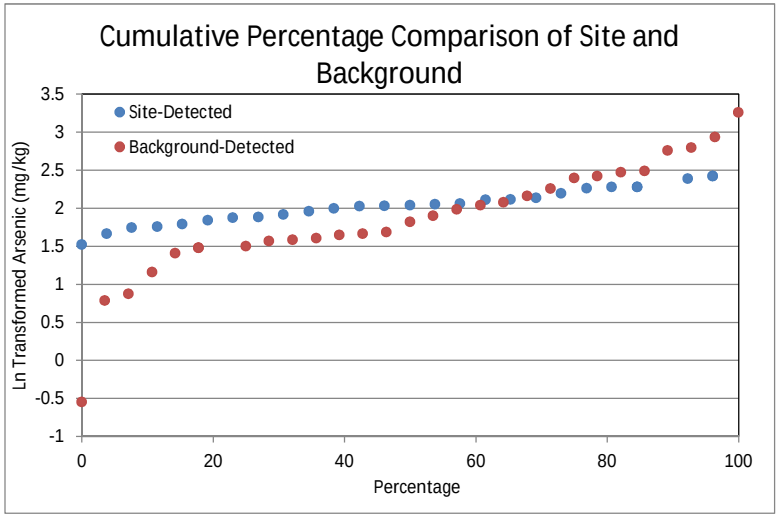

Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
22000
24000
26000
28000
30000
More
Aluminum Concentration (mg/kg)

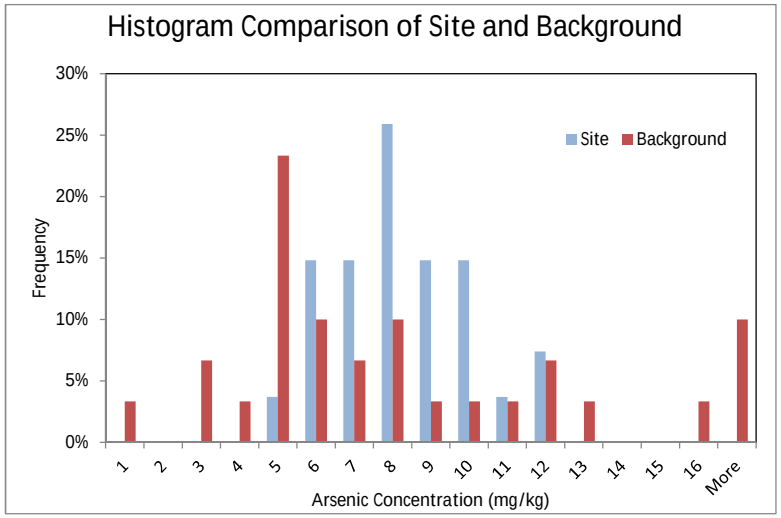
Surface Soil Exposure Area 2 - Arsenic



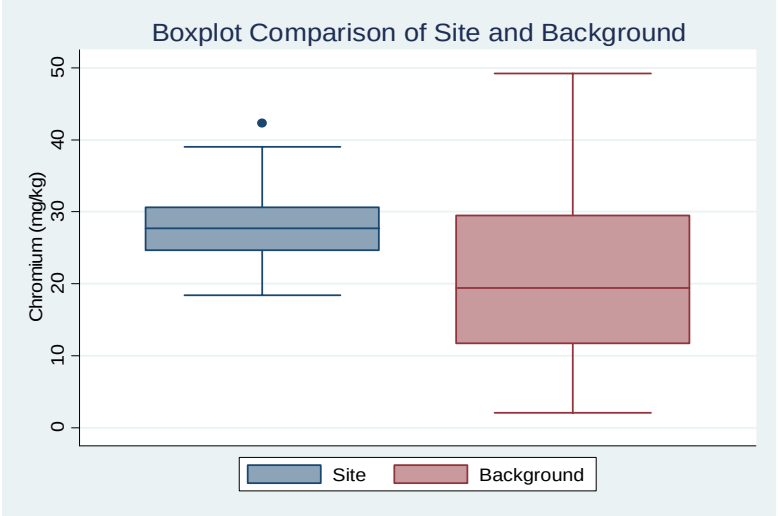


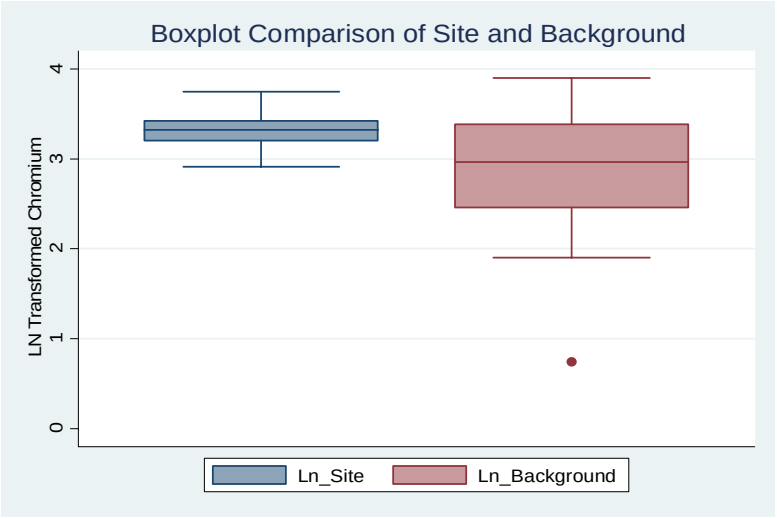


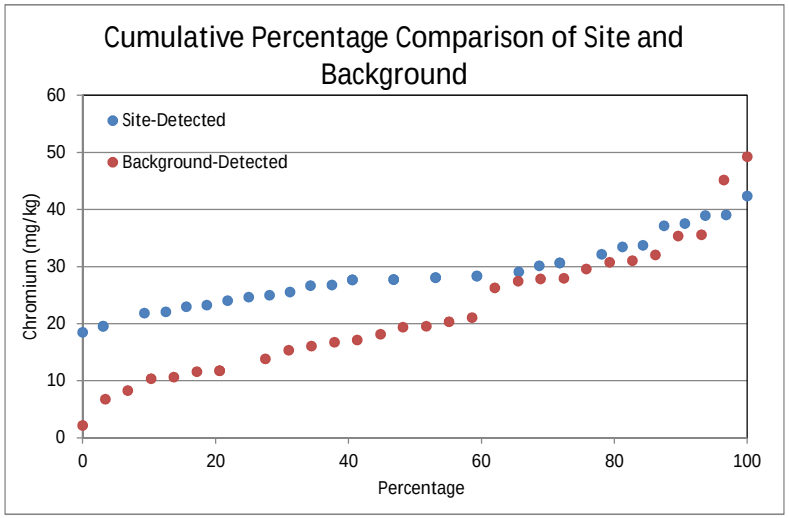


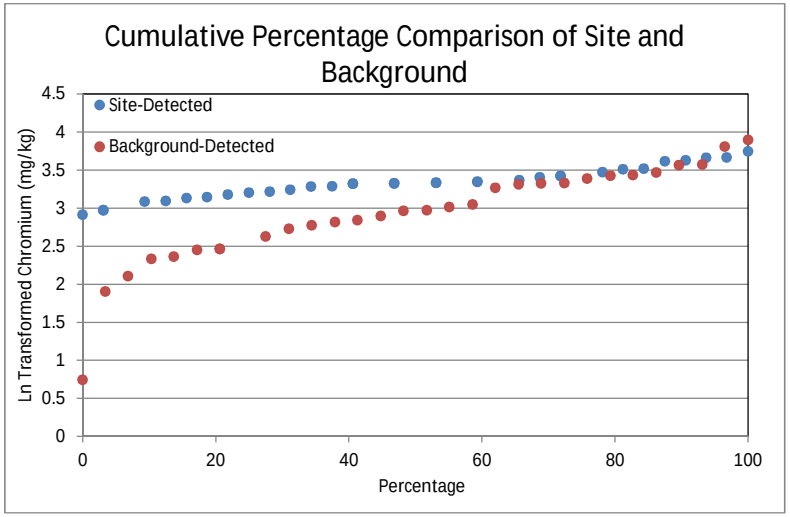

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
More
Arsenic Concentration (mg/kg)

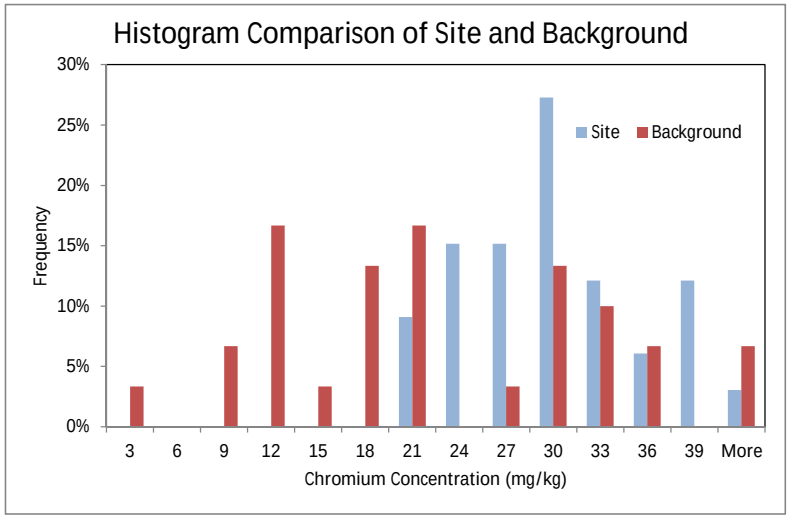
Surface Soil Exposure Area 2 - Chromium



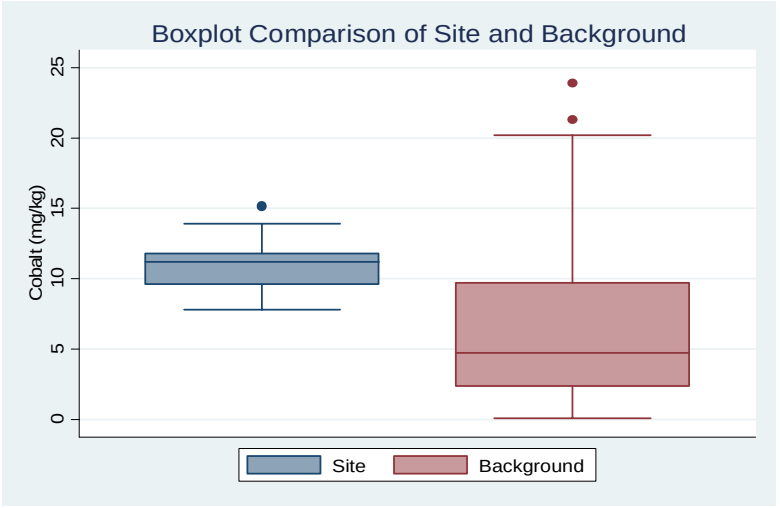


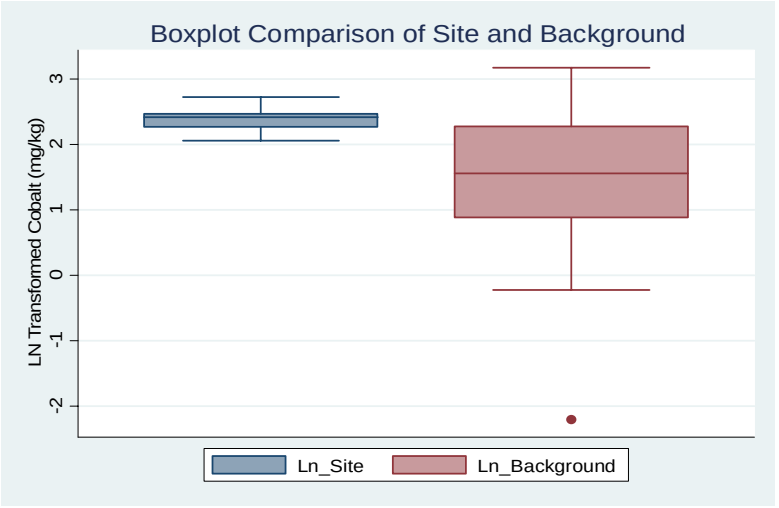


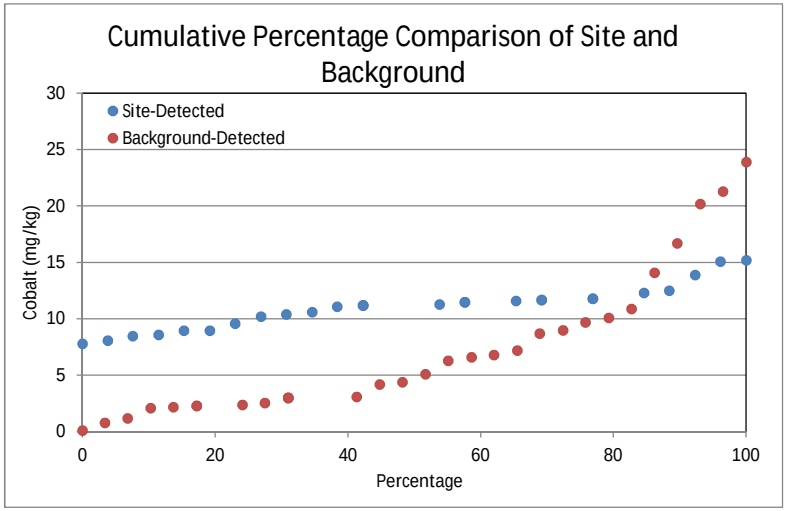


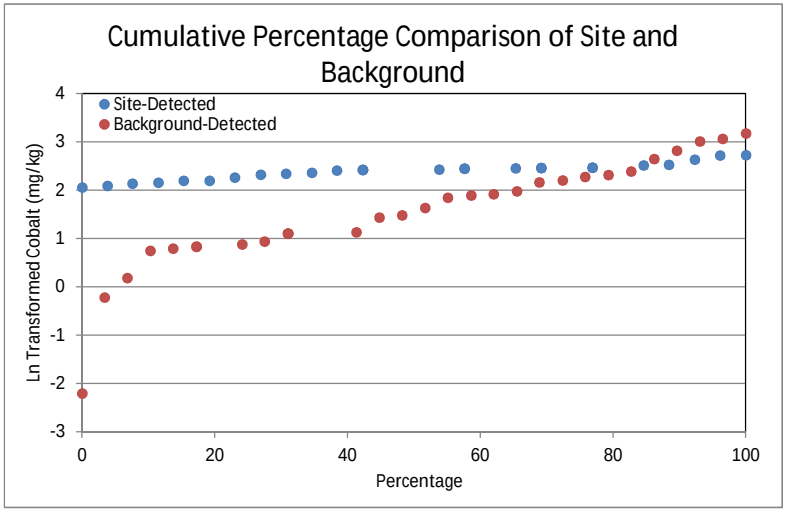

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
3
6
9
12
15
18
21
24
27
30
33
36
39
More
Chromium Concentration (mg/kg)

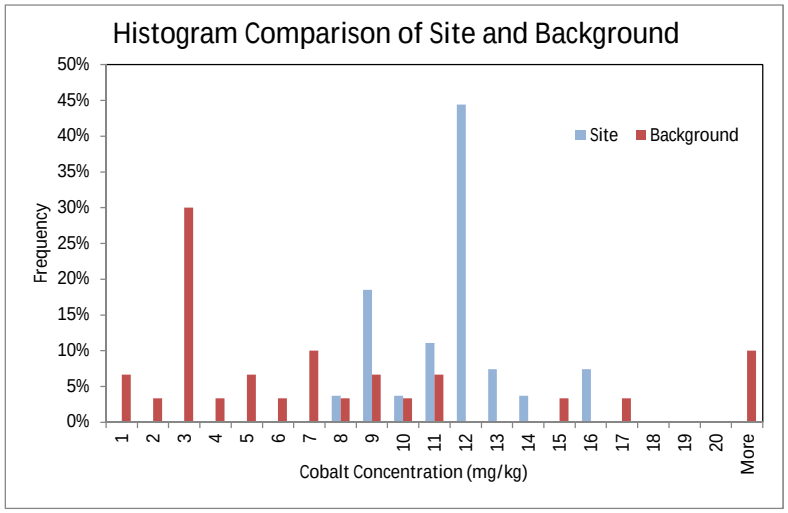
Surface Soil Exposure Area 2 - Cobalt



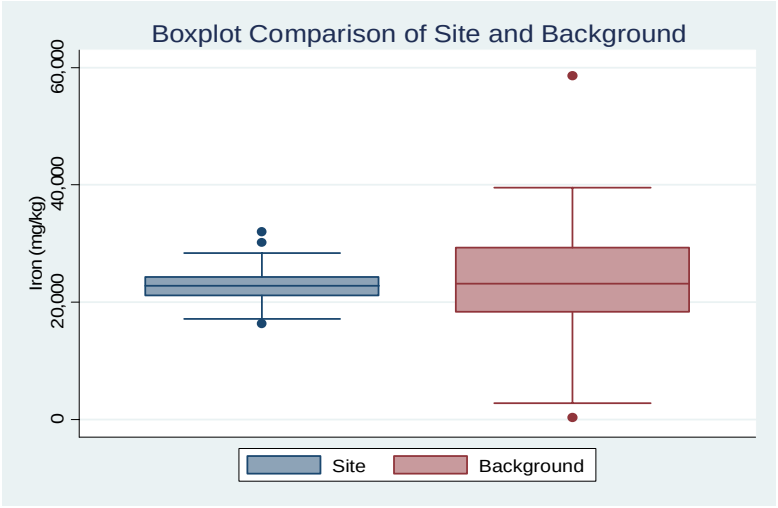


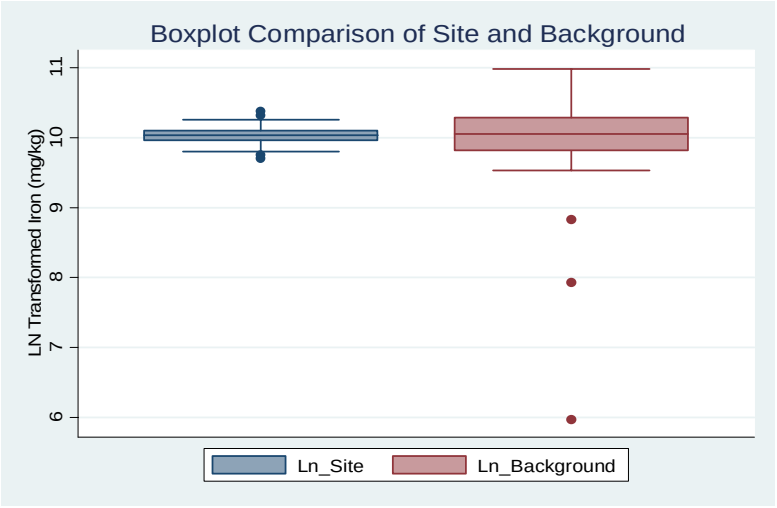


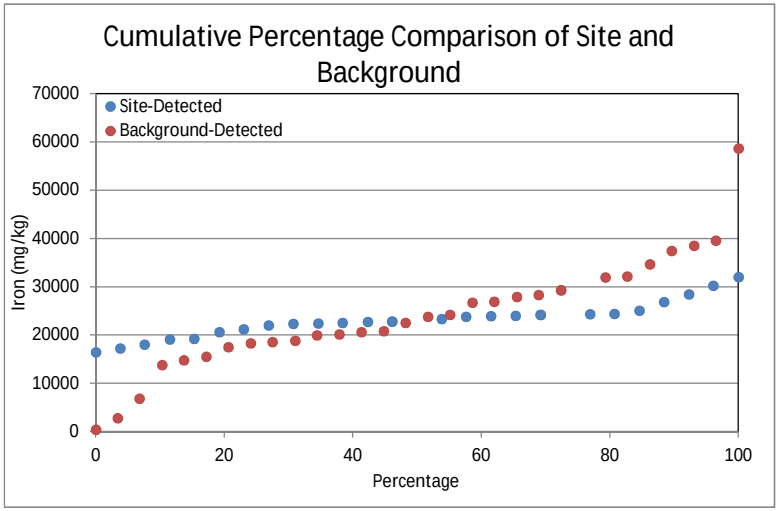


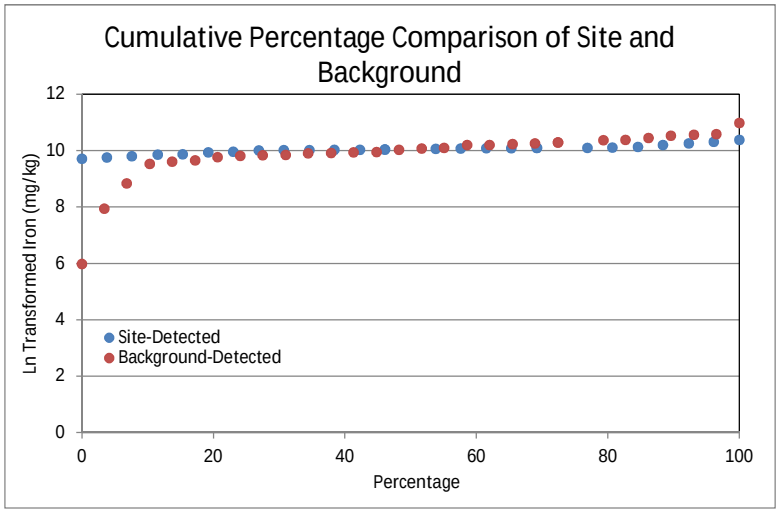

Histogram Comparison of Site and Background
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
More
Cobalt Concentration (mg/kg)

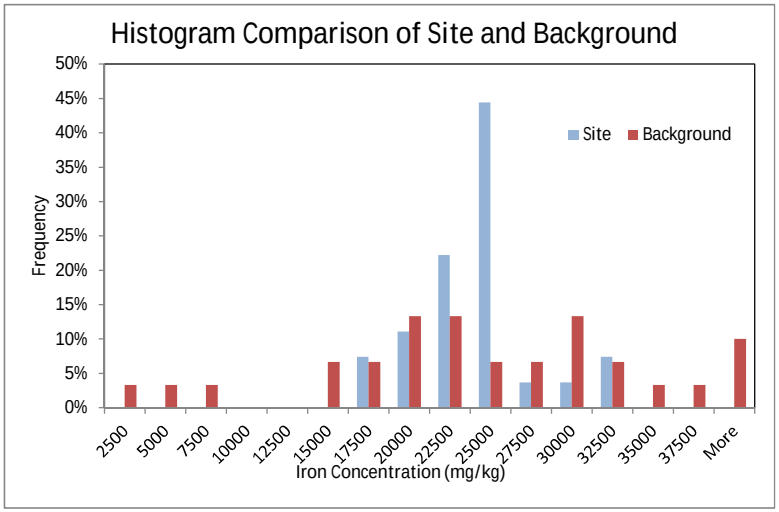
Surface Soil Exposure Area 2 - Iron



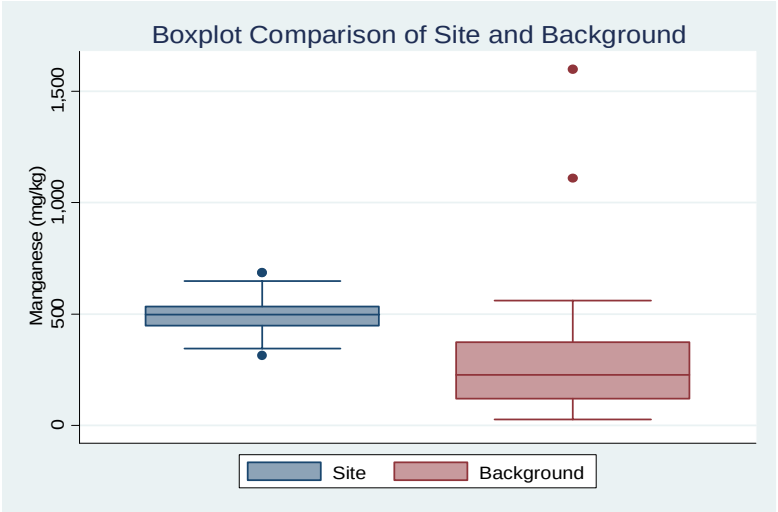


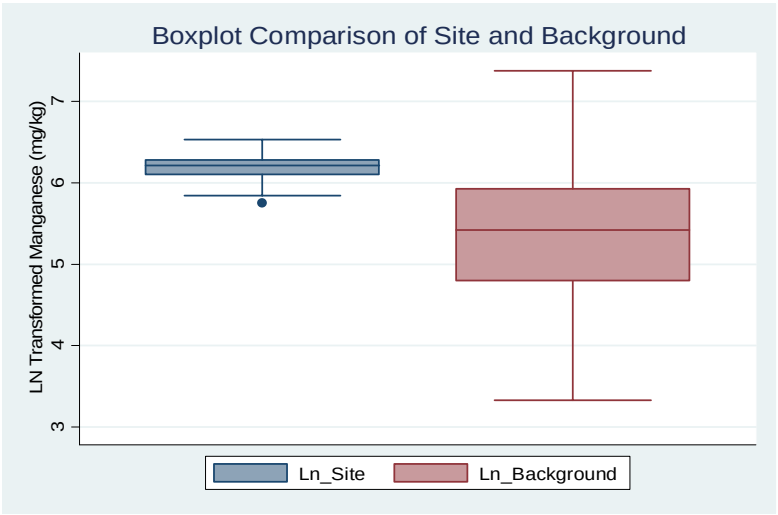


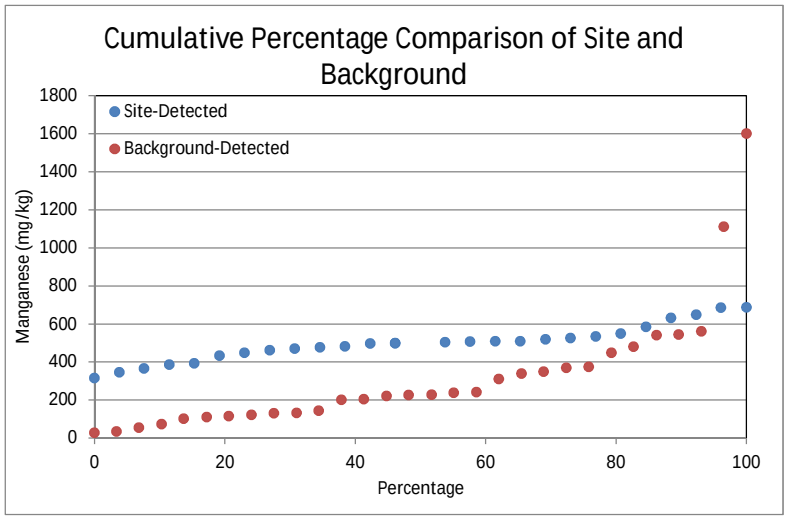


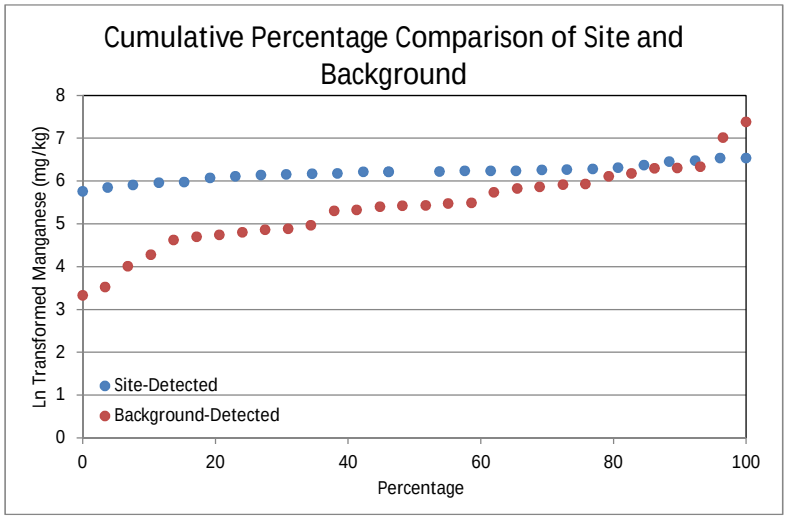

Histogram Comparison of Site and Background
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2500
5000
7500
10000
12500
15000
17500
20000
22500
25000
27500
30000
32500
35000
37500
More
Iron Concentration (mg/kg)

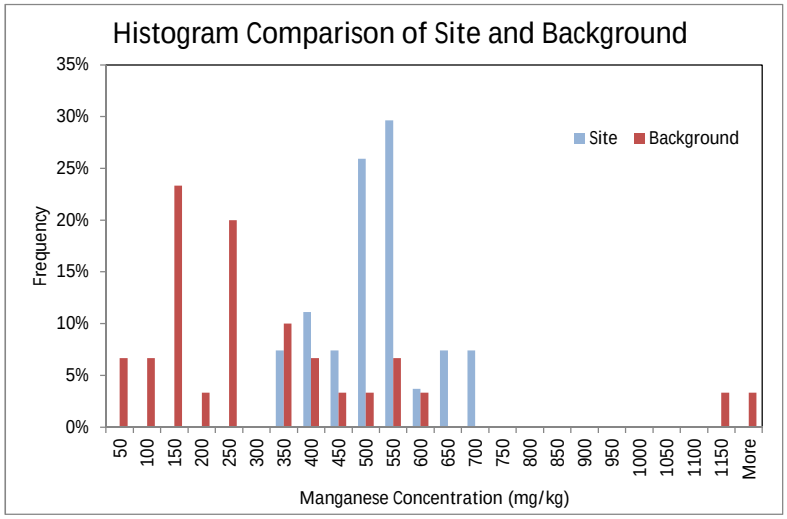
Surface Soil Exposure Area 2 - Manganese



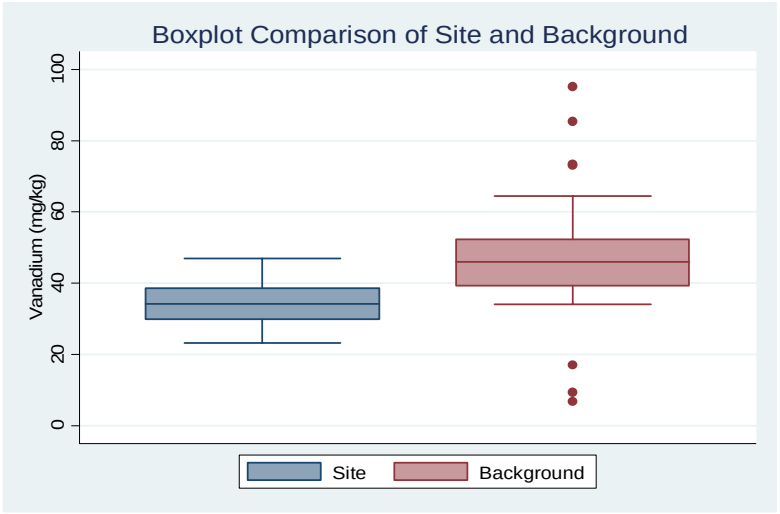


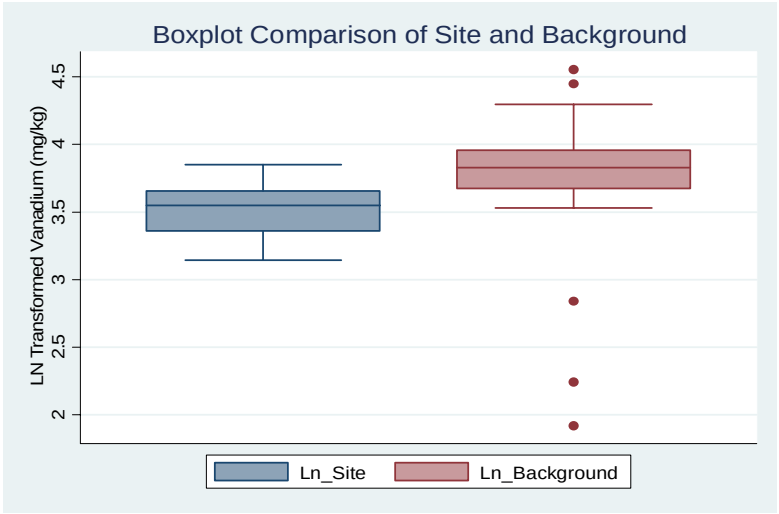


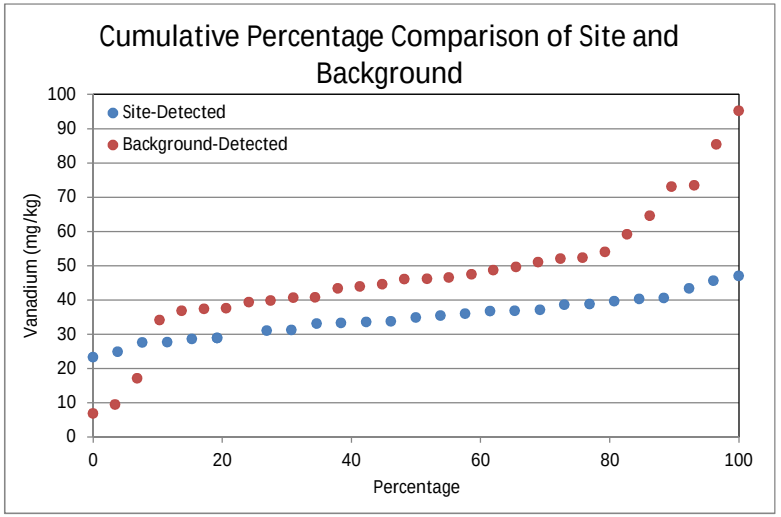


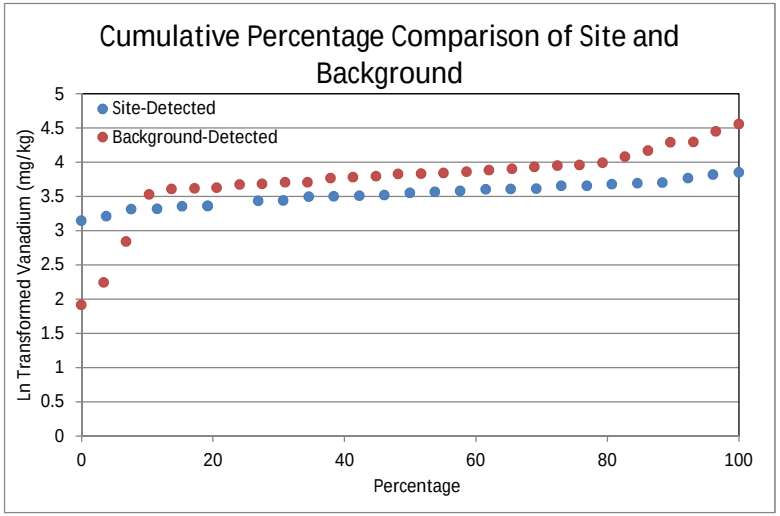

Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
More
Manganese Concentration (mg/kg)

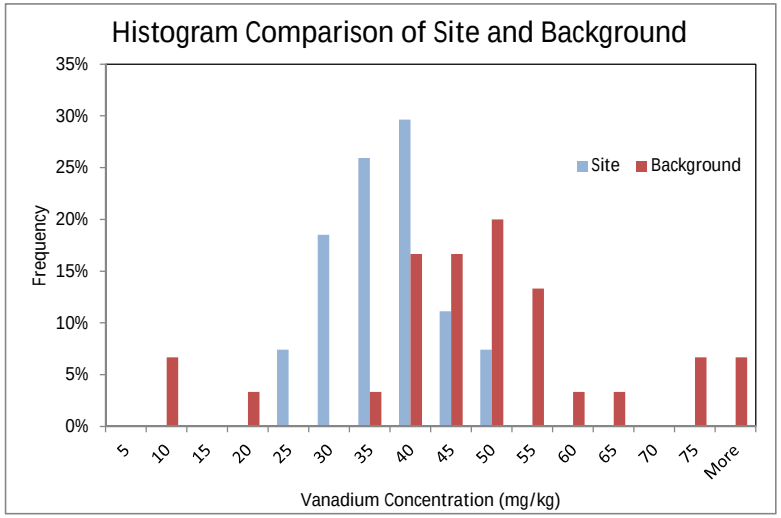
Surface Soil Exposure Area 2 - Vanadium










Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
More
Vanadium Concentration (mg/kg)

ATTACHMENT 4

GRAPHICAL COMPARISONS OF SITE SURFACE SOIL-EXPOSURE AREA 2 AND BACKGROUND SOILS FOR COPCS NOT EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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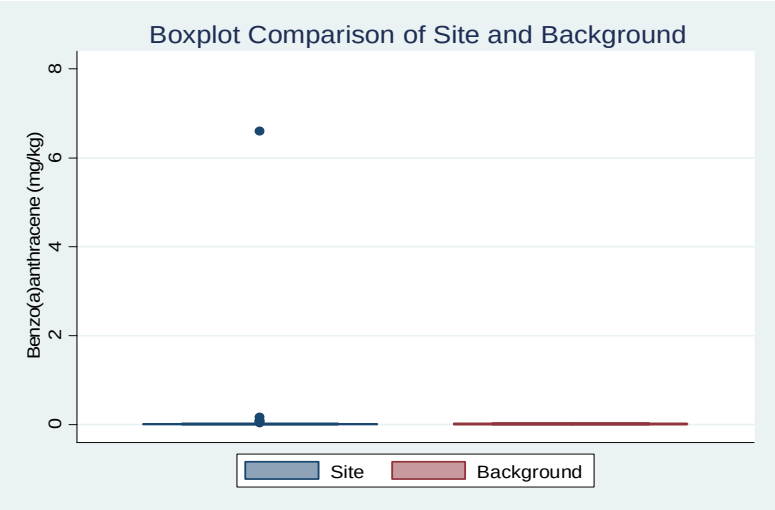
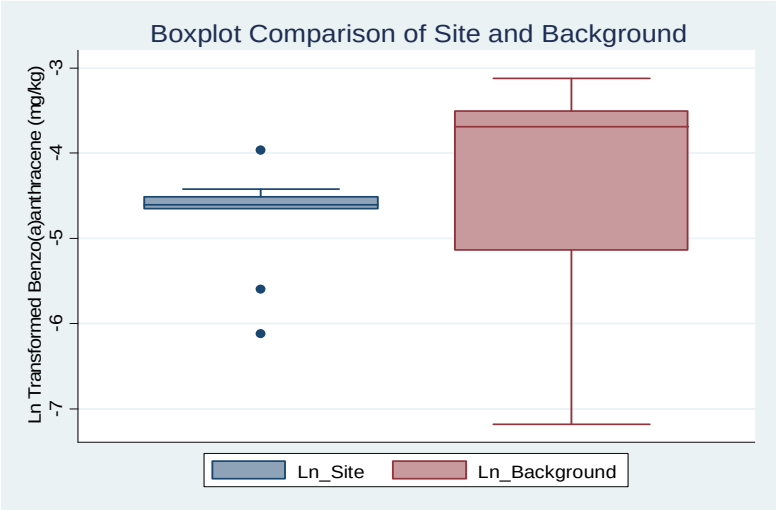
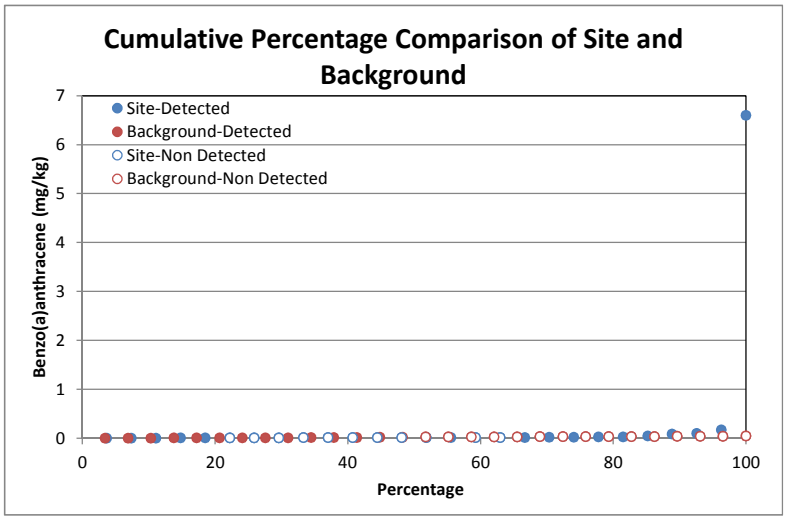
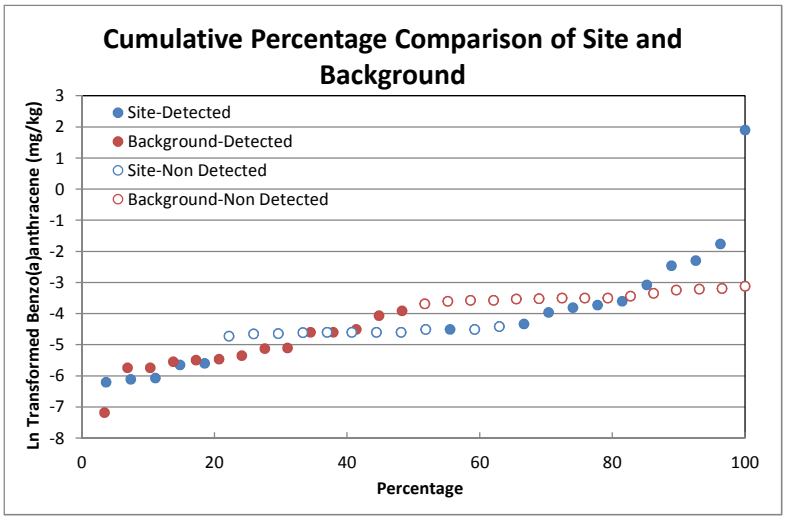
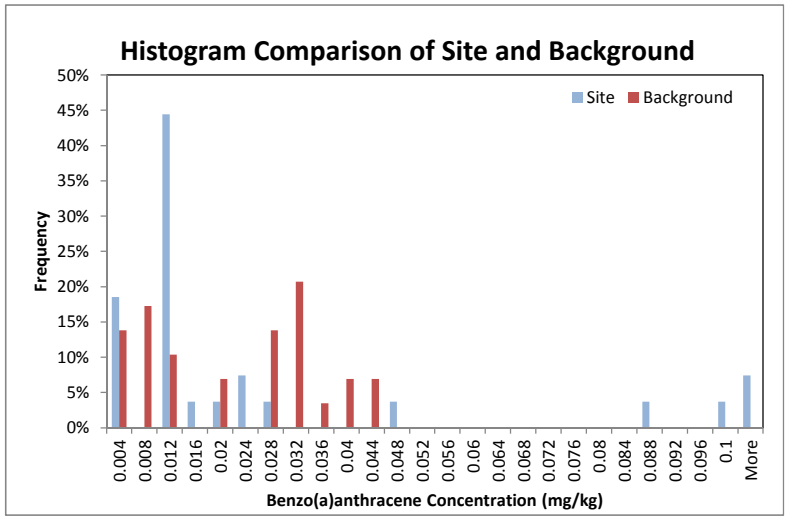
Surface Soil Exposure Area 2 - Benzo(a)anthracene



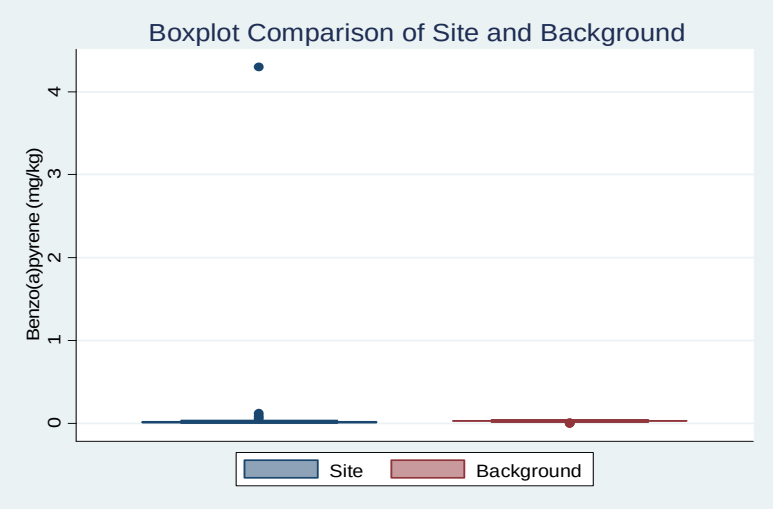


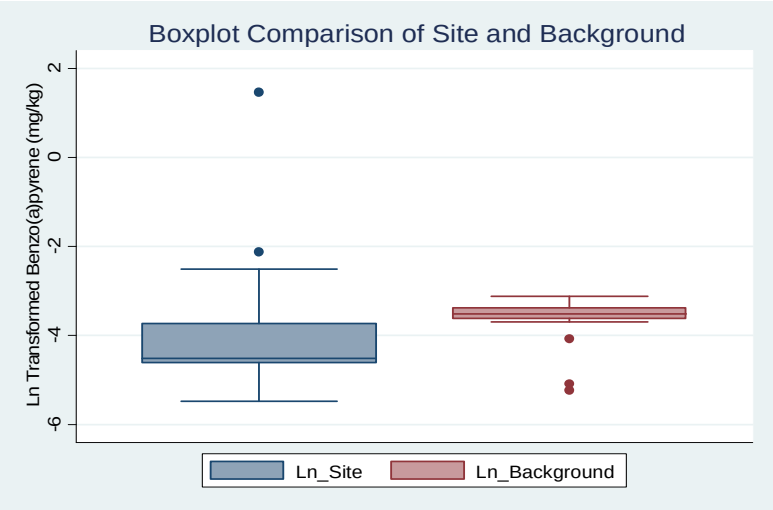


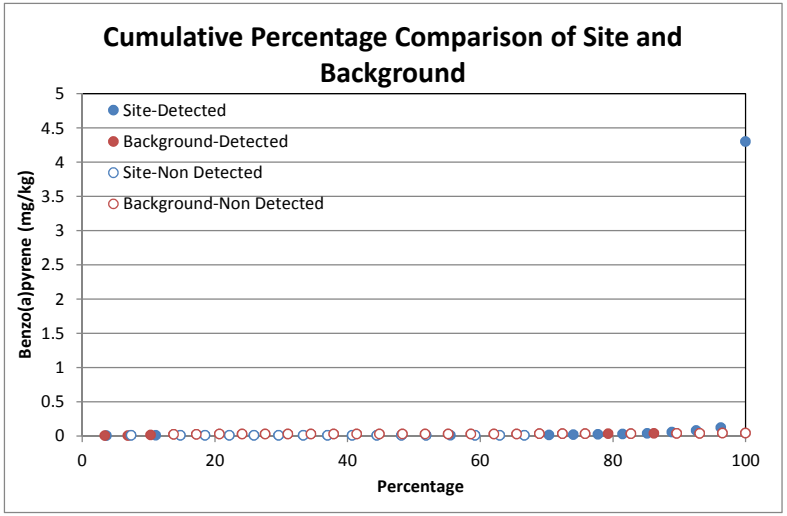


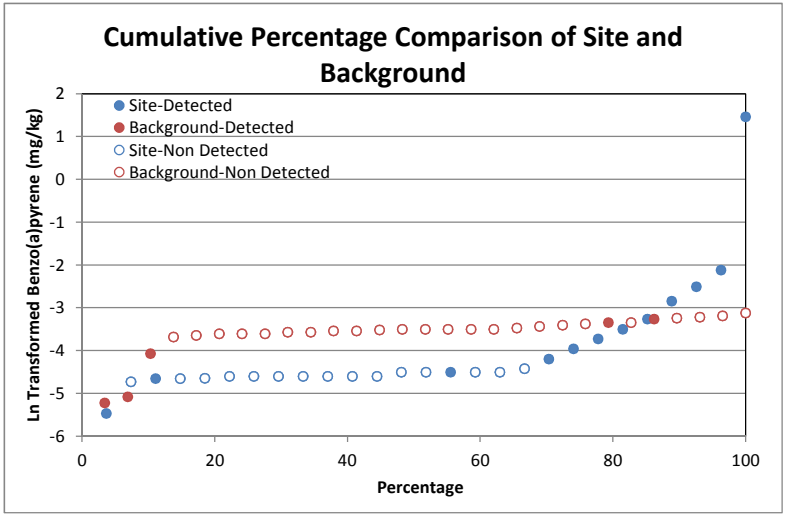

Histogram Comparison of Site and Background
Site
Background
Frequency
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
0.004
0.008
0.012
0.016
0.02
0.024
0.028
0.032
0.036
0.04
0.044
0.048
0.052
0.056
0.06
0.064
0.068
0.072
0.076
0.08
0.084
0.088
0.092
0.096
0.1
More
Benzo(a)anthracene Concentration (mg/kg)

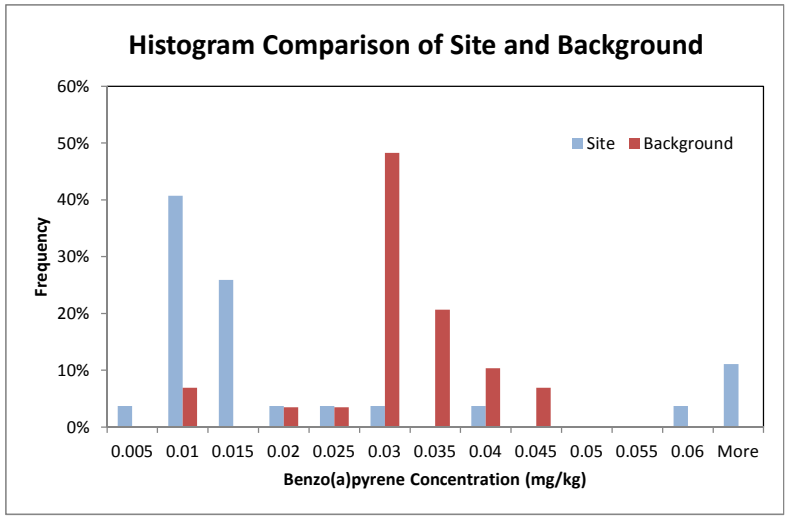
Surface Soil Exposure Area 2 - Benzo(a)pyrene



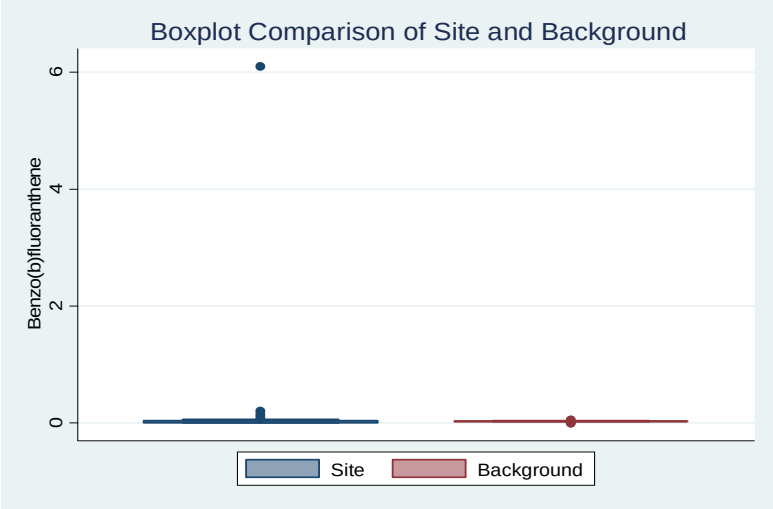


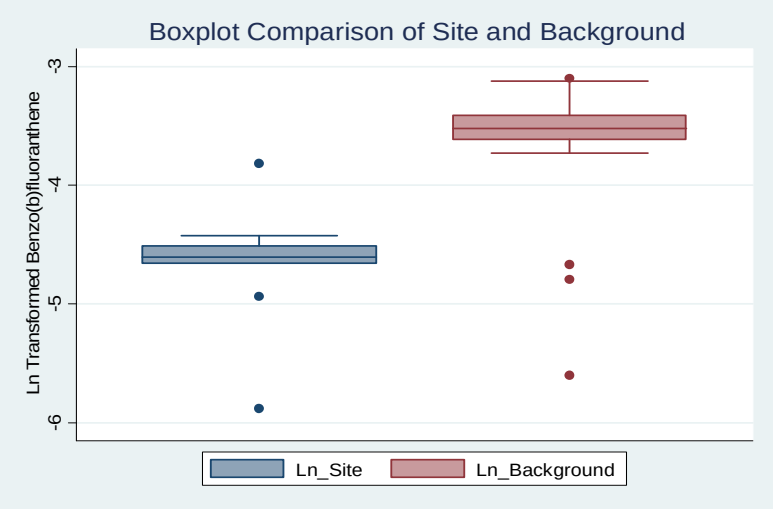


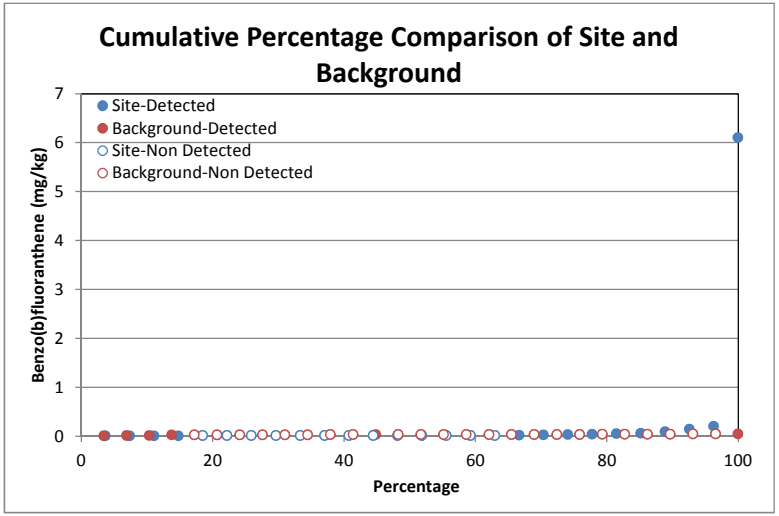


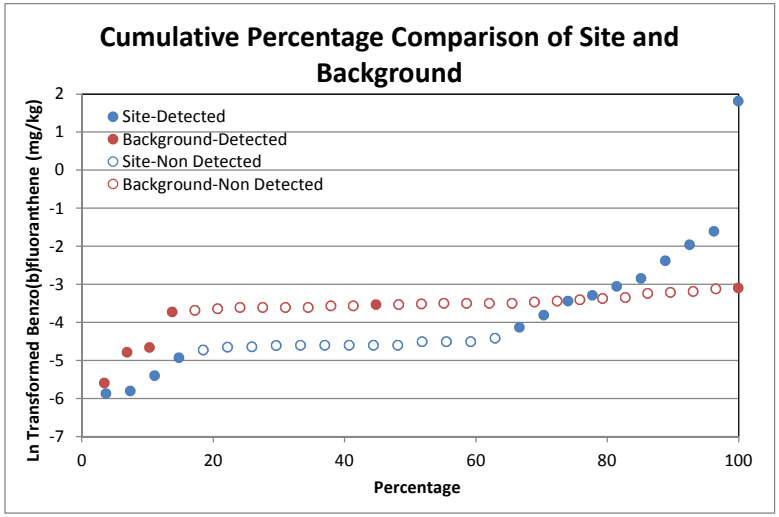

Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.005
0.01
0.015
0.02
0.025
0.03
0.035
0.04
0.045
0.05
0.055
0.06
More
Benzo(a)pyrene Concentration (mg/kg)

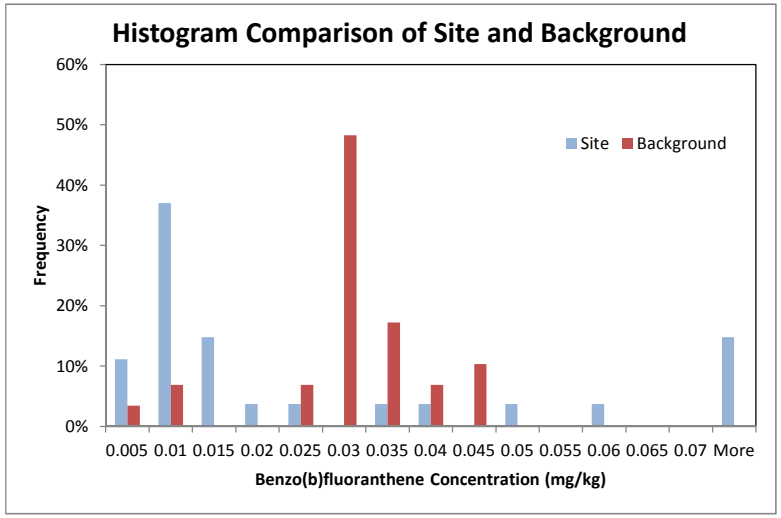
Surface Soil Exposure Area 2 - Benzo(b)fluoranthene



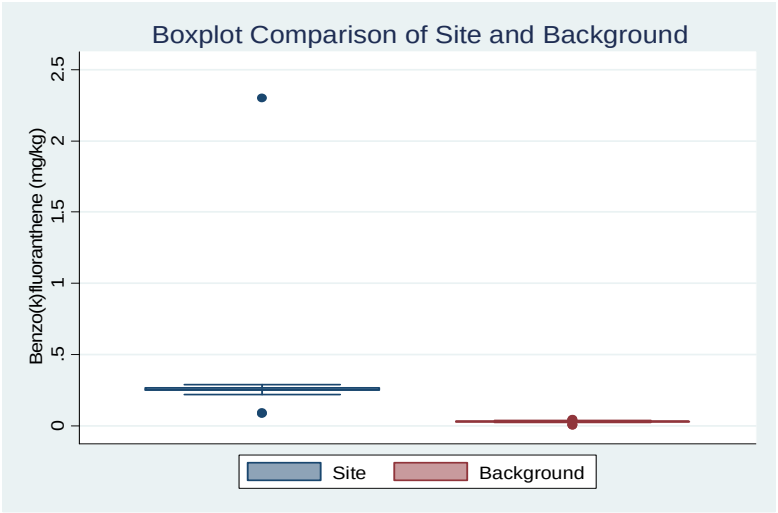


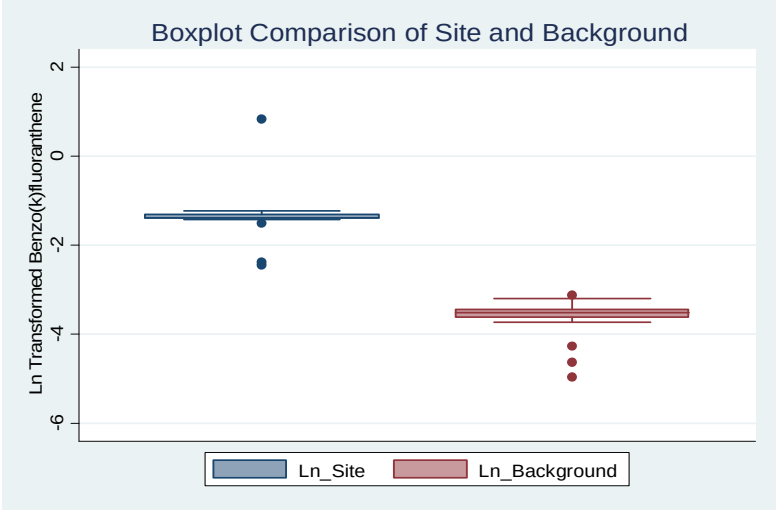


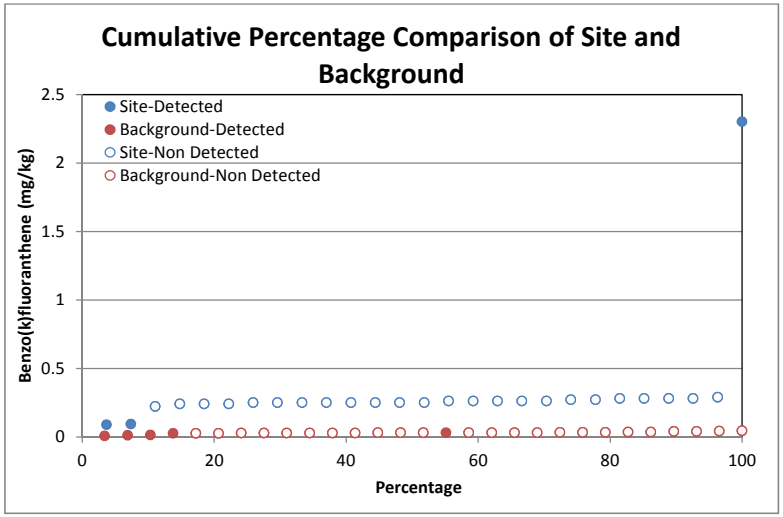


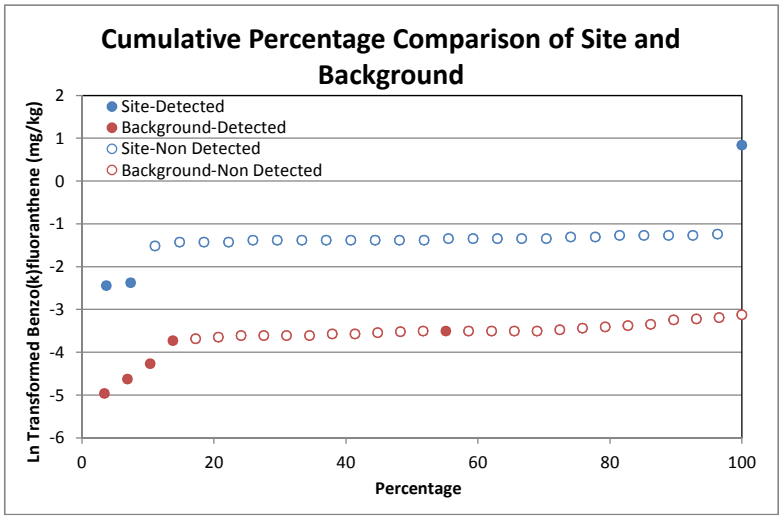

Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.005 0.01 0.015 0.02 0.025 0.03 0.035 0.04 0.045 0.05 0.055 0.06 0.065 0.07 More
Benzo(b)fluoranthene Concentration (mg/kg)

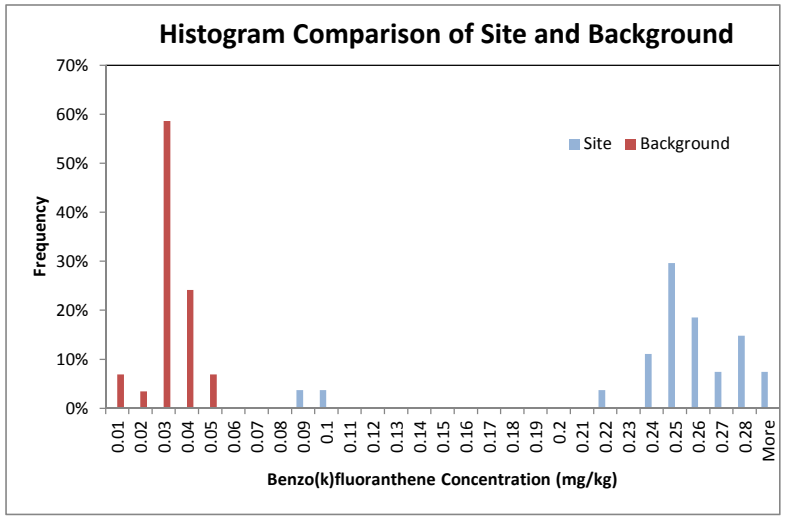
Surface Soil Exposure Area 2 - Benzo(k)fluoranthene



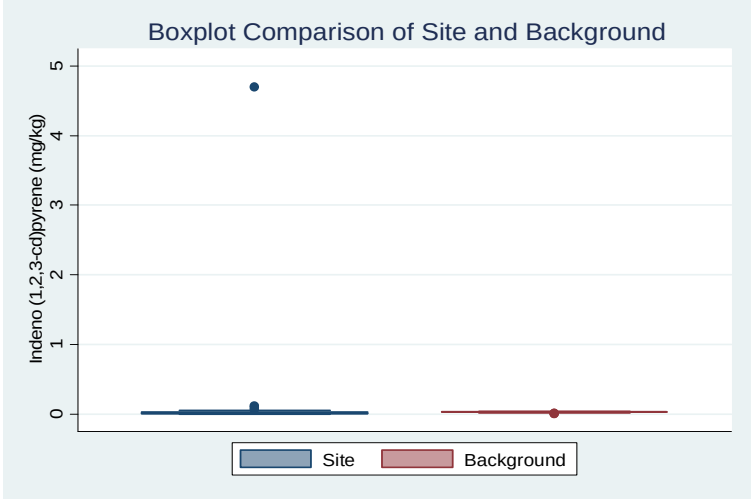


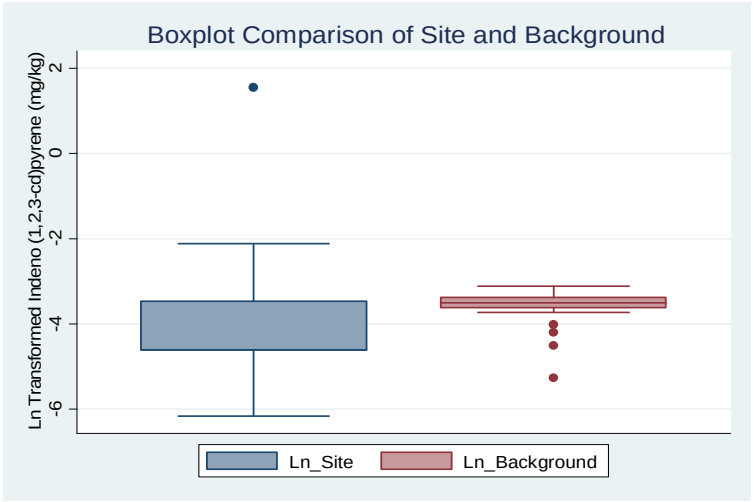


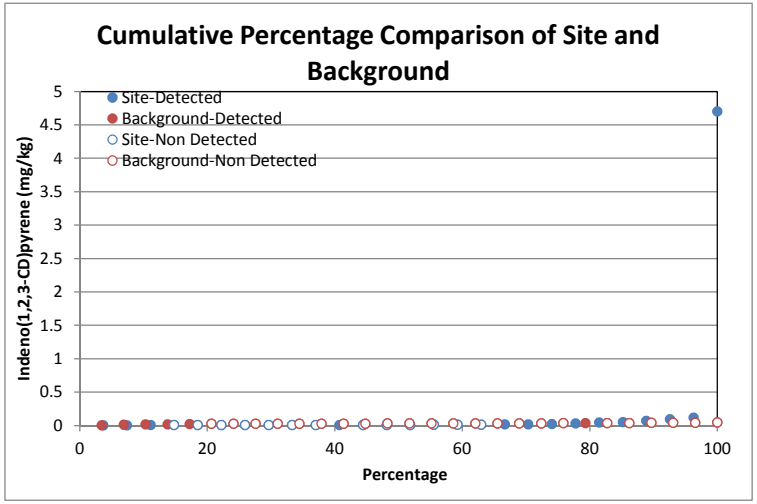


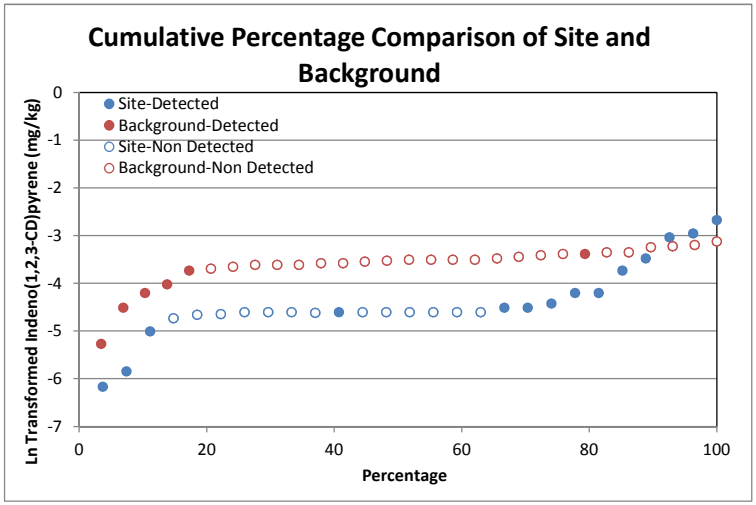

Histogram Comparison of Site and Background
70%
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
0.11
0.12
0.13
0.14
0.15
0.16
0.17
0.18
0.19
0.2
0.21
0.22
0.23
0.24
0.25
0.26
0.27
0.28
More
Benzo(k)fluoranthene Concentration (mg/kg)

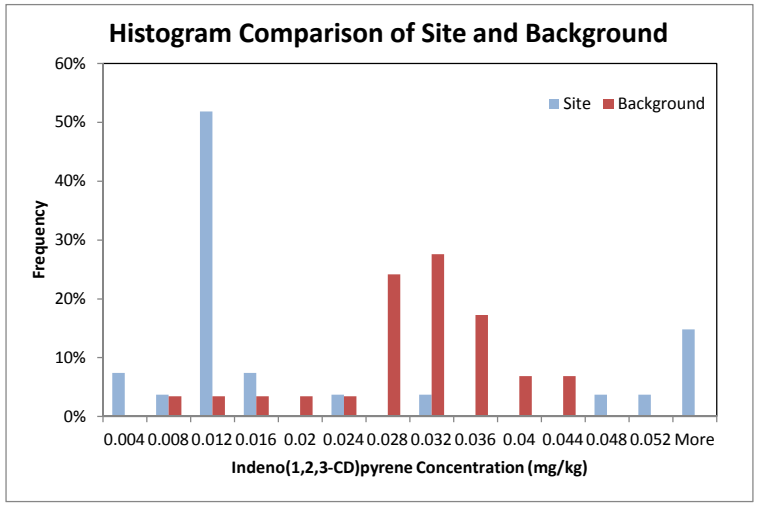
Surface Soil Exposure Area 2 - Indeno(1,2,3-cd)pyrene



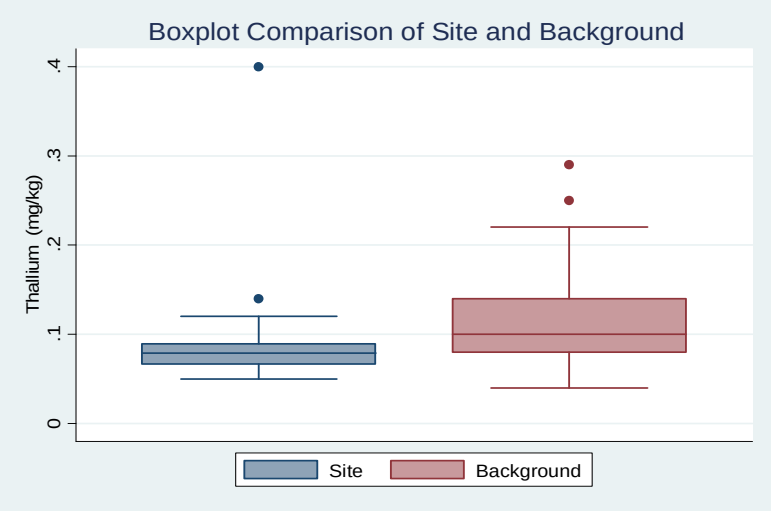


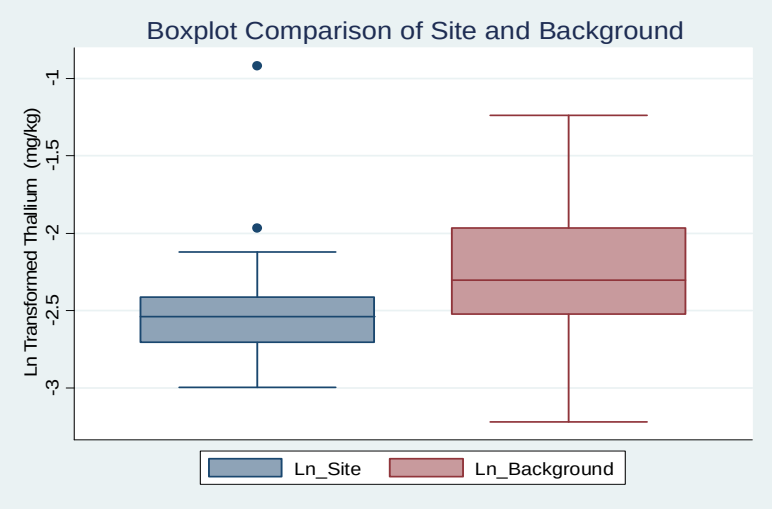


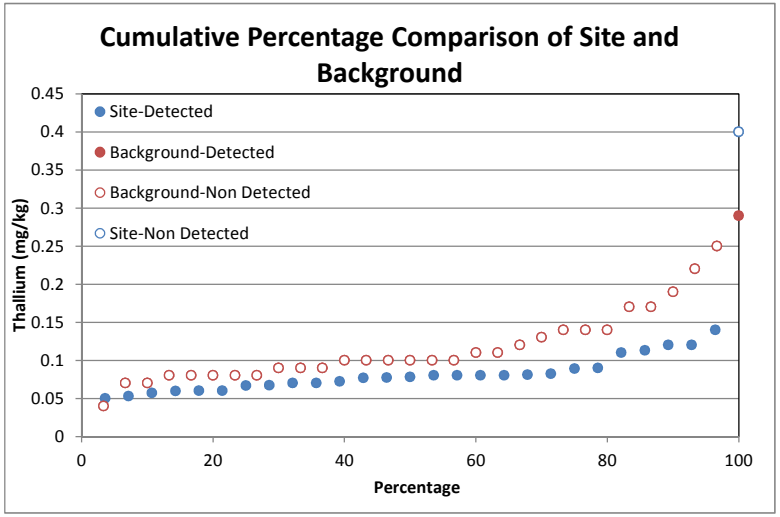


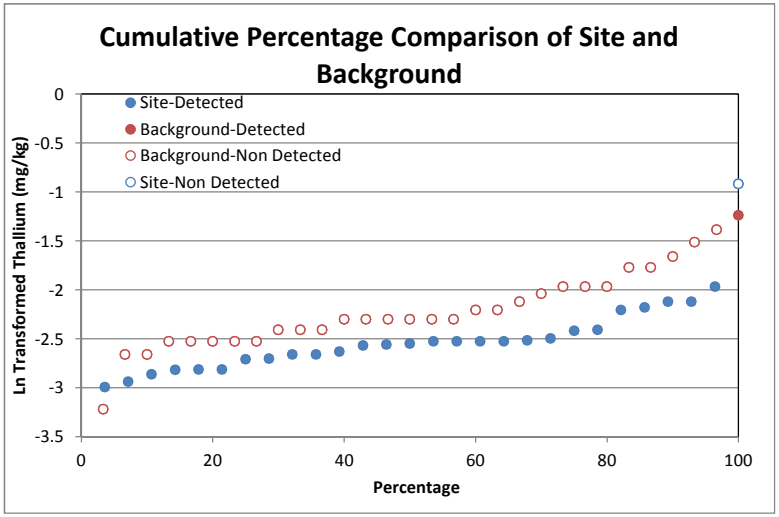

Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.004
0.008
0.012
0.016
0.02
0.024
0.028
0.032
0.036
0.04
0.044
0.048
0.052
More
Indeno(1,2,3-CD)pyrene Concentration (mg/kg)

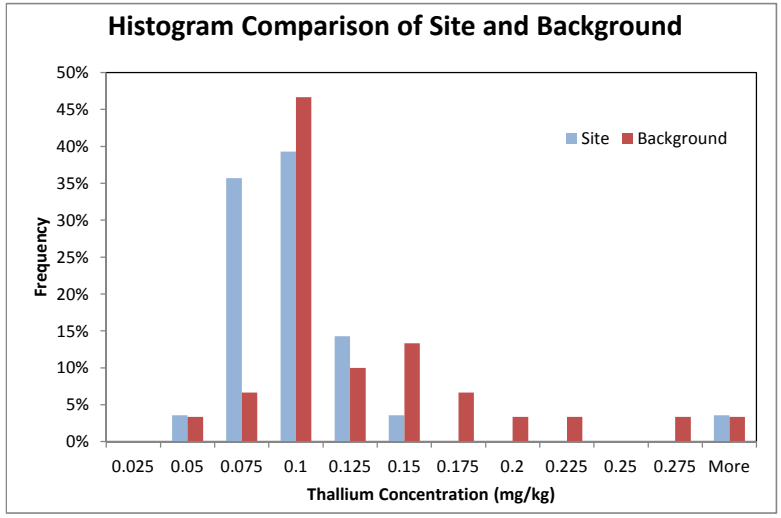
Surface Soil Exposure Area 2 - Thallium










Histogram Comparison of Site and Background
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
0.025
0.05
0.075
0.1
0.125
0.15
0.175
0.2
0.225
0.25
0.275
More
Thallium Concentration (mg/kg)

ATTACHMENT 5

GRAPHICAL COMPARISONS OF SITE SURFACE SOIL-SITE WIDE AND BACKGROUND SOILS FOR COPCS EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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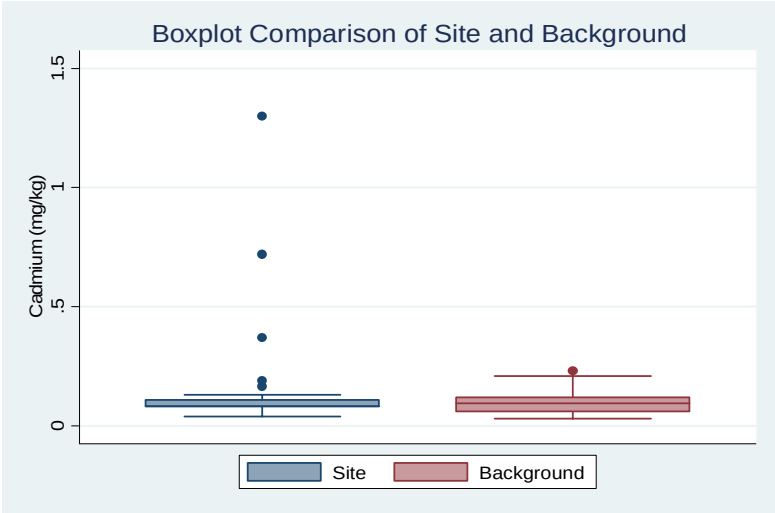
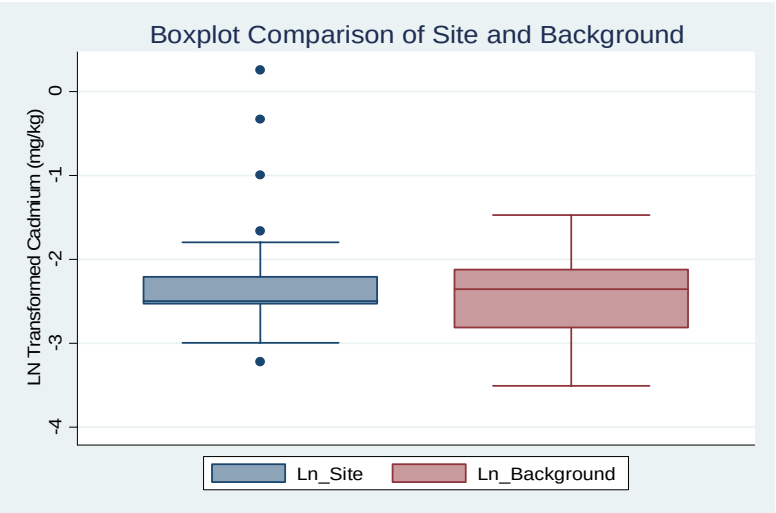
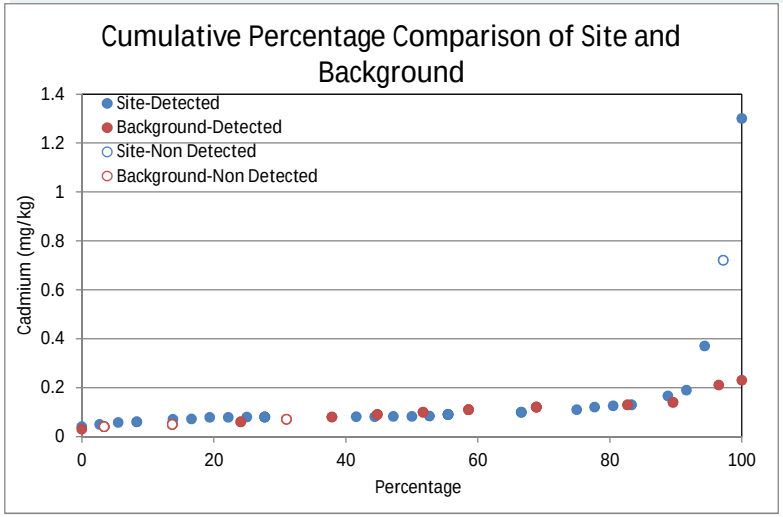
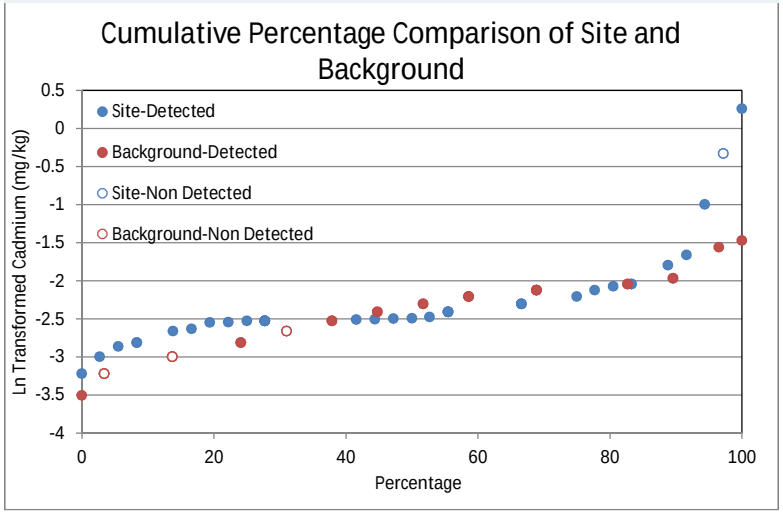
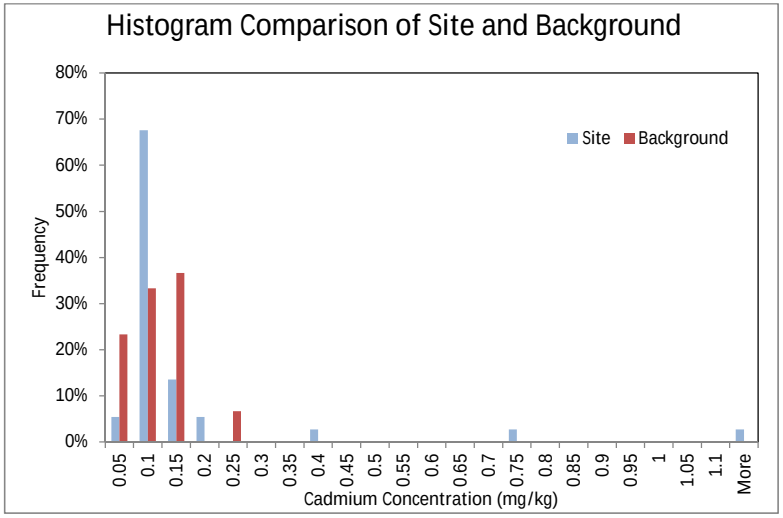
Surface Soil - Cadmium



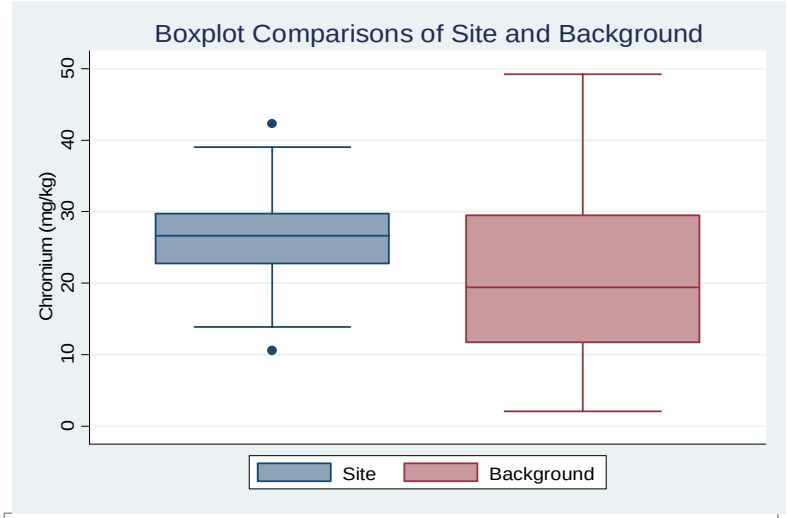


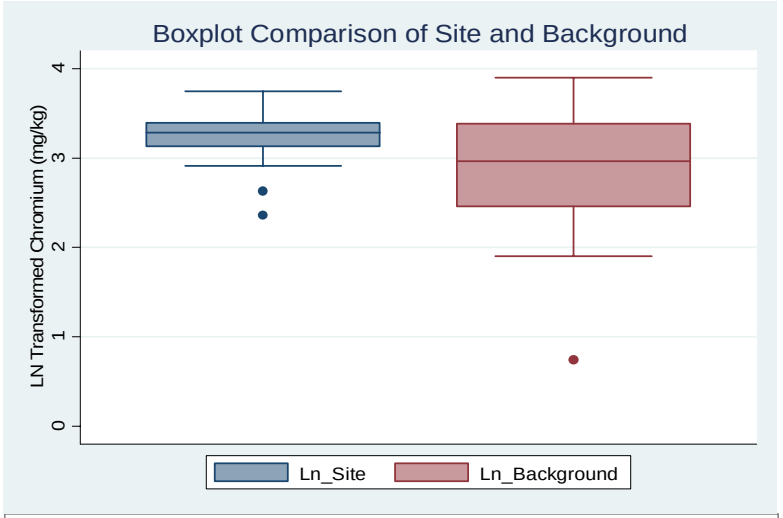


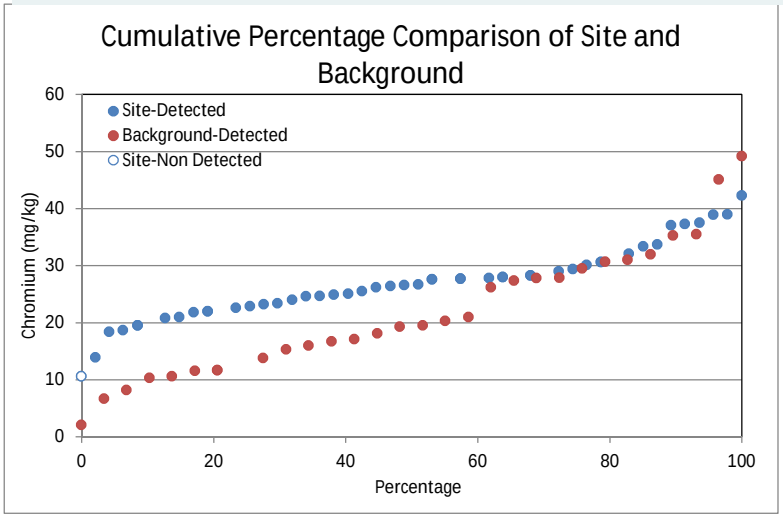


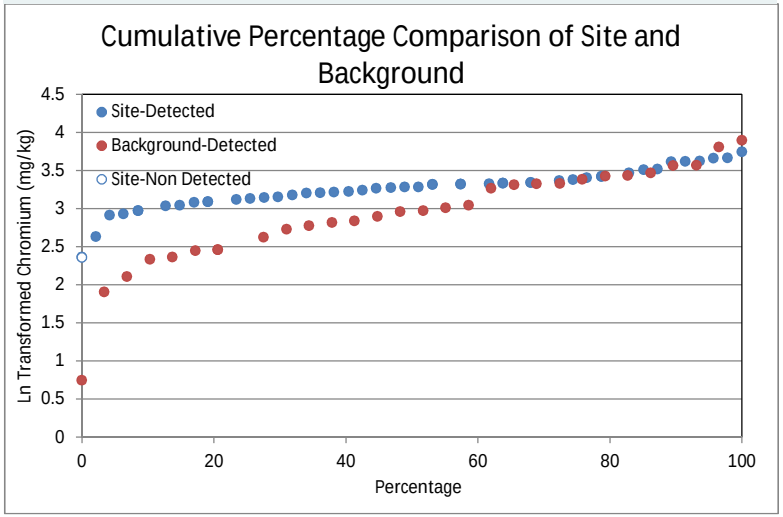

Histogram Comparison of Site and Background
80%
70%
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
0.55
0.6
0.65
0.7
0.75
0.8
0.85
0.9
0.95
1
1.05
1.1
More
Cadmium Concentration (mg/kg)

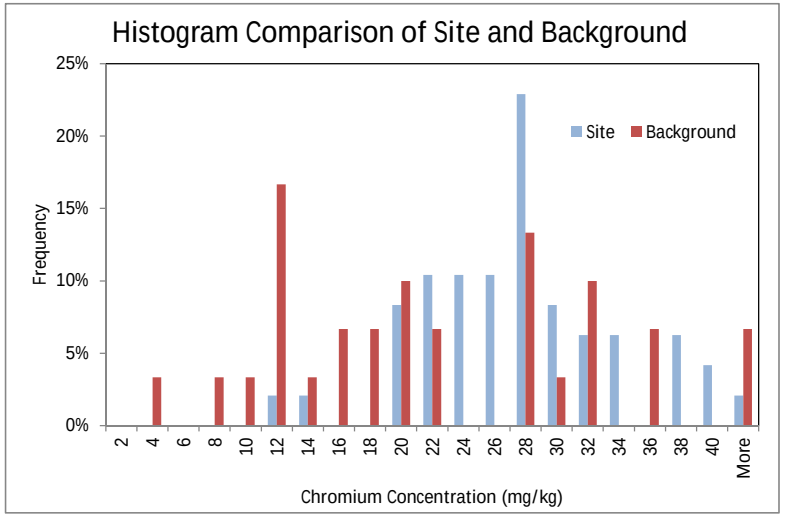
Surface Soil - Chromium



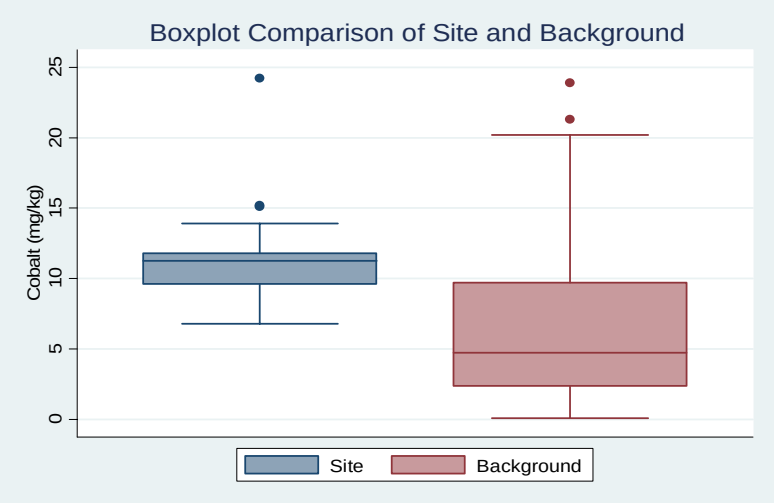


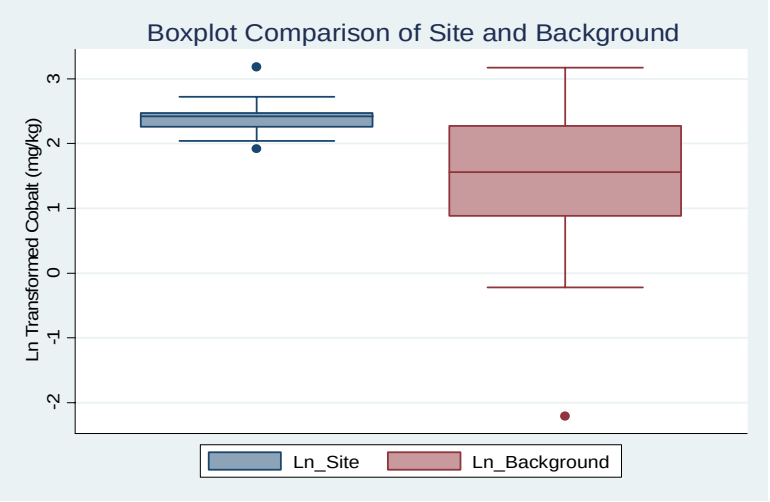


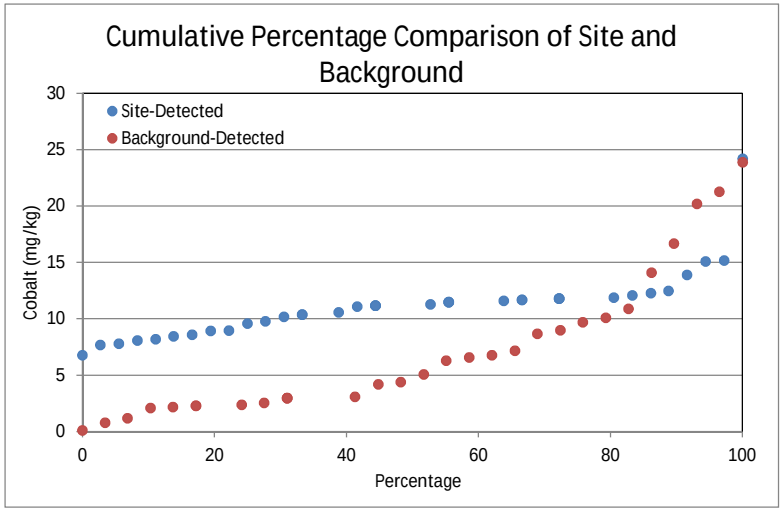


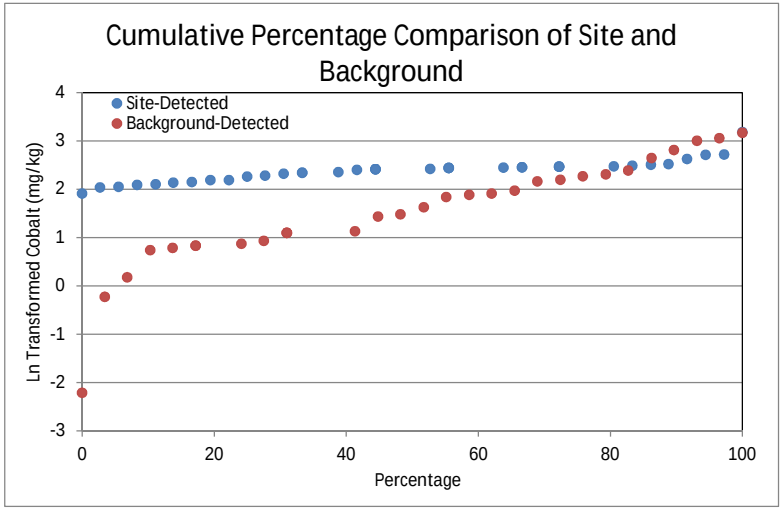

Histogram Comparison of Site and Background
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
More
Chromium Concentration (mg/kg)

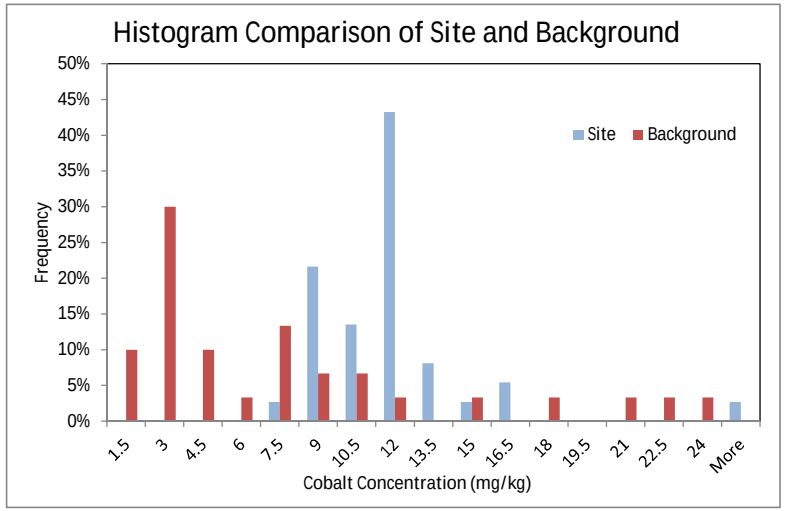
Surface Soil - Cobalt



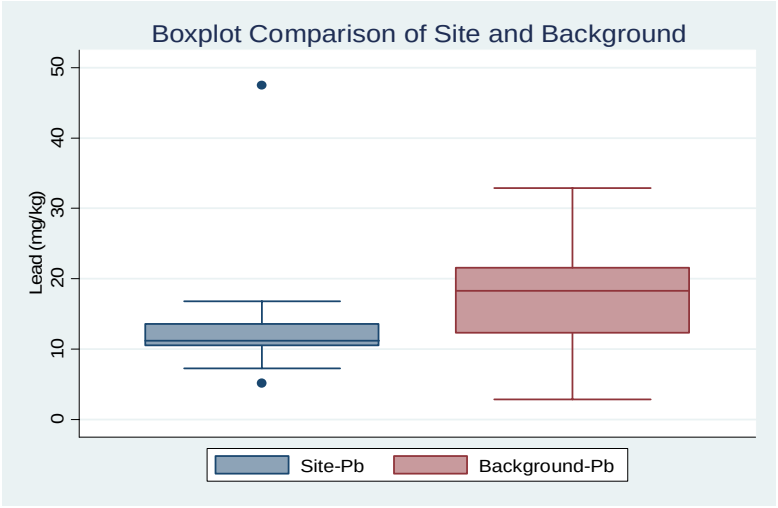


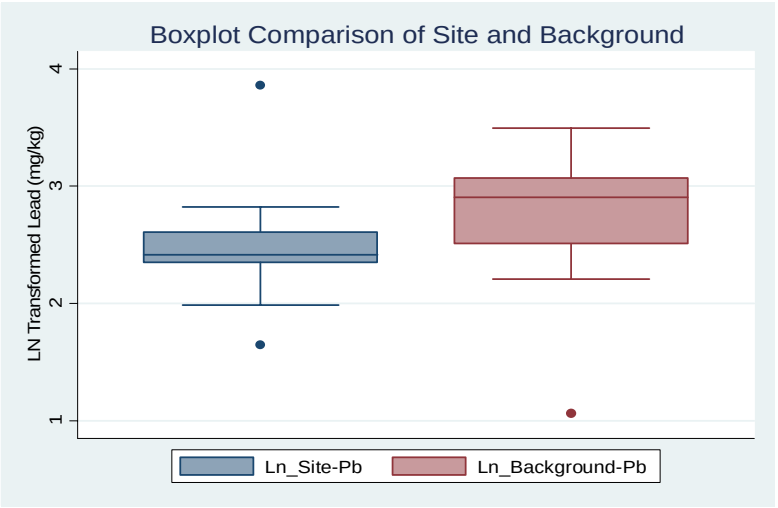


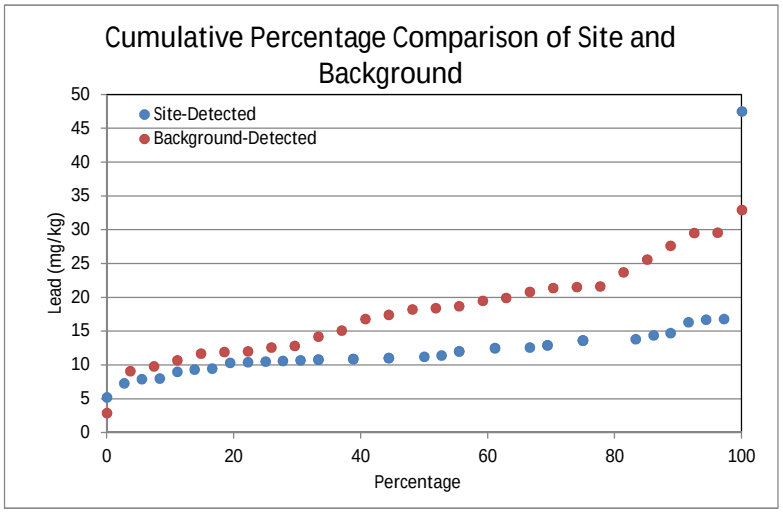


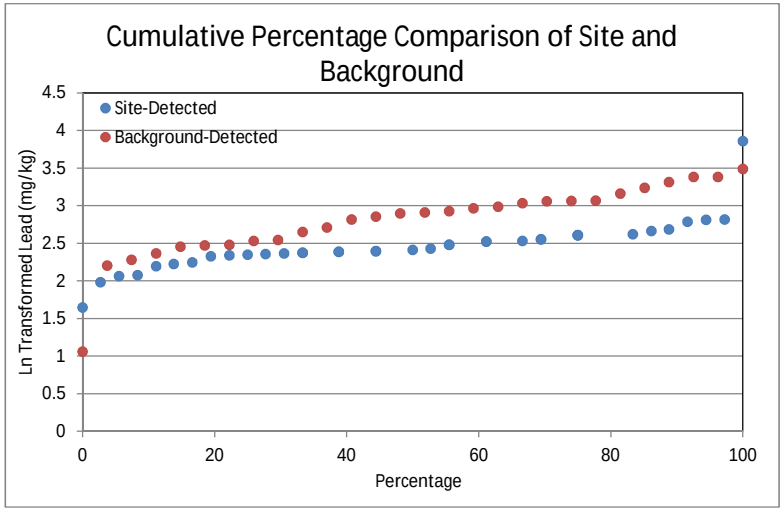

Histogram Comparison of Site and Background
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
1.5
3
4.5
6
7.5
9
10.5
12
13.5
15
16.5
18
19.5
21
22.5
24
More
Cobalt Concentration (mg/kg)

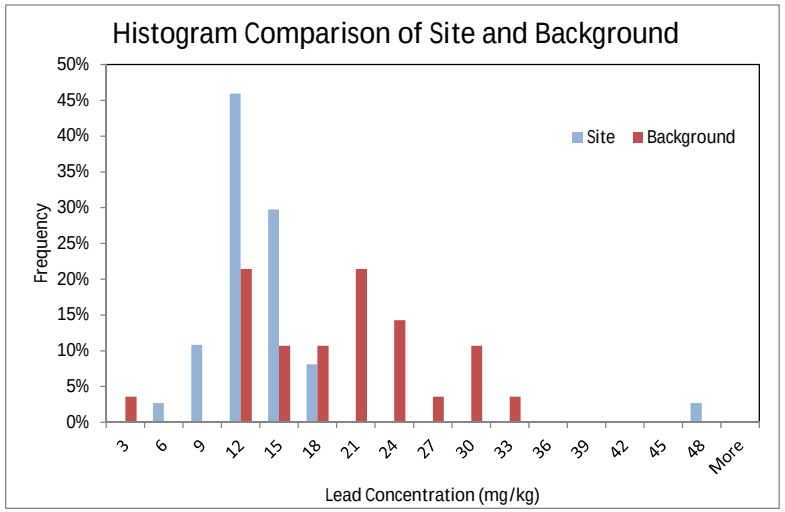
Surface Soil - Lead



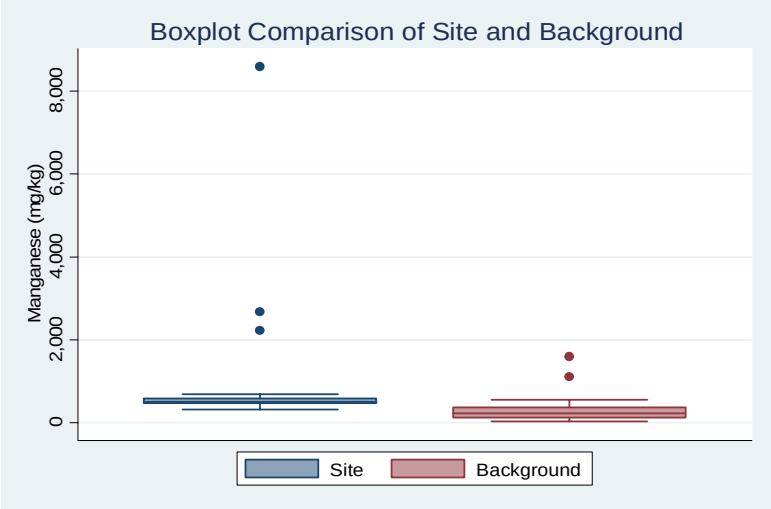


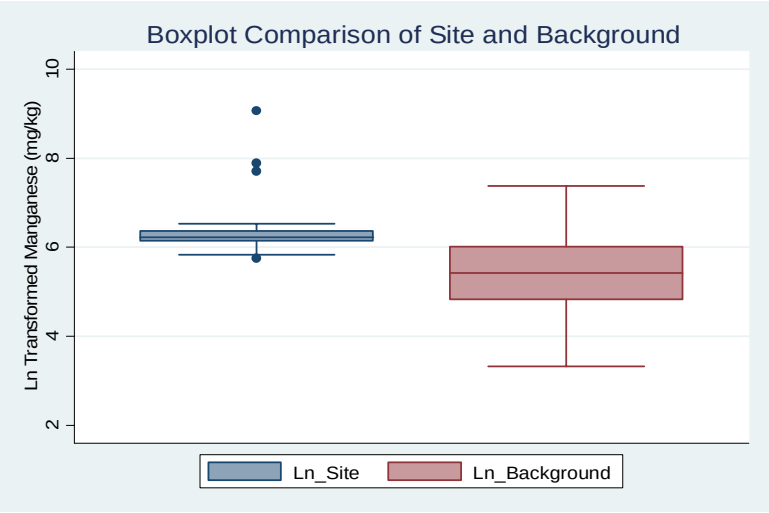


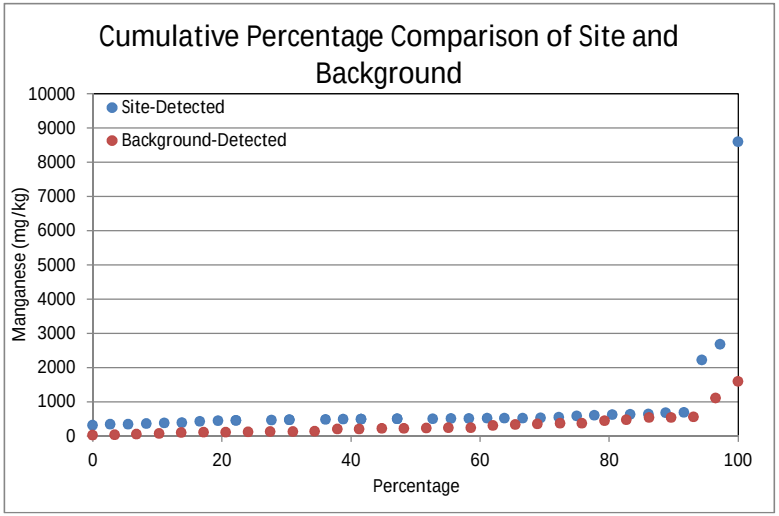


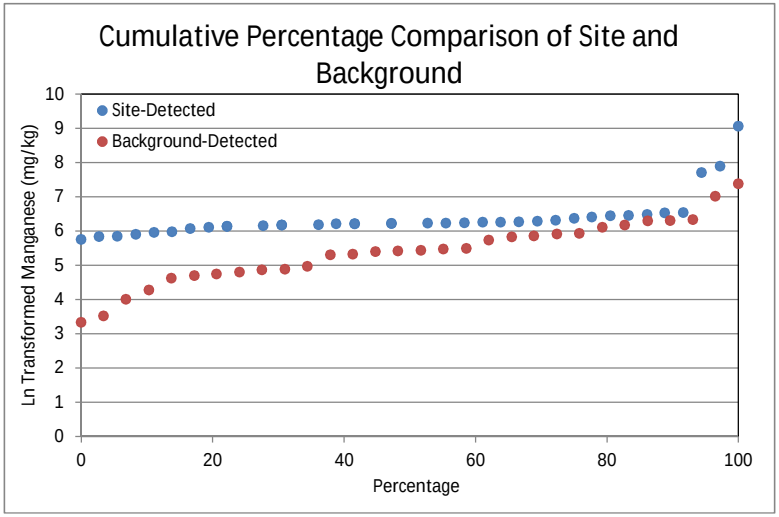

Histogram Comparison of Site and Background
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
3
6
9
12
15
18
21
24
27
30
33
36
39
42
45
48
More
Lead Concentration (mg/kg)

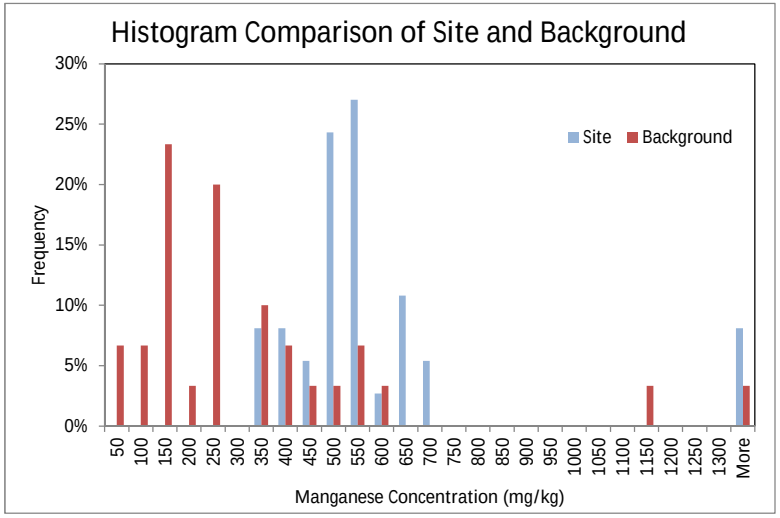
Surface Soil - Manganese



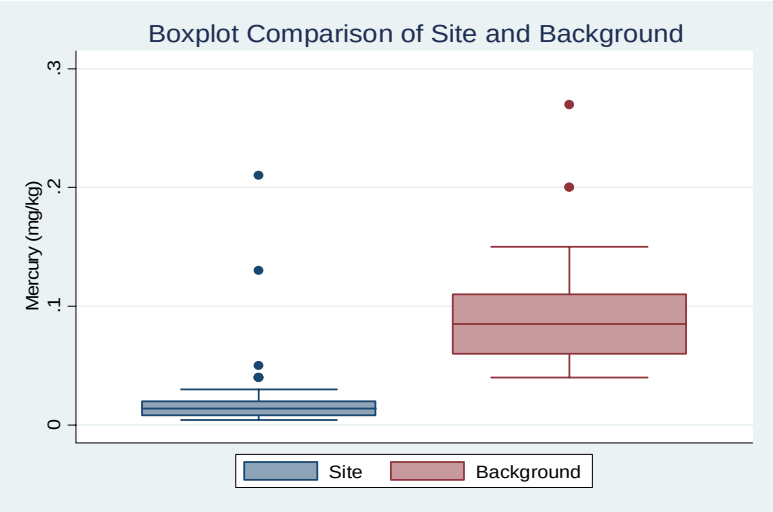


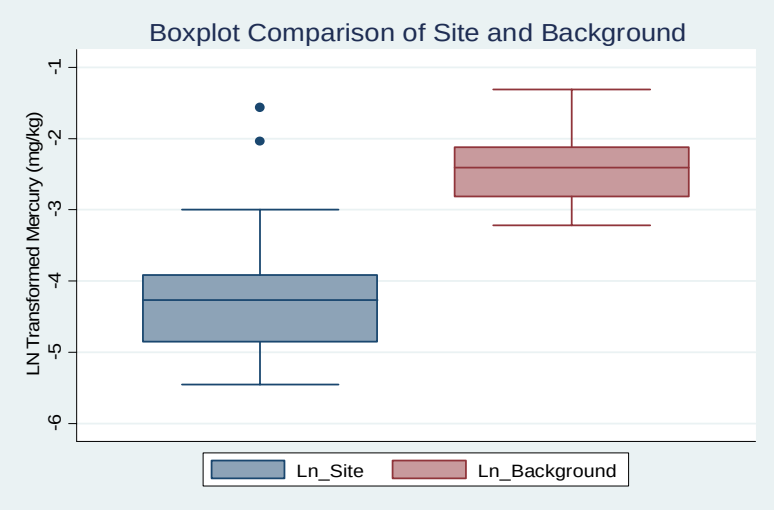


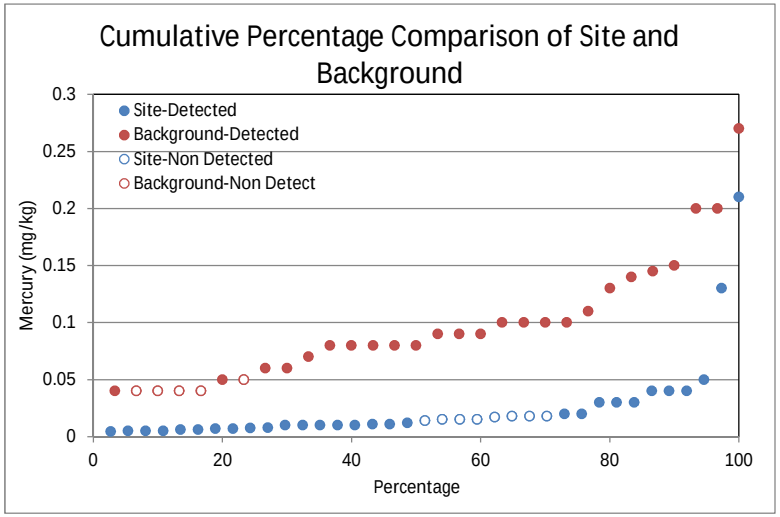


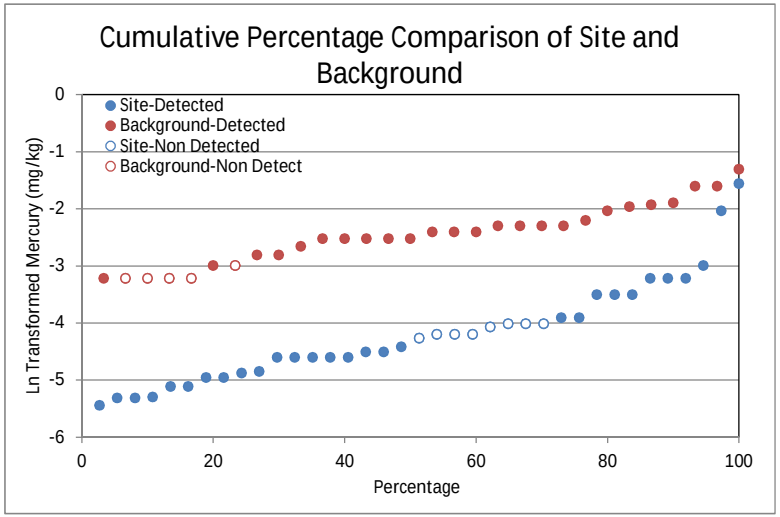

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
More
Manganese Concentration (mg/kg)

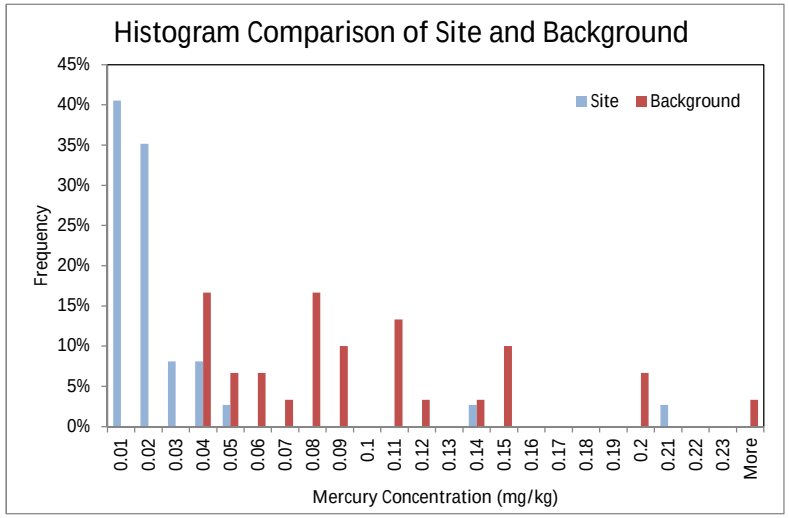
Surface Soil - Mercury



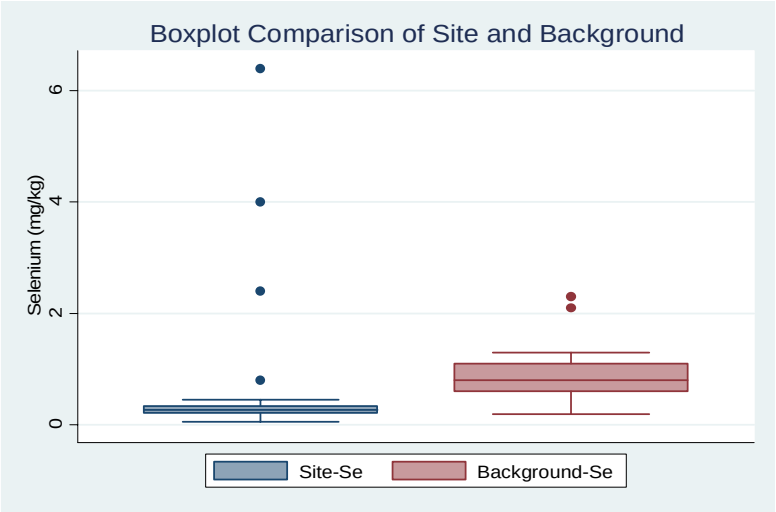


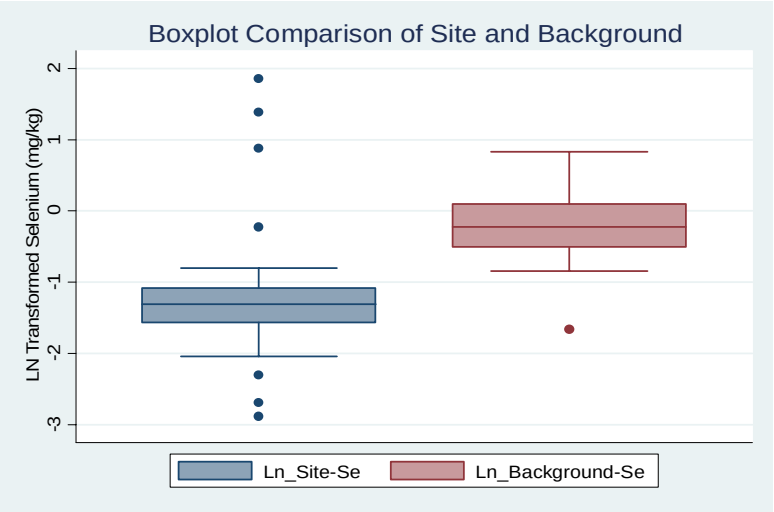


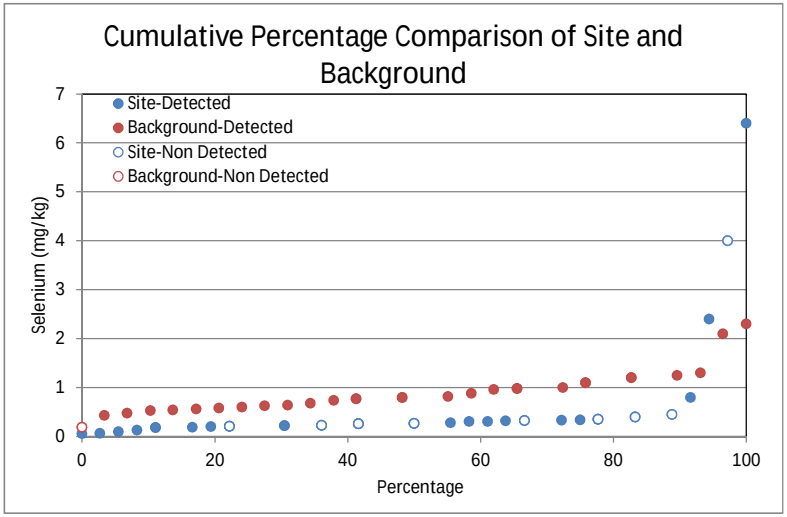


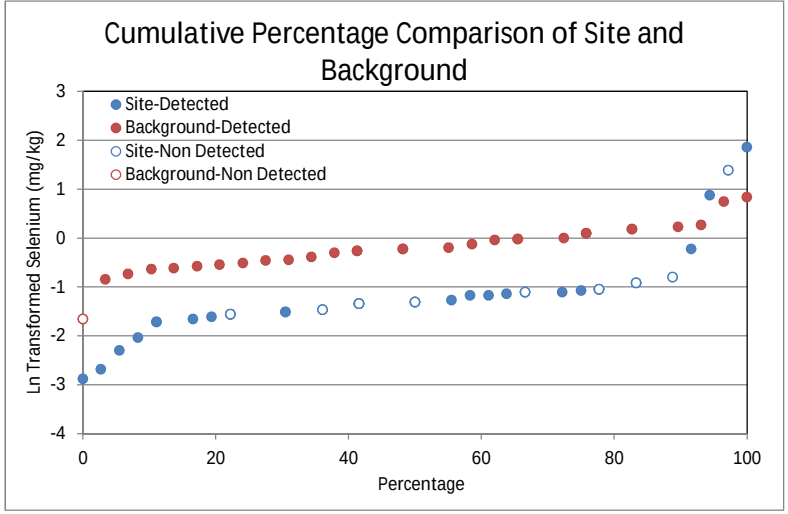

Histogram Comparison of Site and Background
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
0.11
0.12
0.13
0.14
0.15
0.16
0.17
0.18
0.19
0.2
0.21
0.22
0.23
More
Mercury Concentration (mg/kg)

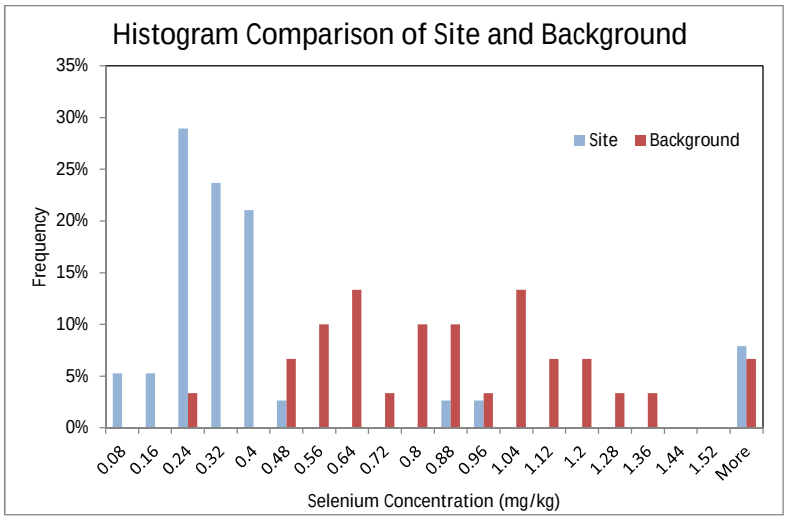
Surface Soil - Selenium



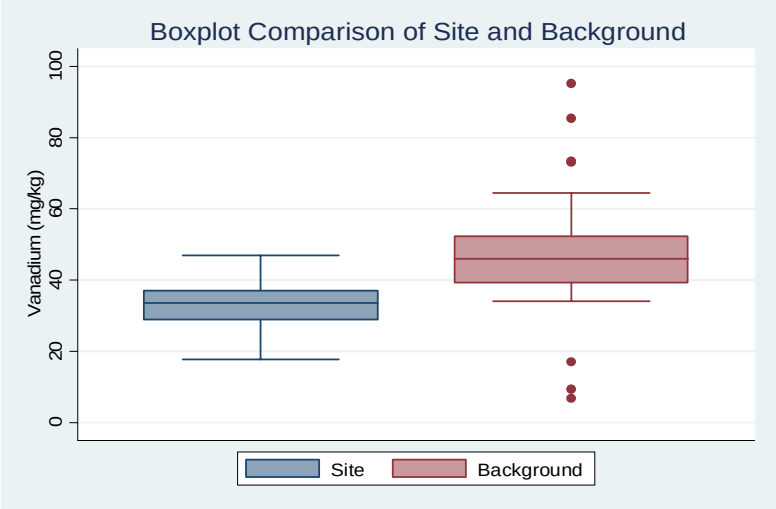


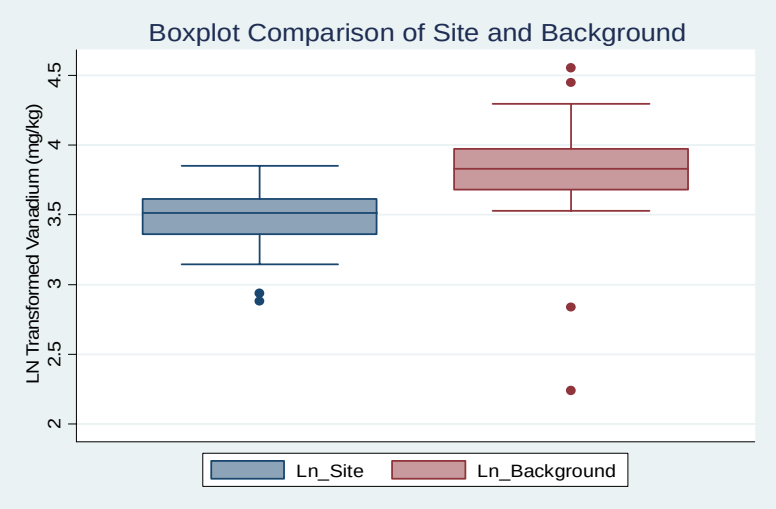


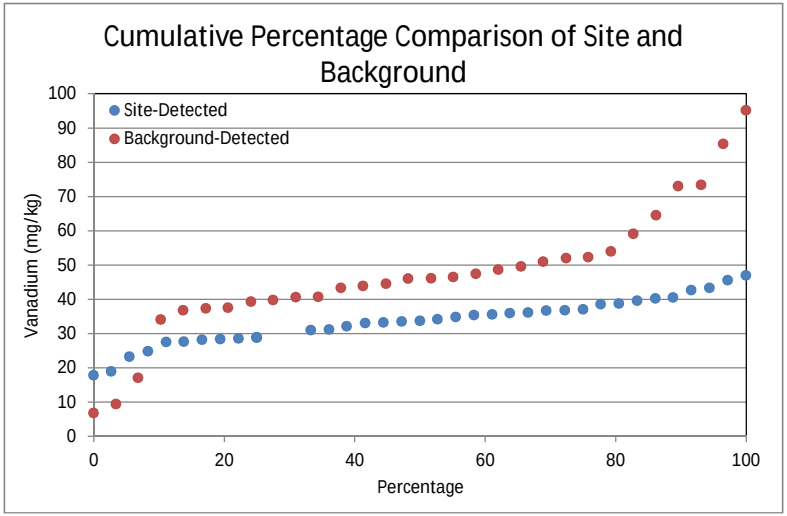


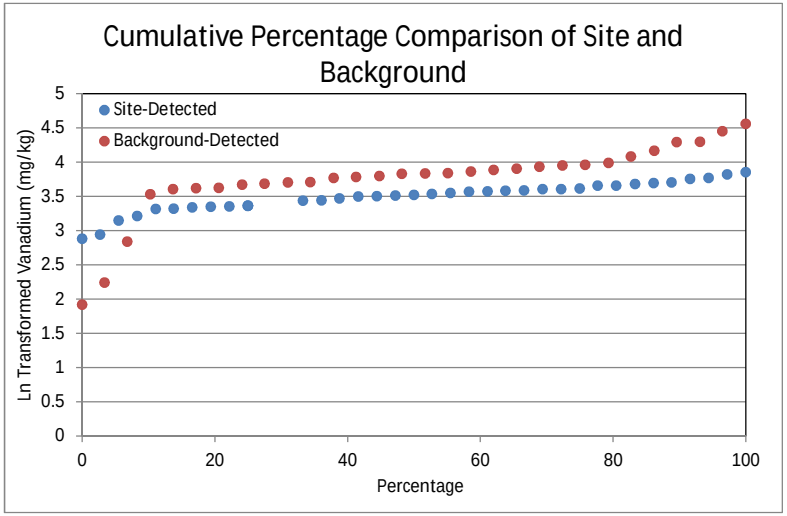

Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
0.08
0.16
0.24
0.32
0.4
0.48
0.56
0.64
0.72
0.8
0.88
0.96
1.04
1.12
1.2
1.28
1.36
1.44
1.52
More
Selenium Concentration (mg/kg)

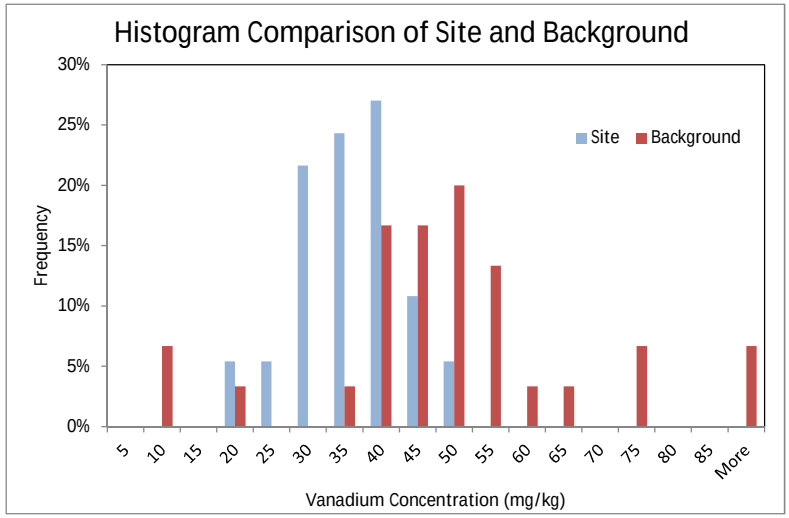
Surface Soil - Vanadium



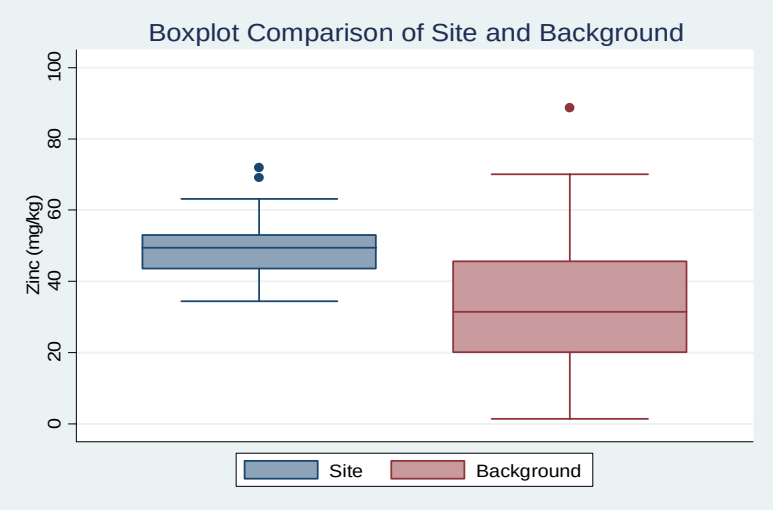


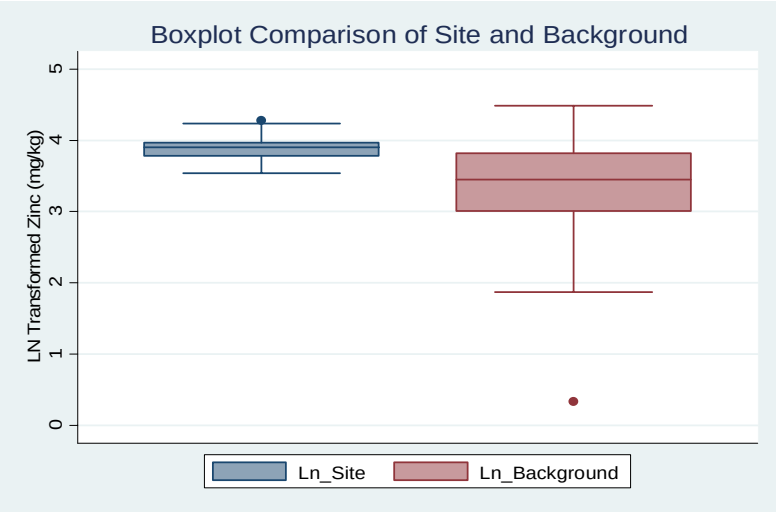


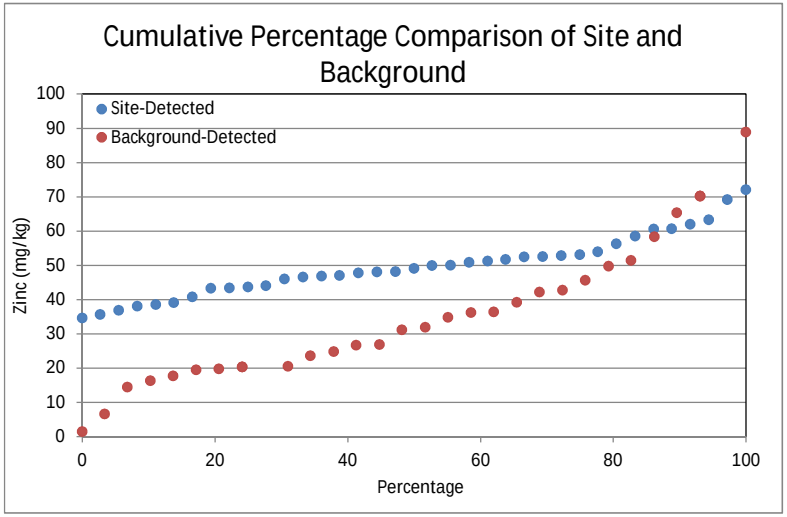


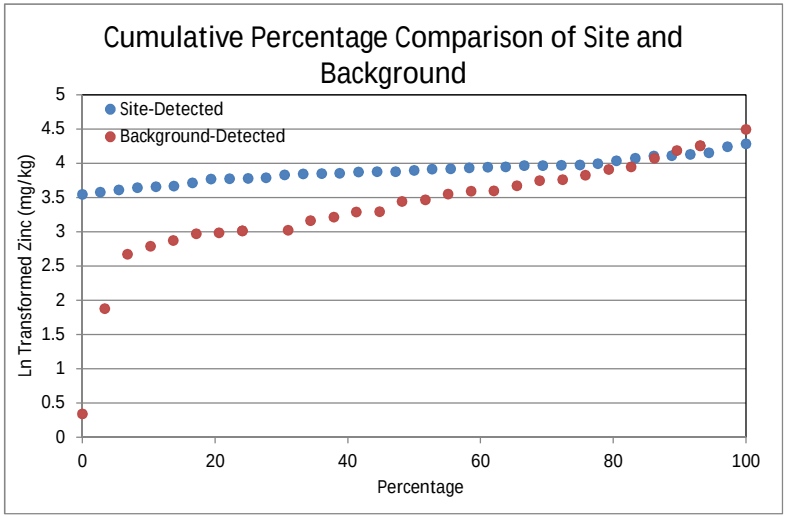

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
More
Vanadium Concentration (mg/kg)

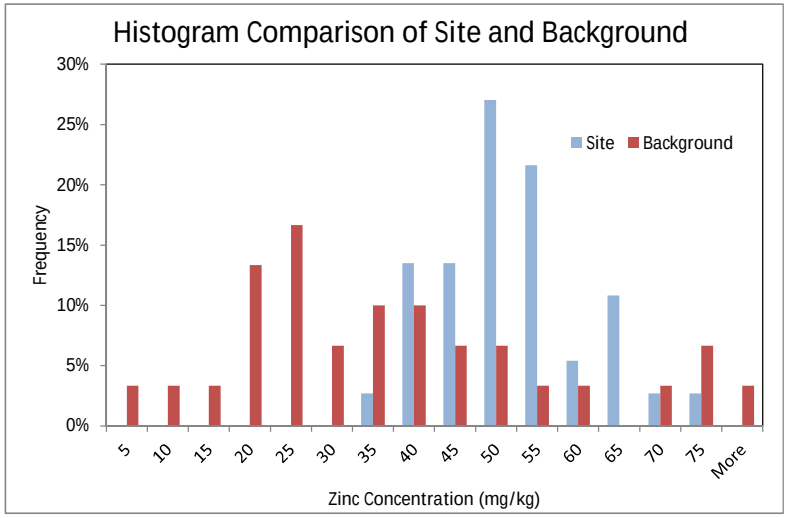
Surface Soil - Zinc





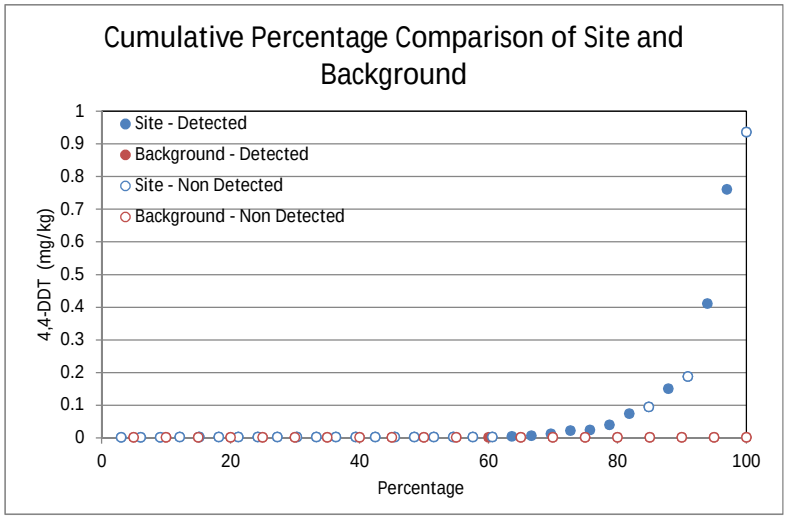


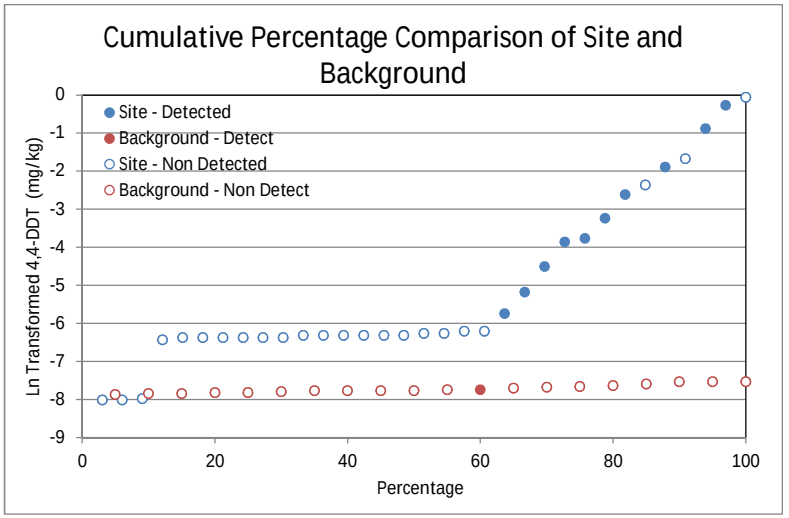


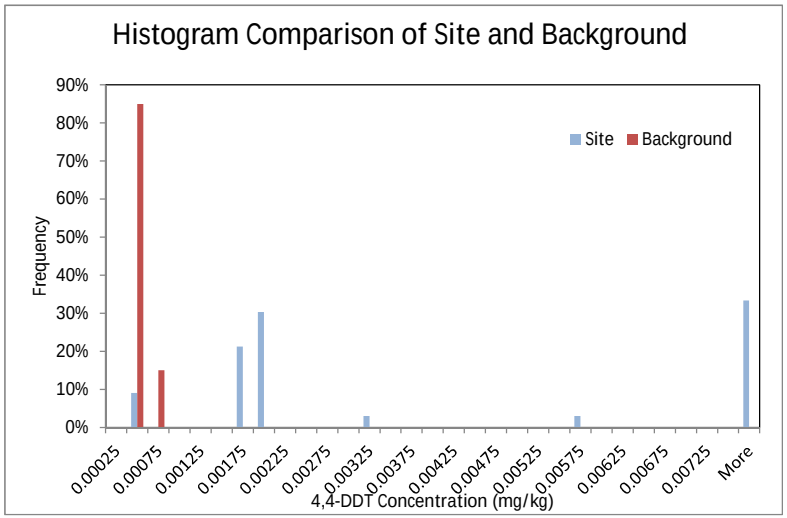

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
More
Zinc Concentration (mg/kg)

Surface Soil - 4,4-DDT

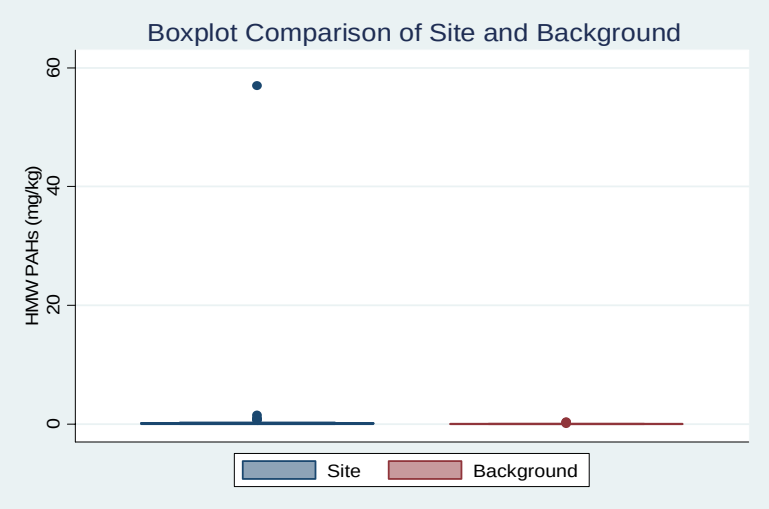
Stata not able to produce Box Plot

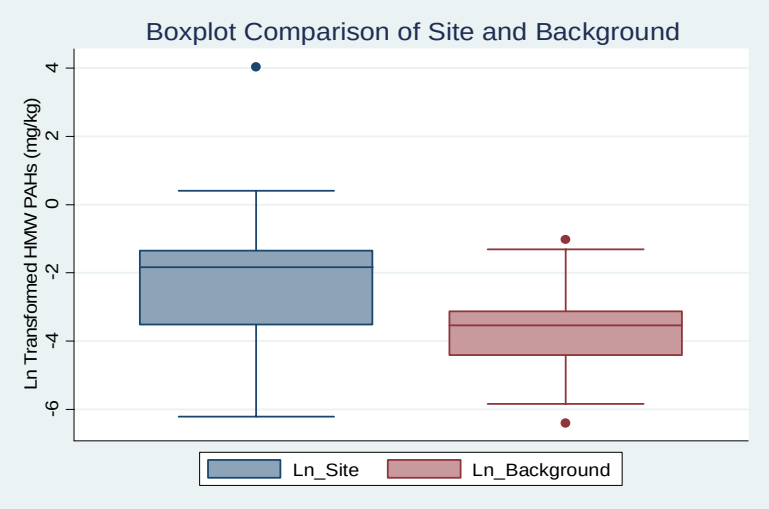


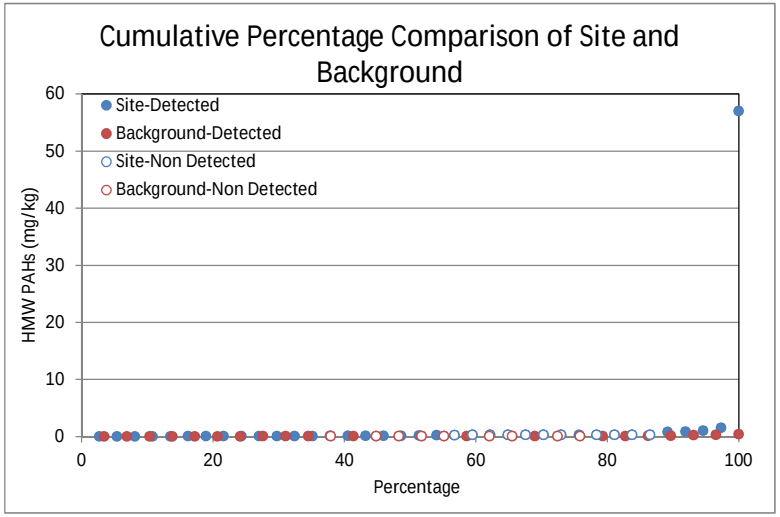


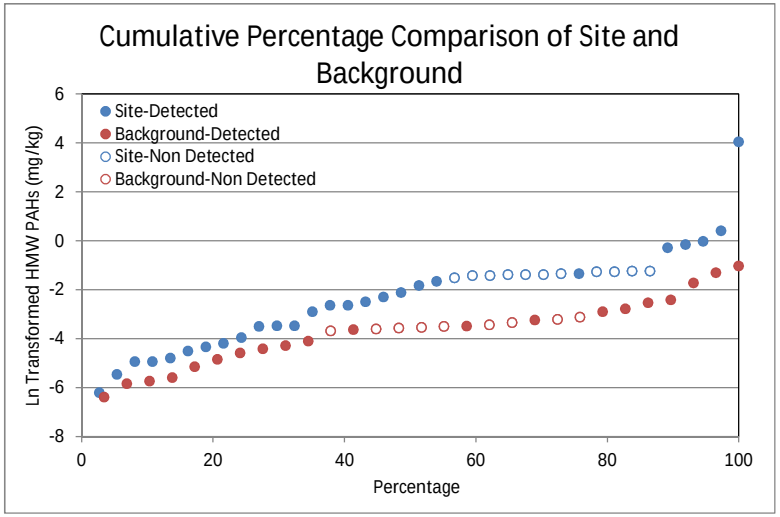

Histogram Comparison of Site and Background
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.00025
0.00075
0.00125
0.00175
0.00225
0.00275
0.00325
0.00375
0.00425
0.00475
0.00525
0.00575
0.00625
0.00675
0.00725
More
4,4-DDT Concentration (mg/kg)

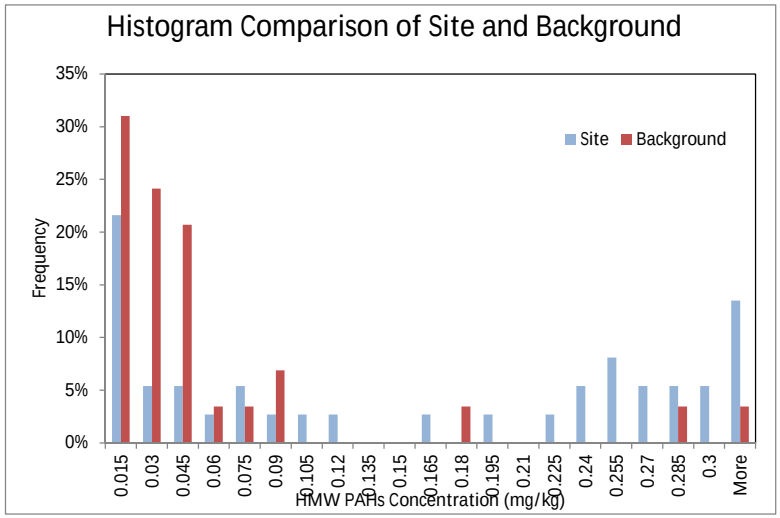
Surface Soil - HMW PAHs



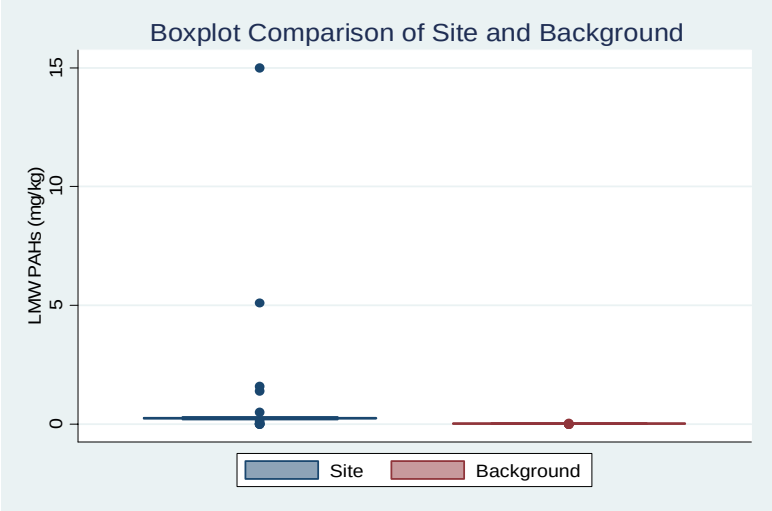


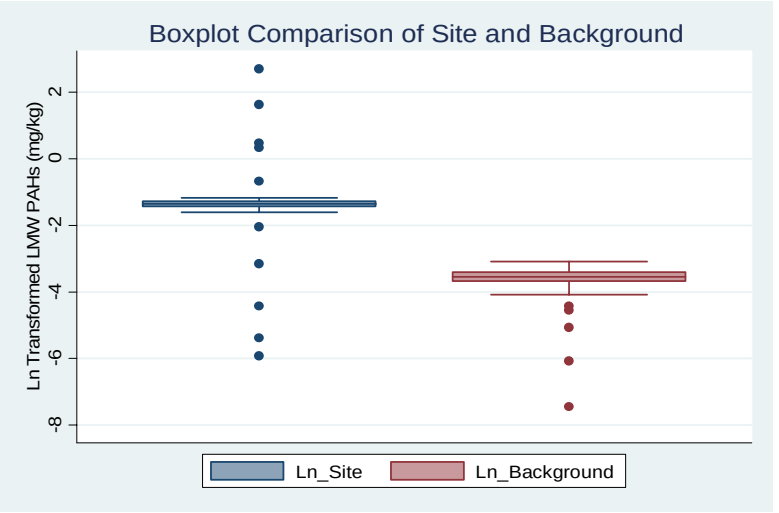


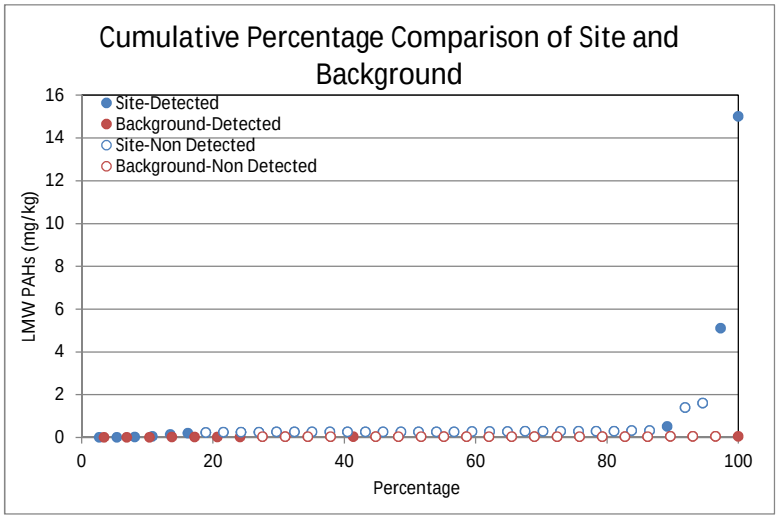


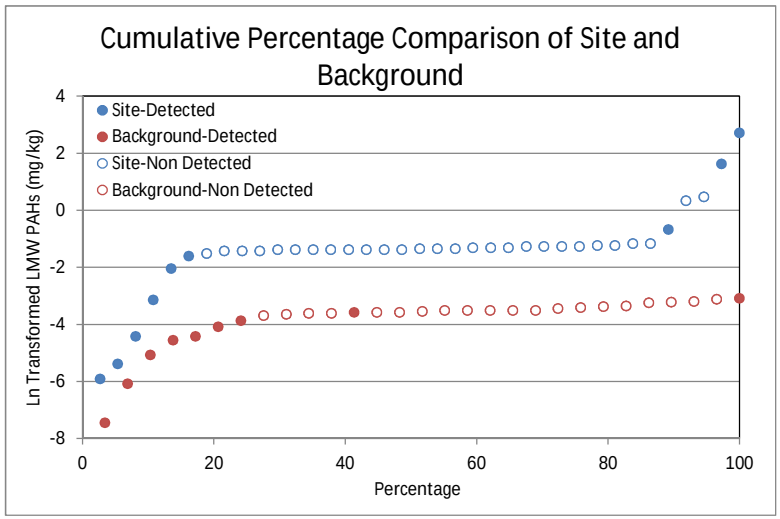

Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
0.015
0.03
0.045
0.06
0.075
0.09
0.105
0.12
0.135
0.15
0.165
0.18
0.195
0.21
0.225
0.24
0.255
0.27
0.285
0.3
More
HMW PAHs Concentration (mg/kg)

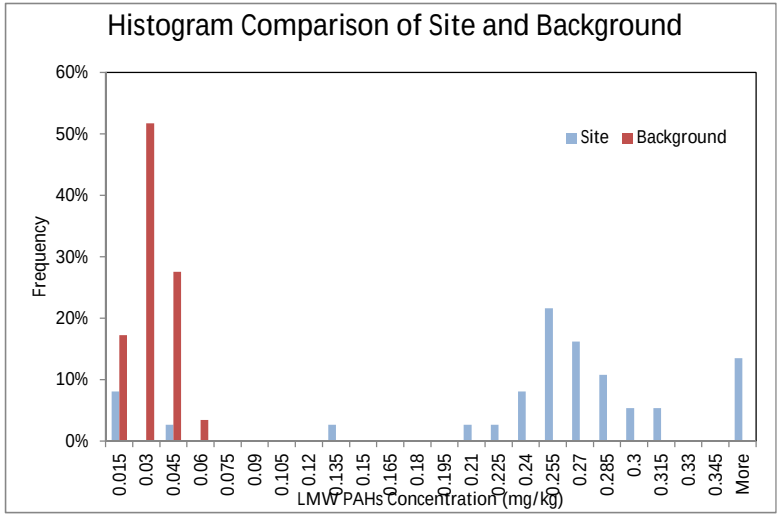
Surface Soil - LMW PAHs










Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.015
0.03
0.045
0.06
0.075
0.09
0.105
0.12
0.135
0.15
0.165
0.18
0.195
0.21
0.225
0.24
0.255
0.27
0.285
0.3
0.315
0.33
0.345
More
LMW PAHs Concentration (mg/kg)

ATTACHMENT 6

GRAPHICAL COMPARISONS OF SITE SURFACE SOIL-SITE WIDE AND BACKGROUND SOILS FOR COPCS NOT EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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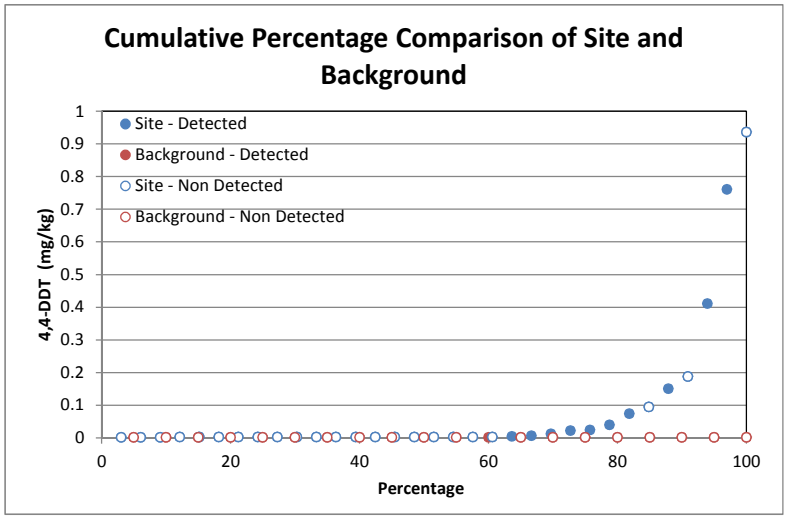
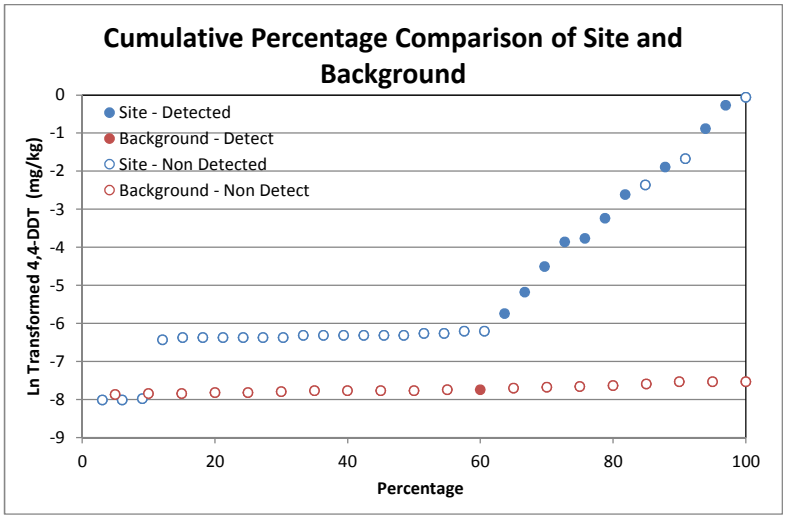
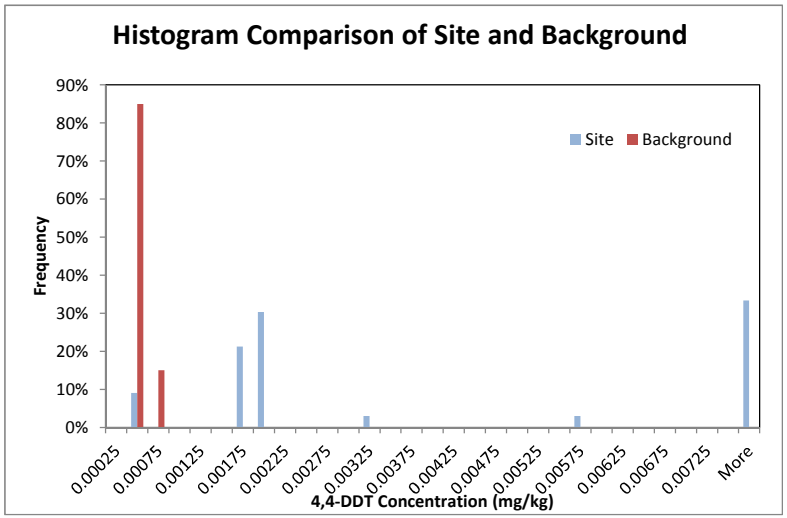
Surface Soil - 4,4-DDT

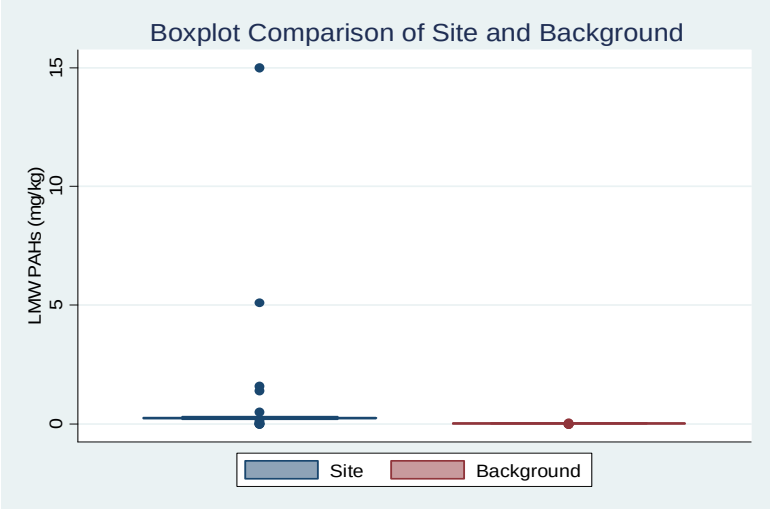
Stata not able to produce Box Plot

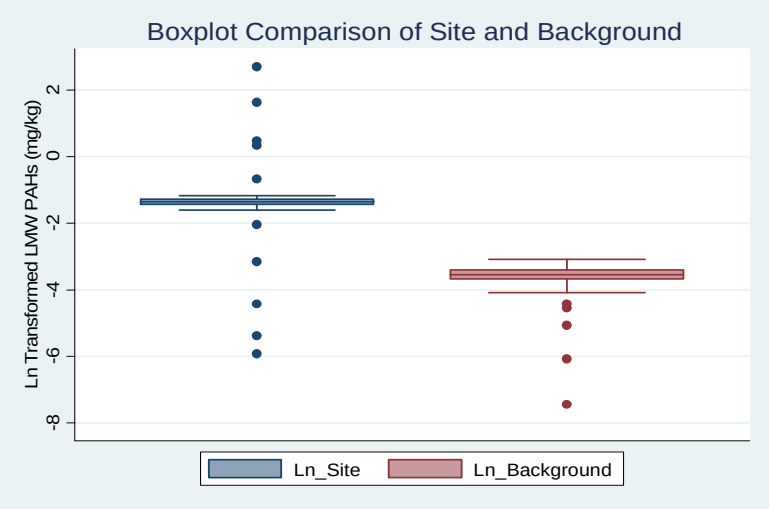


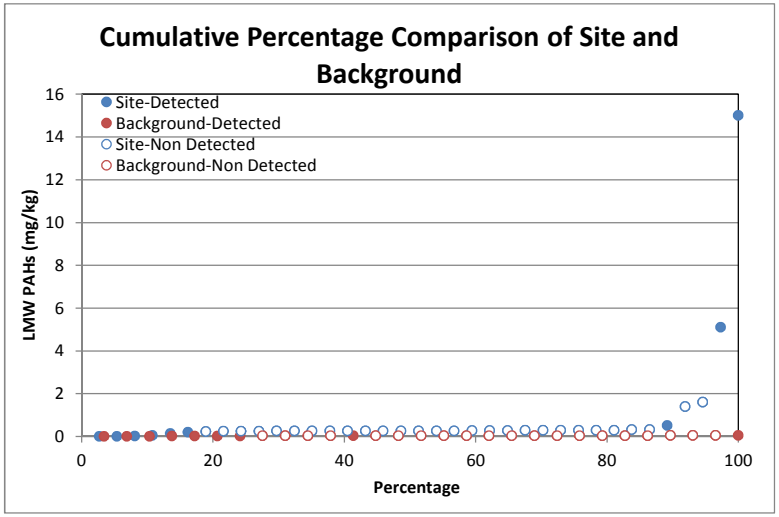


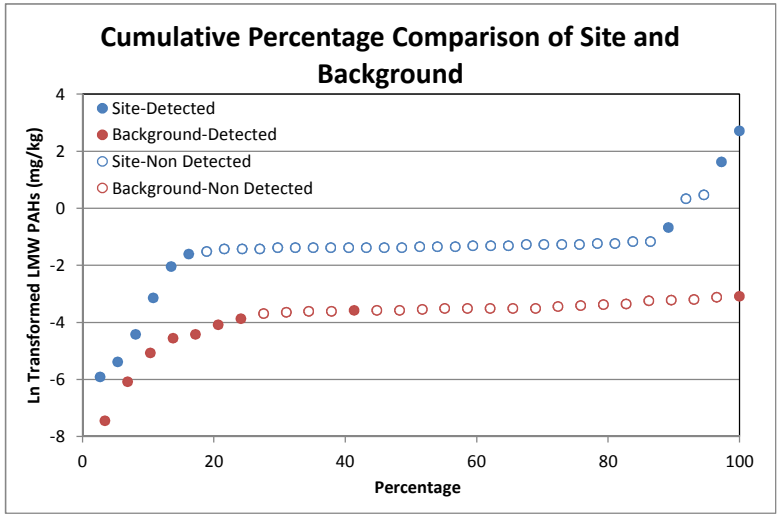

Histogram Comparison of Site and Background
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.00025
0.00075
0.00125
0.00175
0.00225
0.00275
0.00325
0.00375
0.00425
0.00475
0.00525
0.00575
0.00625
0.00675
0.00725
More
4,4-DDT Concentration (mg/kg)

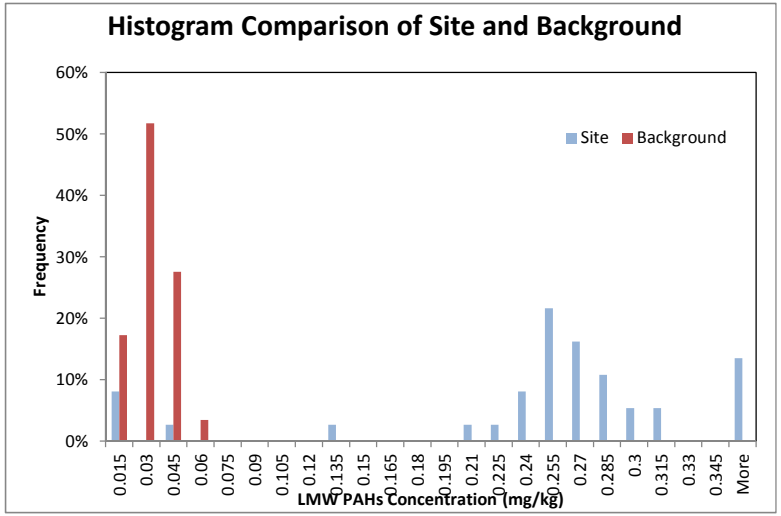
Surface Soil - LMW PAHs










Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.015
0.03
0.045
0.06
0.075
0.09
0.105
0.12
0.135
0.15
0.165
0.18
0.195
0.21
0.225
0.24
0.255
0.27
0.285
0.3
0.315
0.33
0.345
More
LMW PAHs Concentration (mg/kg)

ATTACHMENT 7

GRAPHICAL COMPARISONS OF SITE SUBSURFACE SOIL-EXPOSURE AREA 1 AND BACKGROUND SOILS FOR COPCS EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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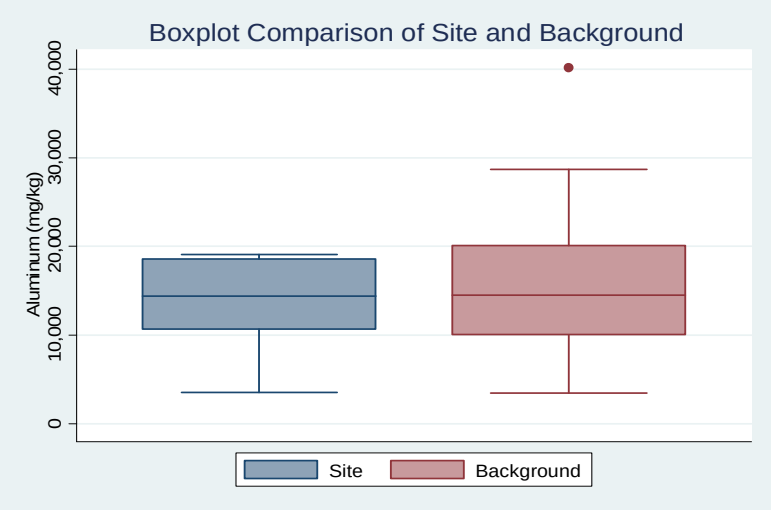
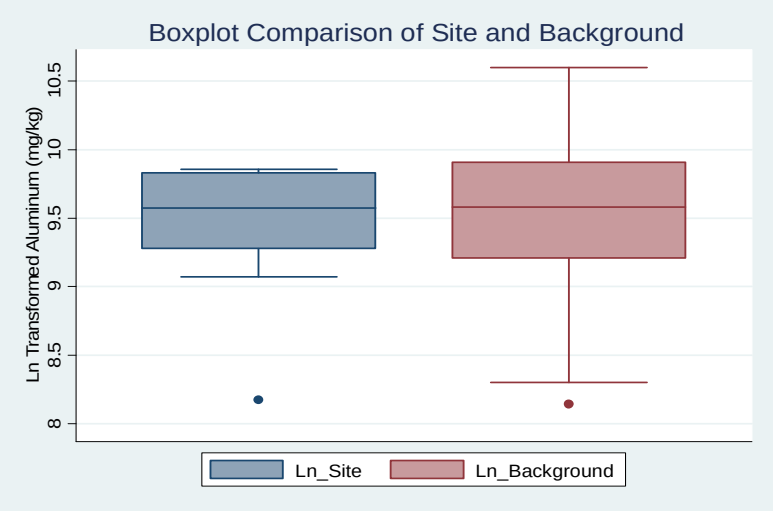
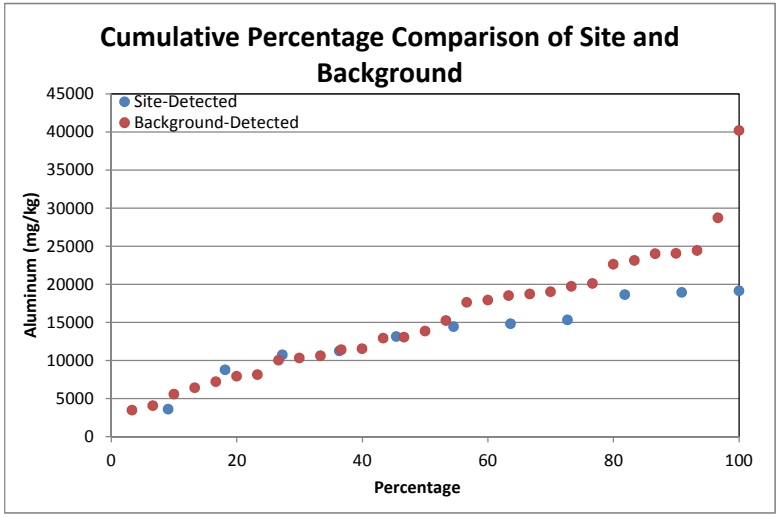
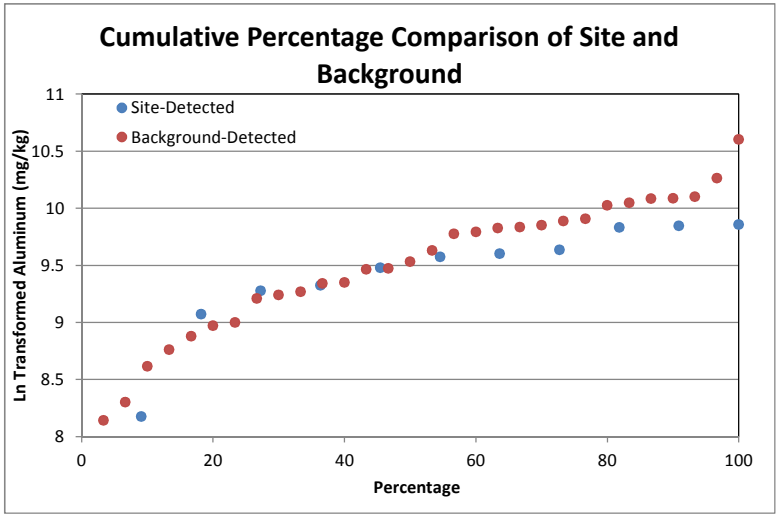
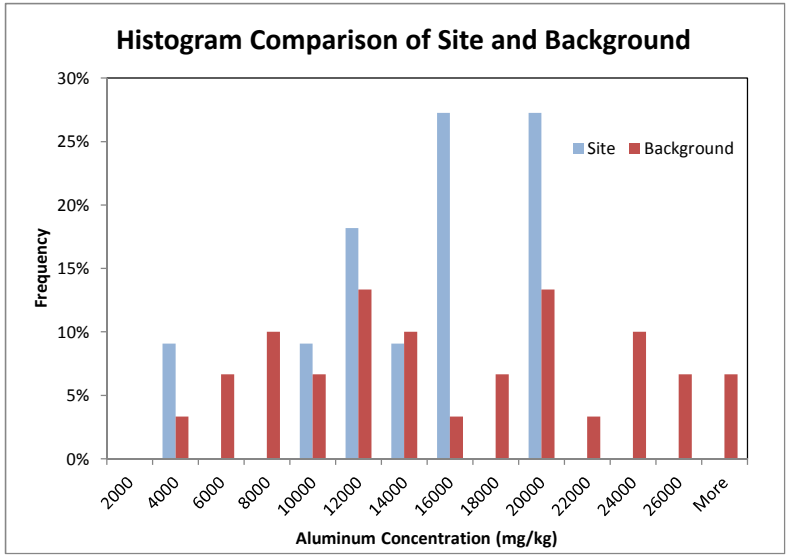
Subsurface Soil Exposure Area 1 - Aluminum



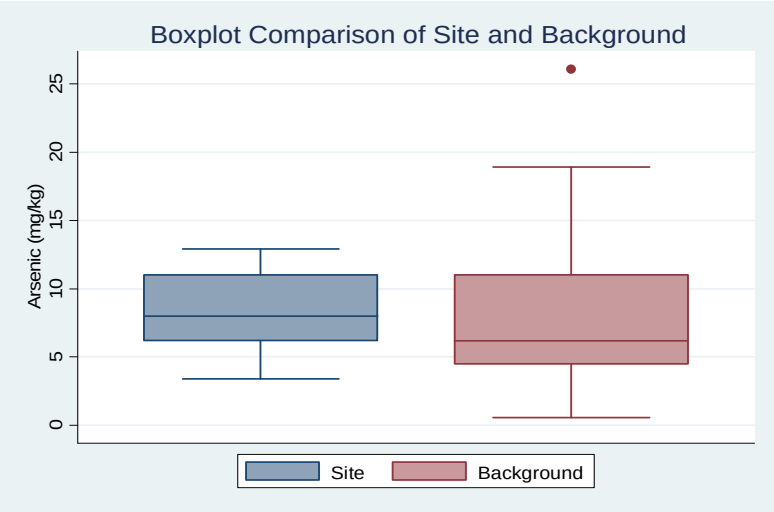


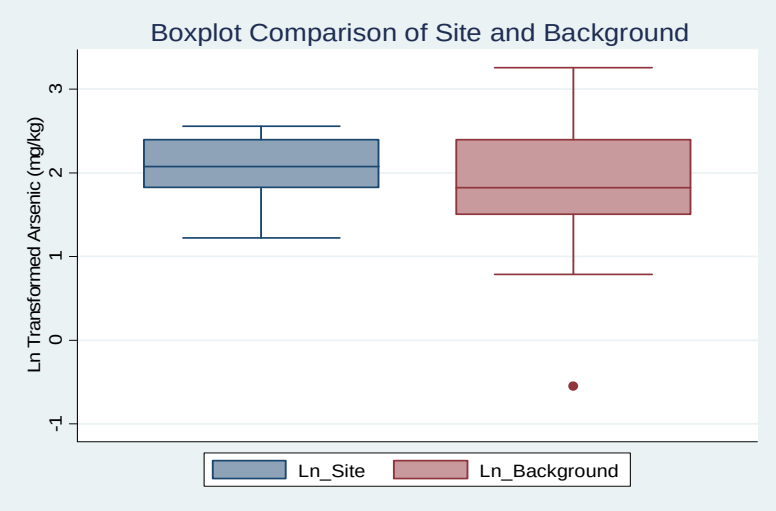


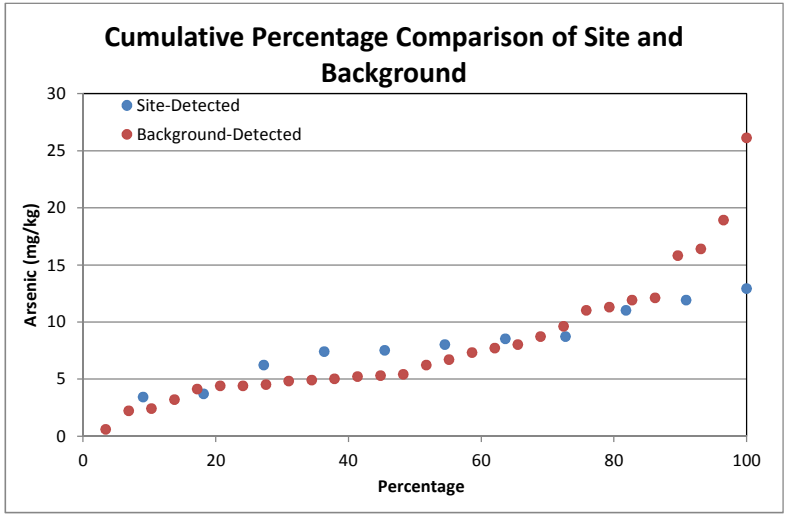


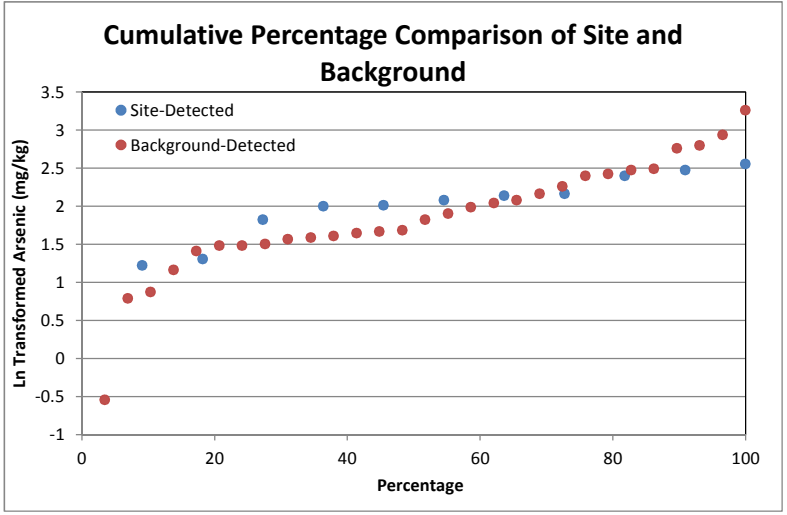

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
22000
24000
26000
More
Aluminum Concentration (mg/kg)

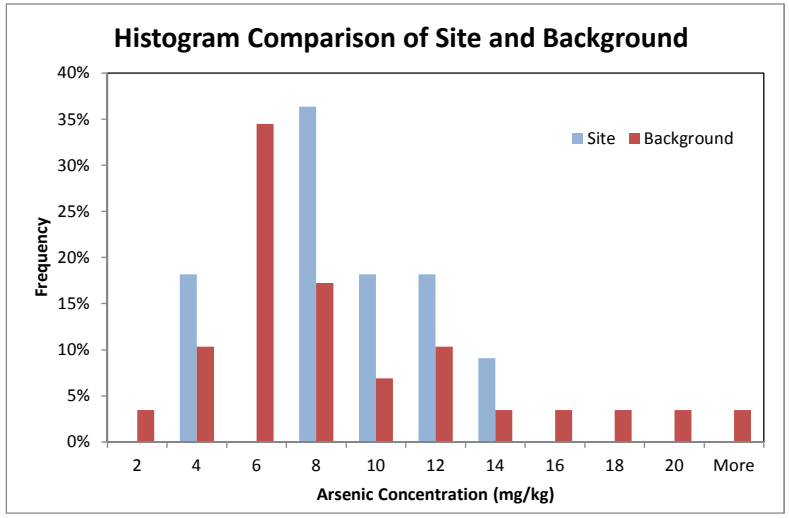
Subsurface Soil Exposure Area 1 - Arsenic



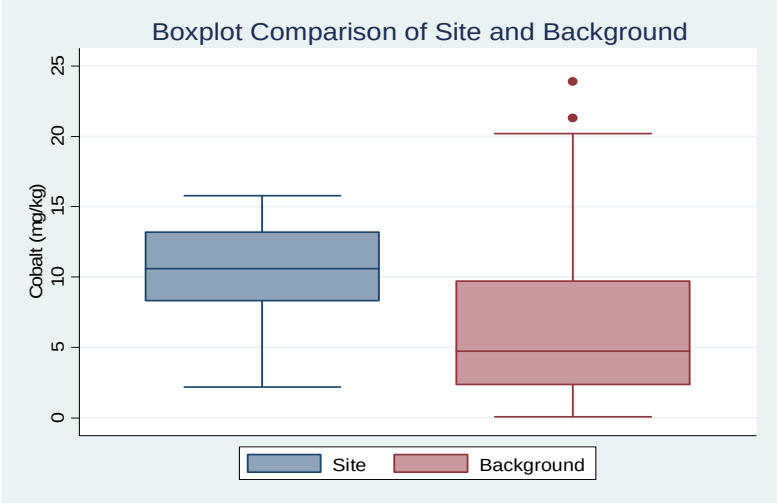


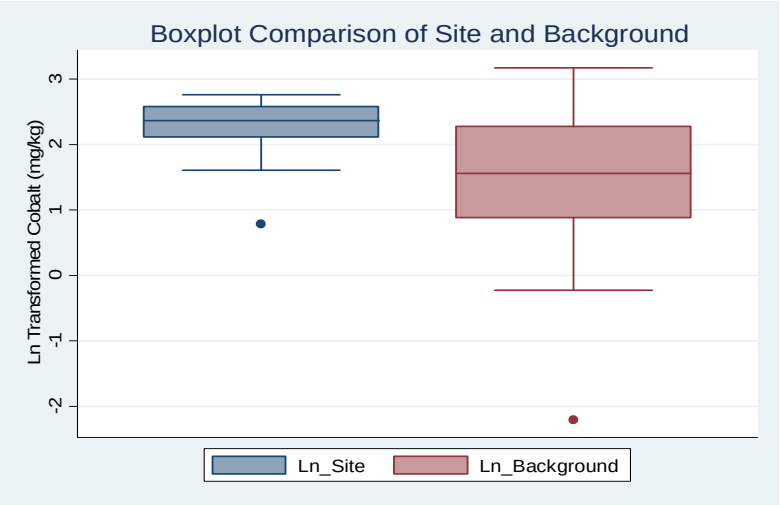


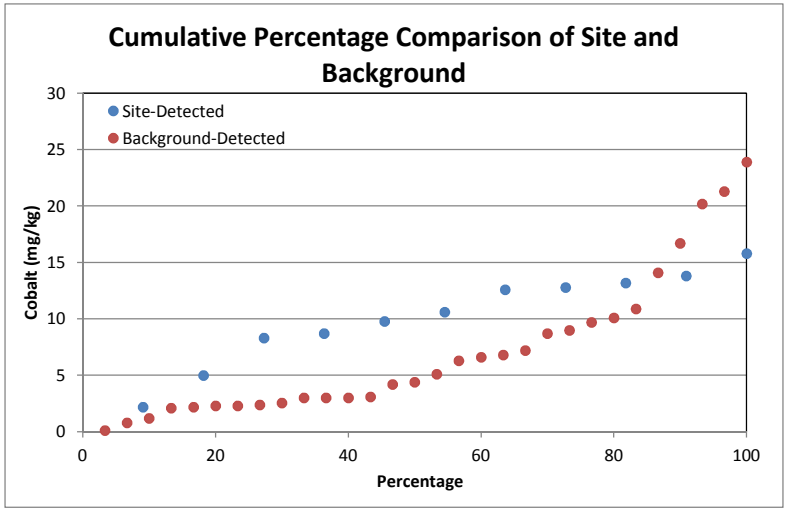


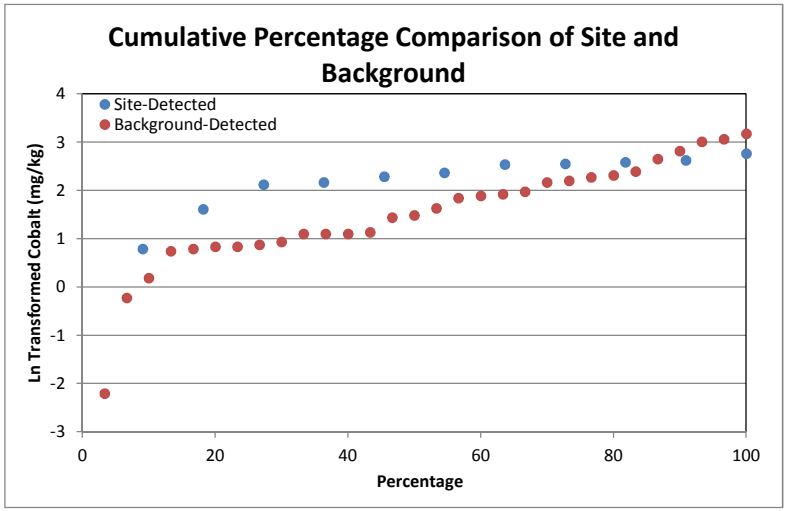

Histogram Comparison of Site and Background
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2
4
6
8
10
12
14
16
18
20
More
Arsenic Concentration (mg/kg)

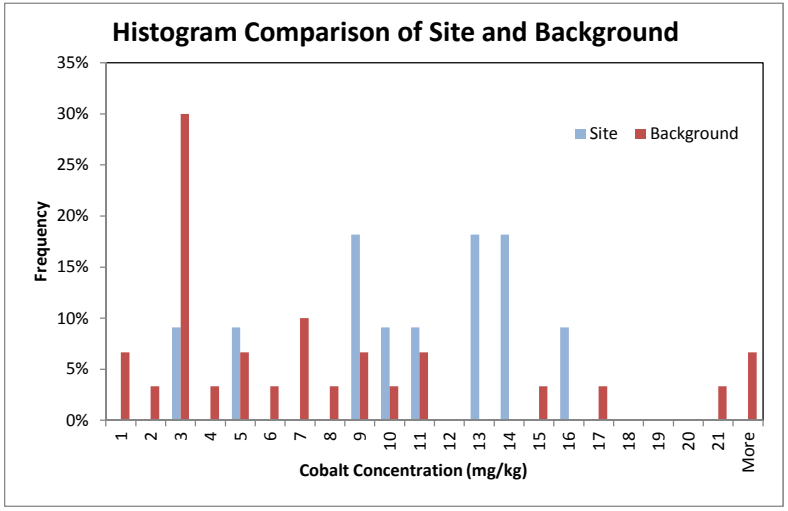
Subsurface Soil Exposure Area 1 - Cobalt



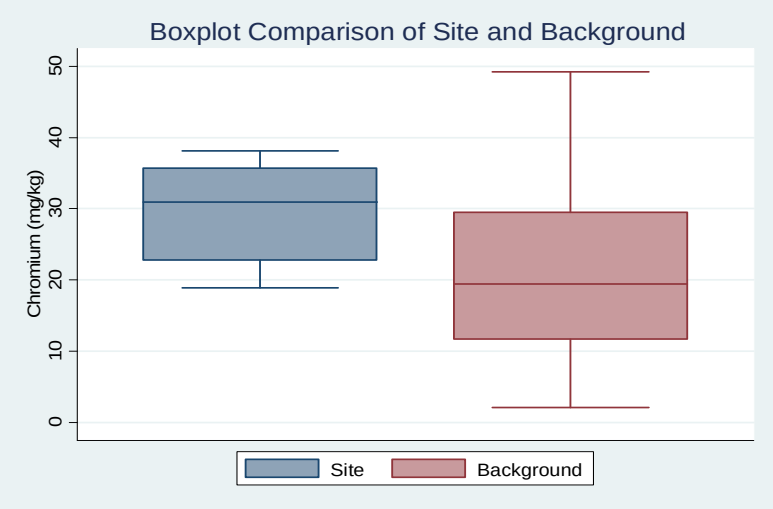


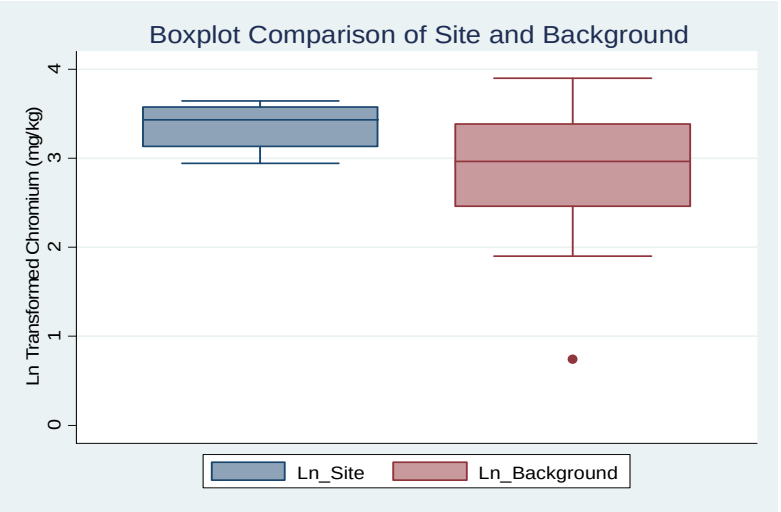


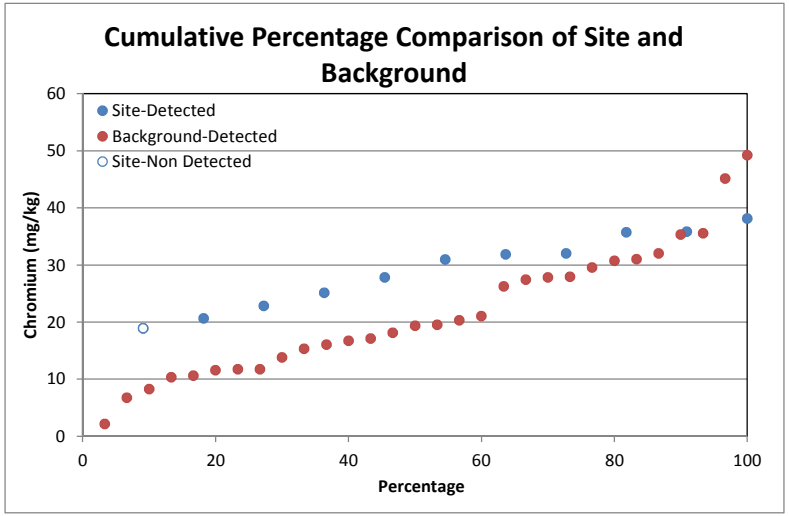


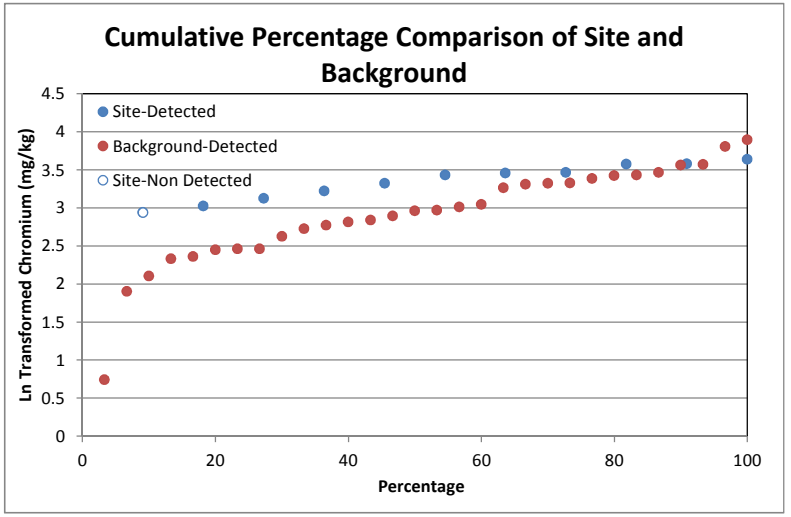

Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
More
Cobalt Concentration (mg/kg)

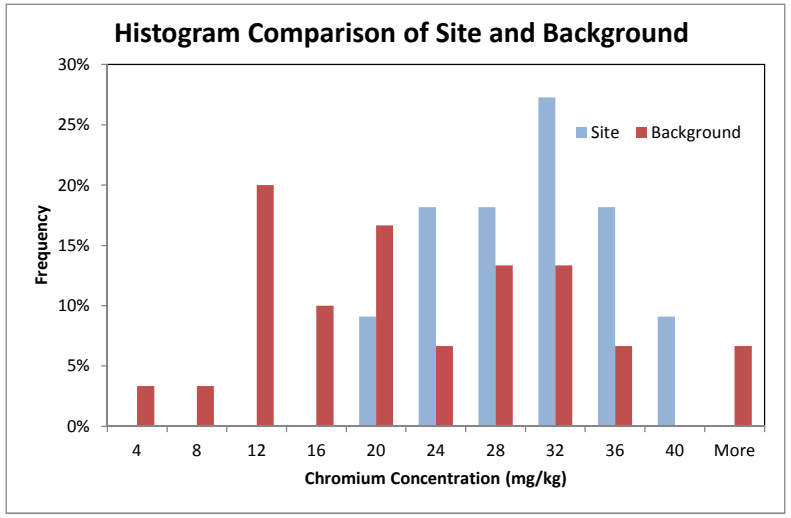
Subsurface Soil Exposure Area 1 - Chromium



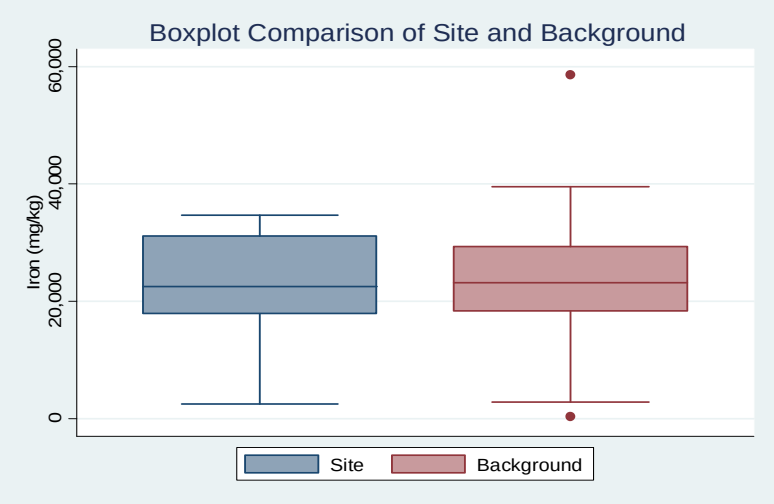


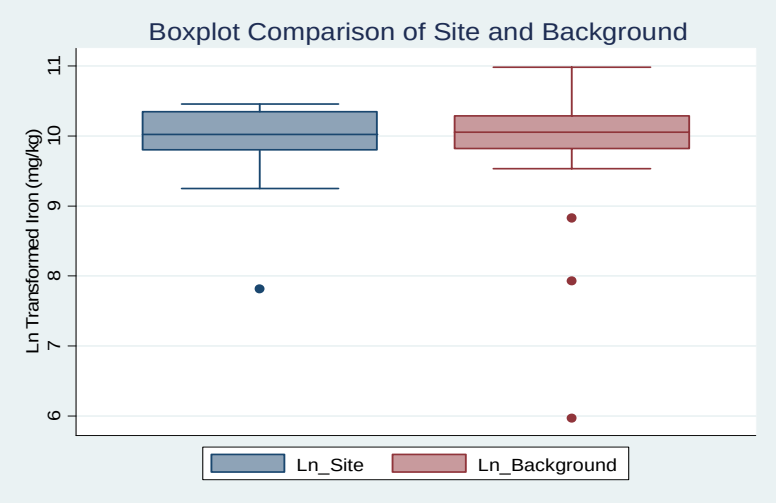


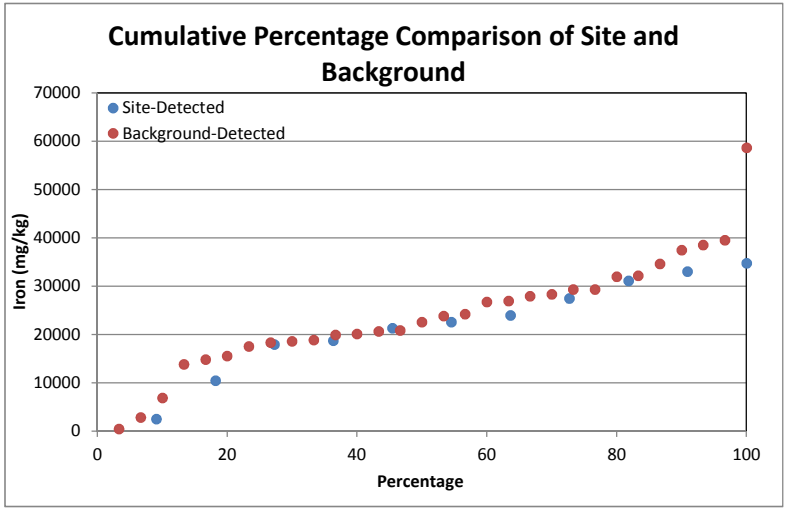


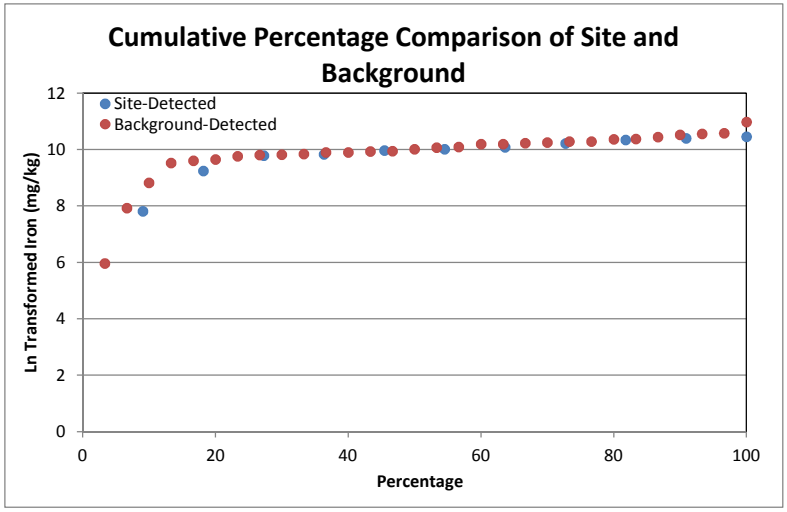

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
4
8
12
16
20
24
28
32
36
40
More
Chromium Concentration (mg/kg)

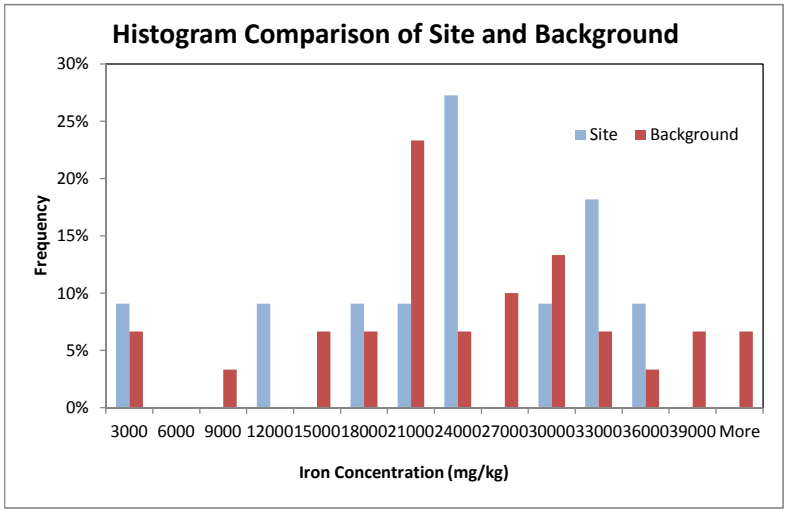
Subsurface Soil Exposure Area 1 - Iron



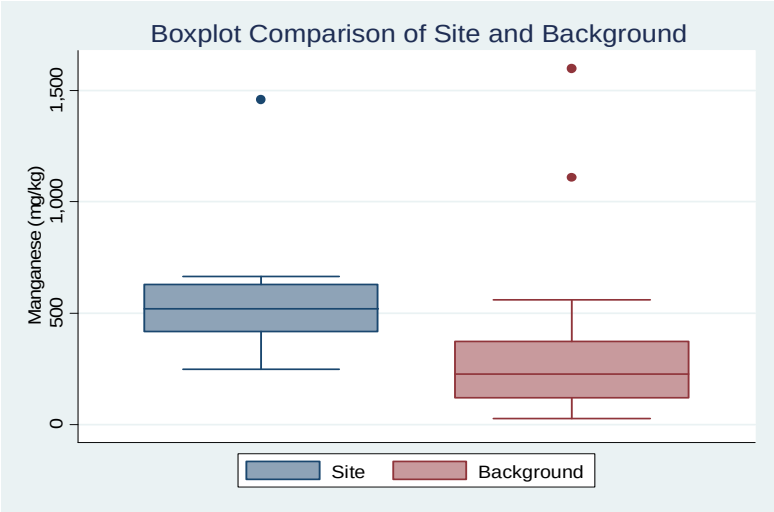


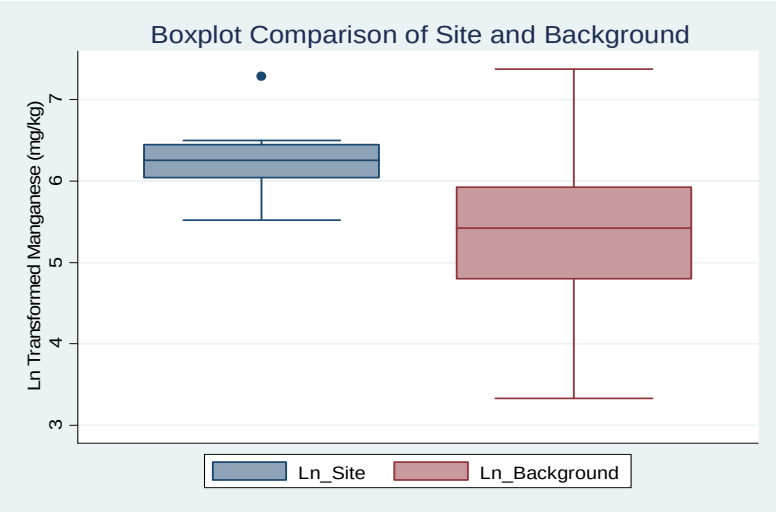


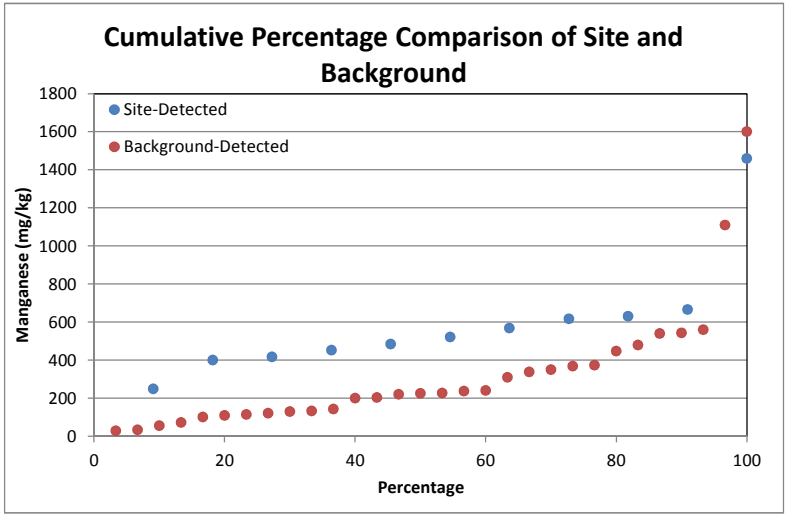


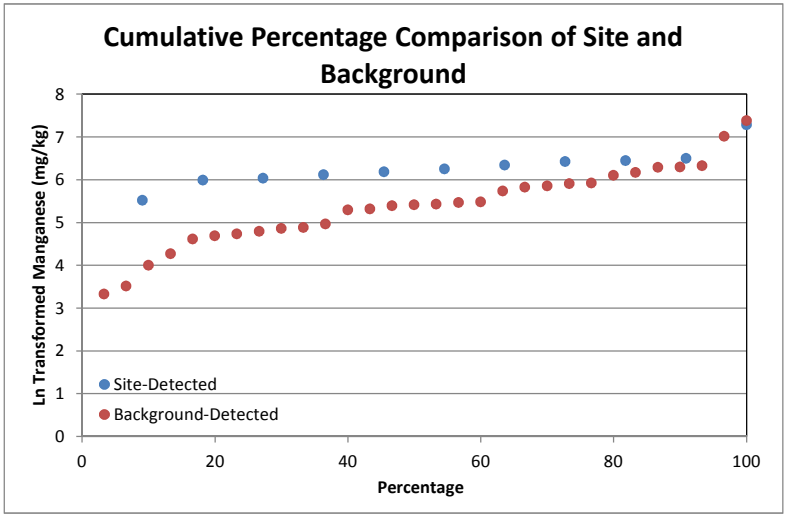

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
3000
6000
9000
12000
15000
18000
21000
24000
27000
30000
33000
36000
39000
More
Iron Concentration (mg/kg)

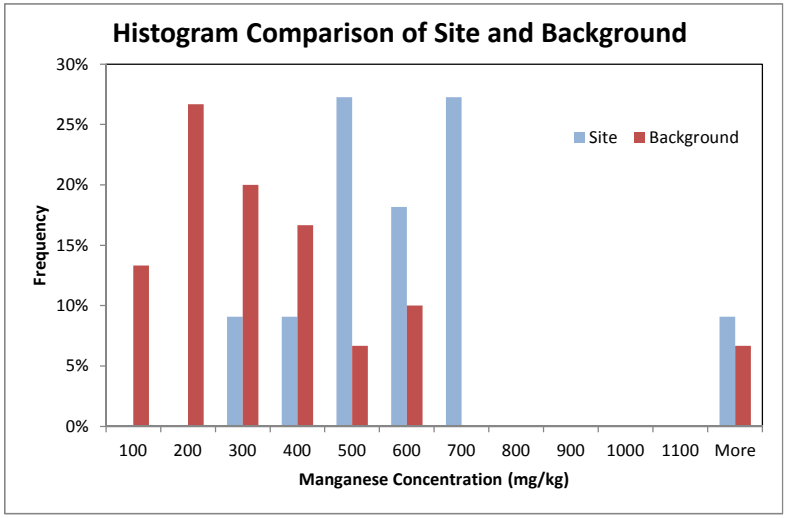
Subsurface Soil Exposure Area 1 - Manganese



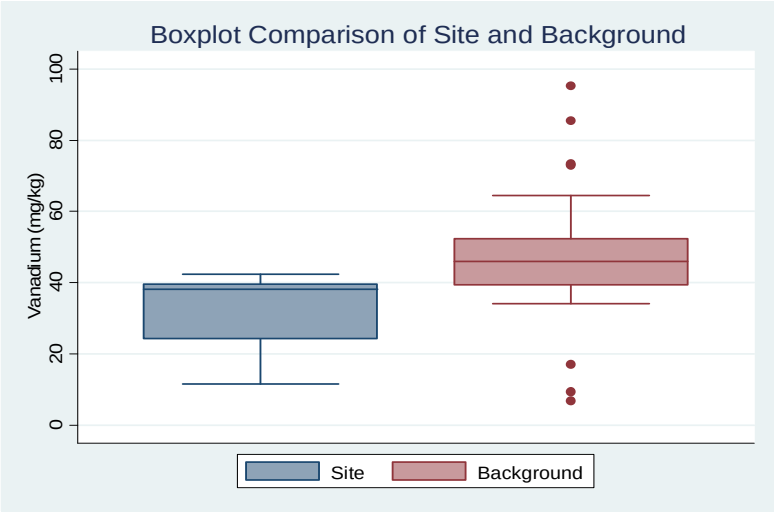


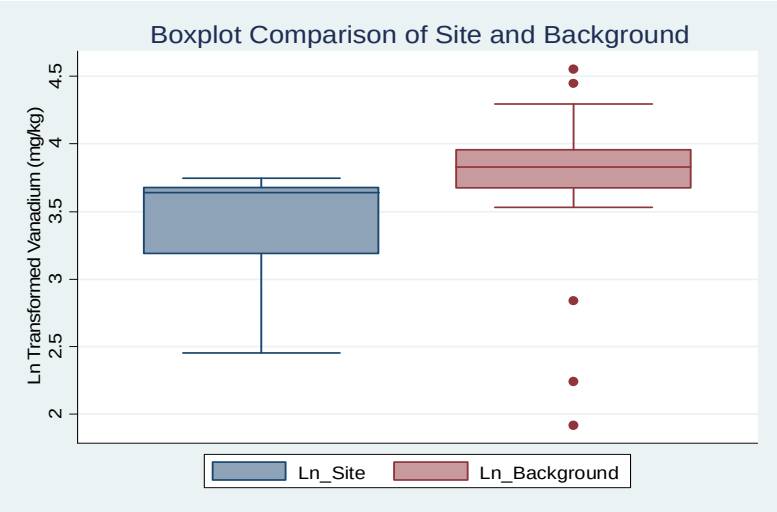


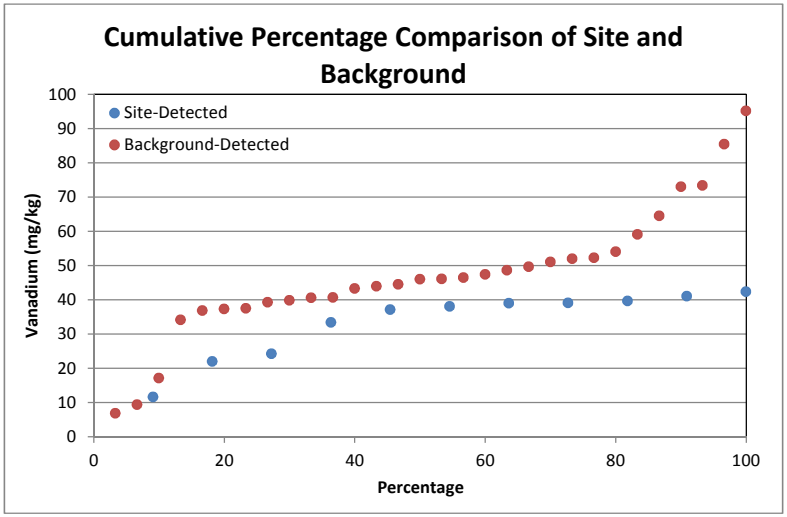


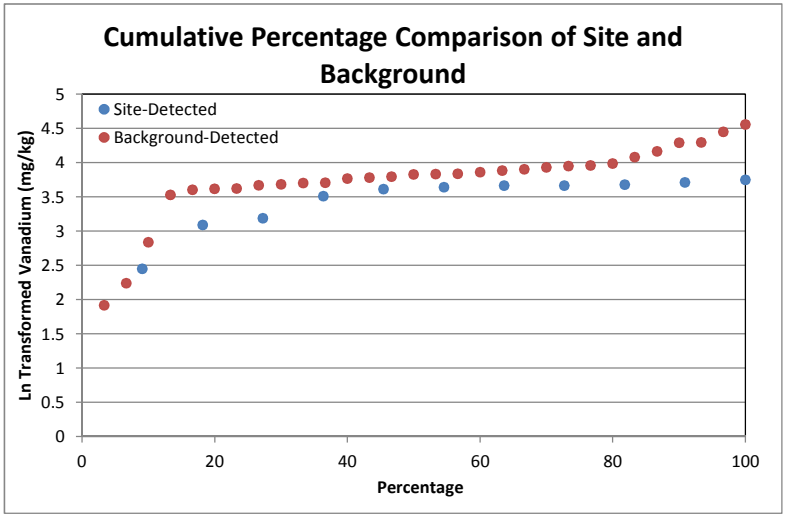

Histogram Comparison of Site and Background
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
100
200
300
400
500
600
700
800
900
1000
1100
More
Manganese Concentration (mg/kg)

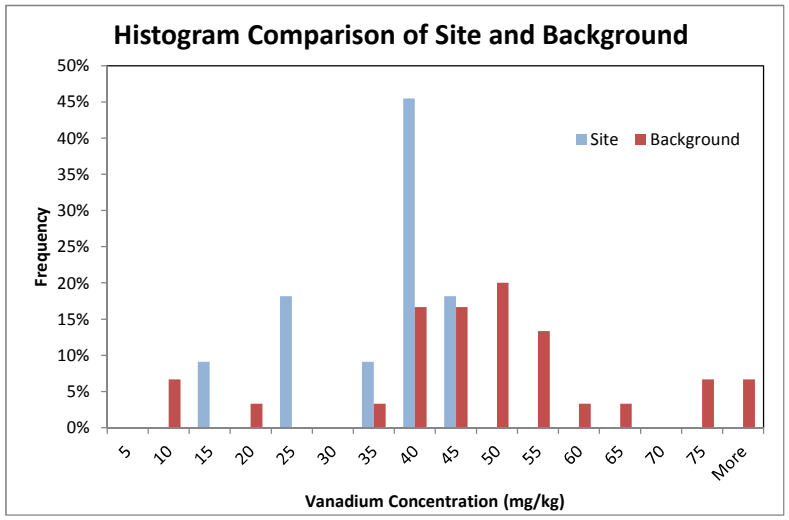
Subsurface Soil Exposure Area 1 - Vanadium










Histogram Comparison of Site and Background
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
More
Vanadium Concentration (mg/kg)

ATTACHMENT 8

GRAPHICAL COMPARISONS OF SITE SUBSURFACE SOIL-EXPOSURE AREA 1 AND BACKGROUND SOILS FOR COPCS NOT EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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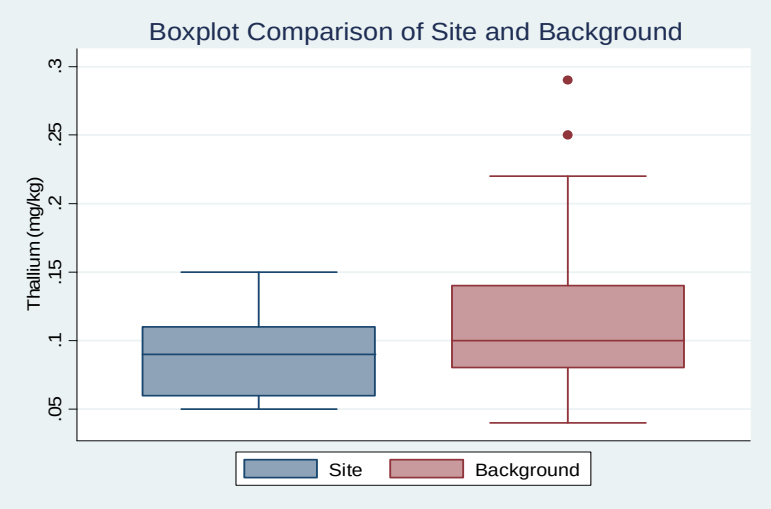
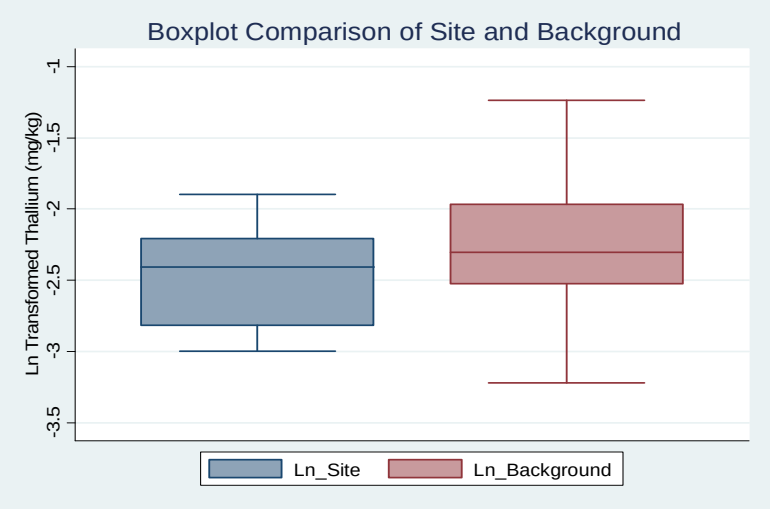
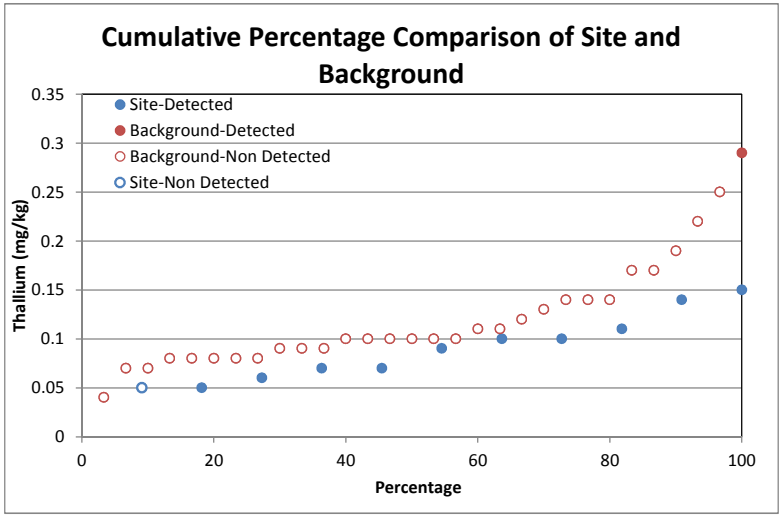
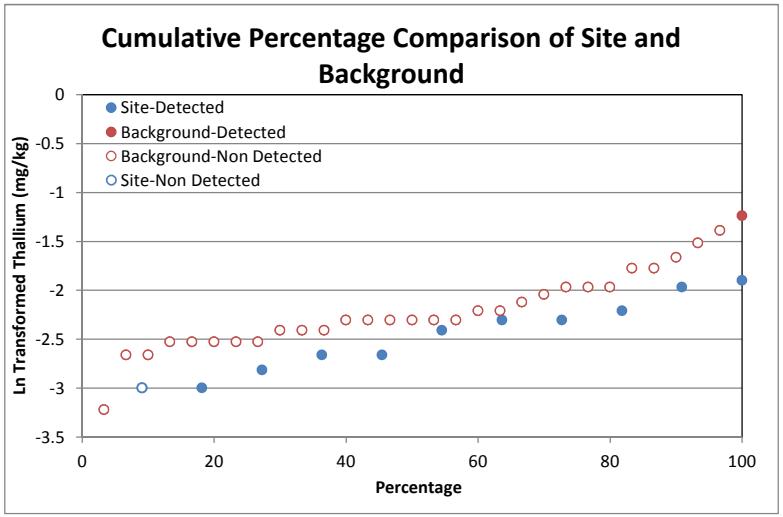
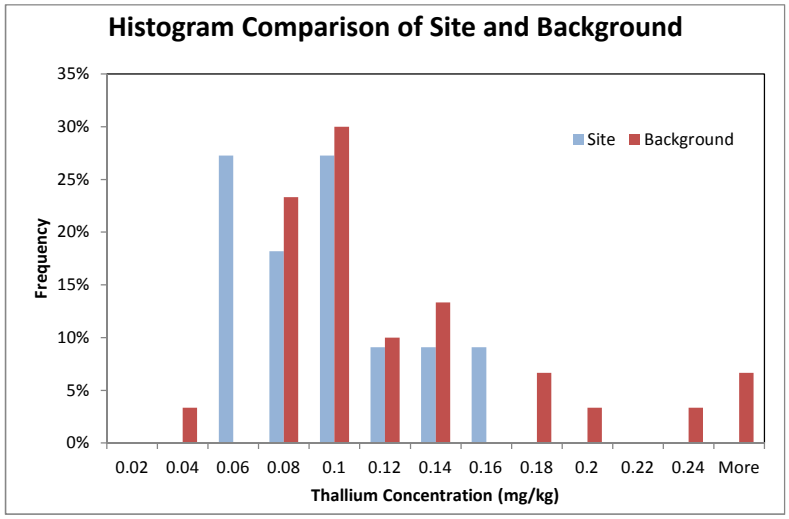
Subsurface Soil Exposure Area 1 - Thallium










Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
0.22
0.24
More
Thallium Concentration (mg/kg)

ATTACHMENT 9

GRAPHICAL COMPARISONS OF SITE SUBSURFACE SOIL-EXPOSURE AREA 2 AND BACKGROUND SOILS FOR COPCS EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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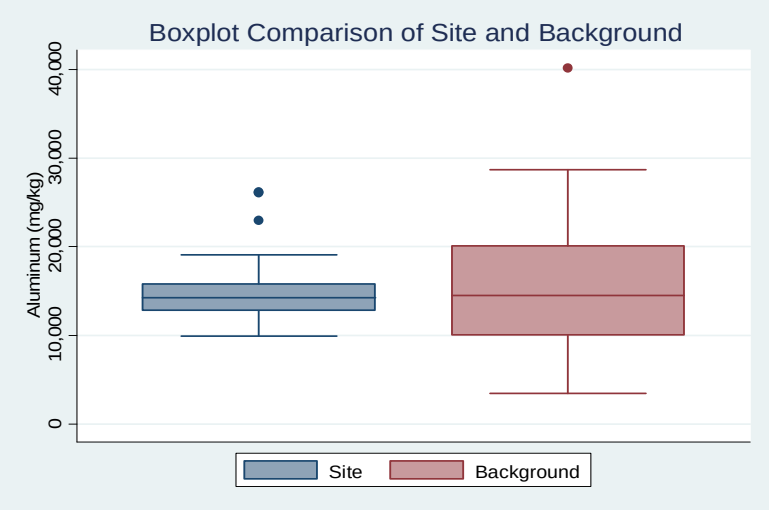
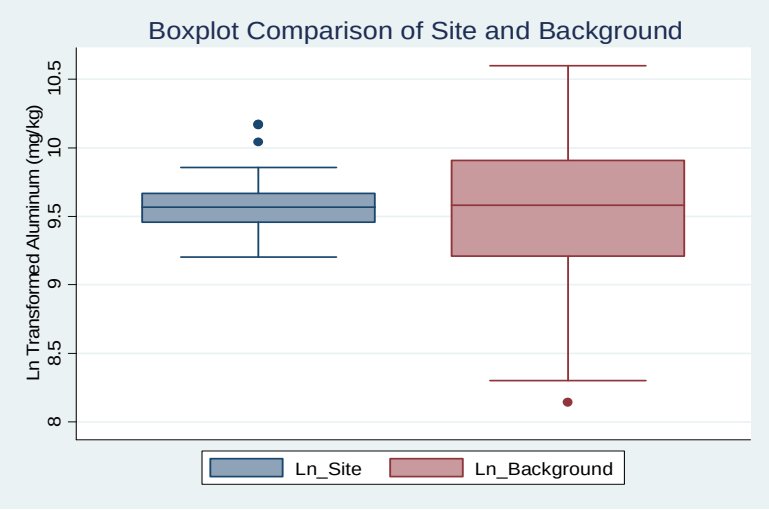
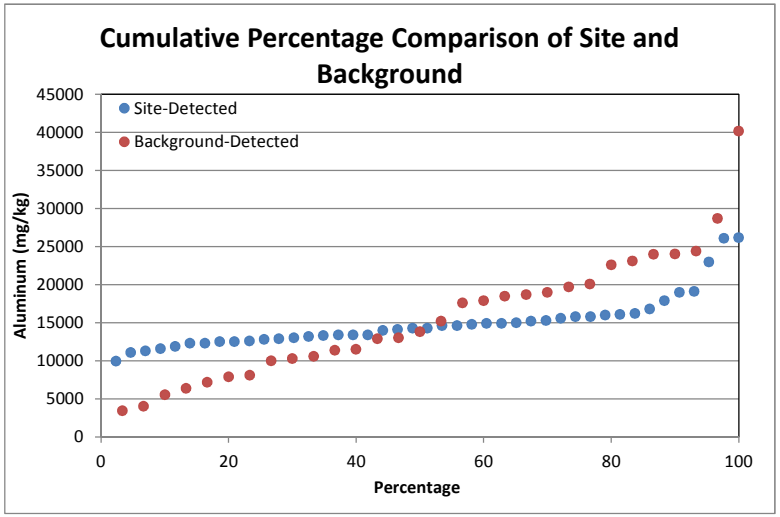
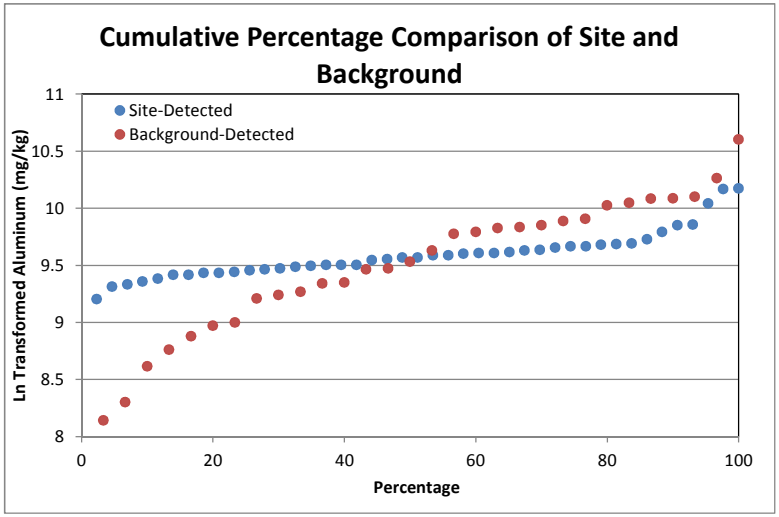
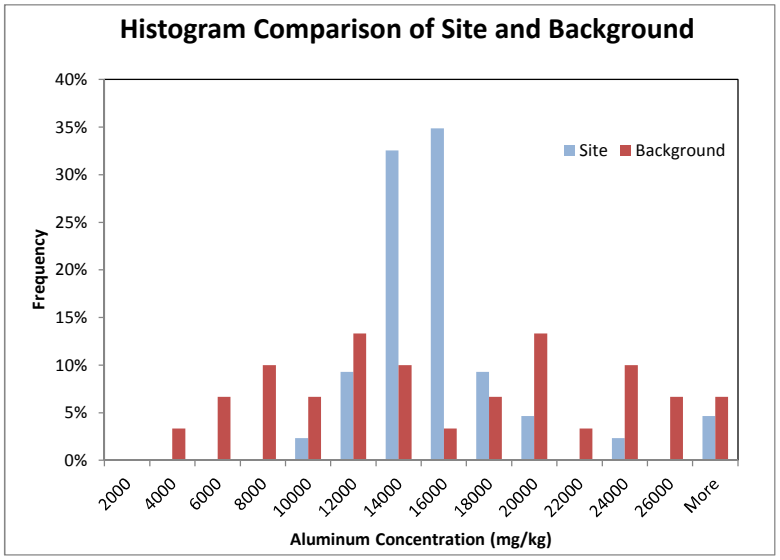
Subsurface Soil Exposure Area 2 - Aluminum



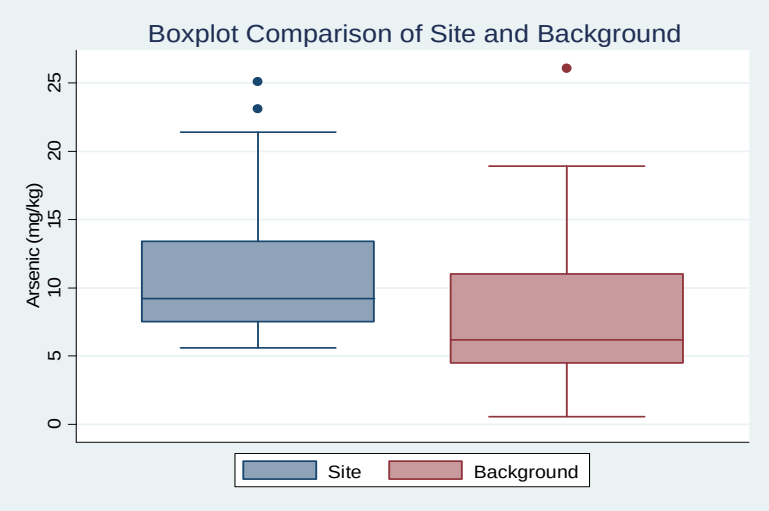


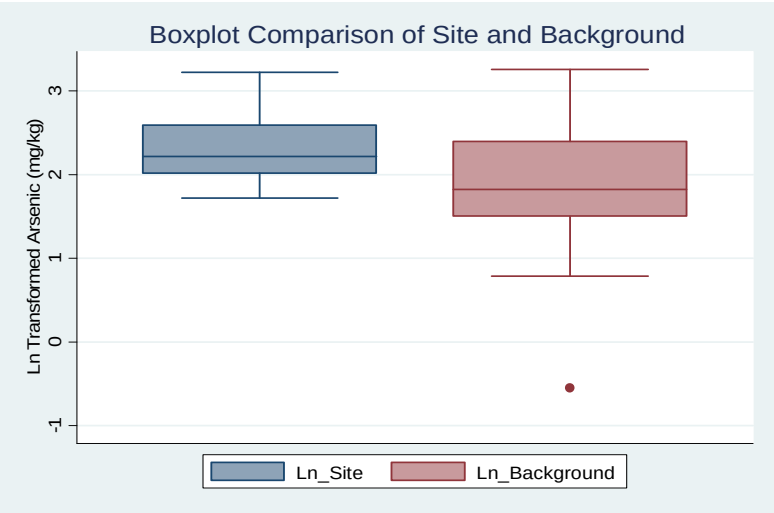


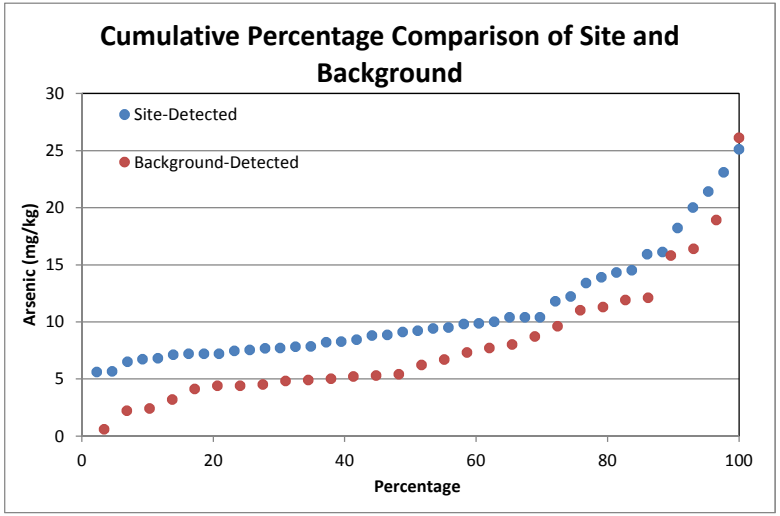


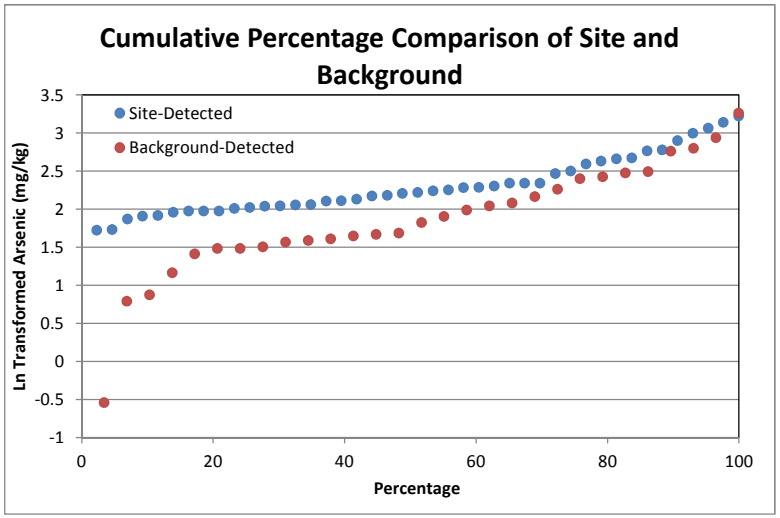

Histogram Comparison of Site and Background
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
22000
24000
26000
More
Aluminum Concentration (mg/kg)

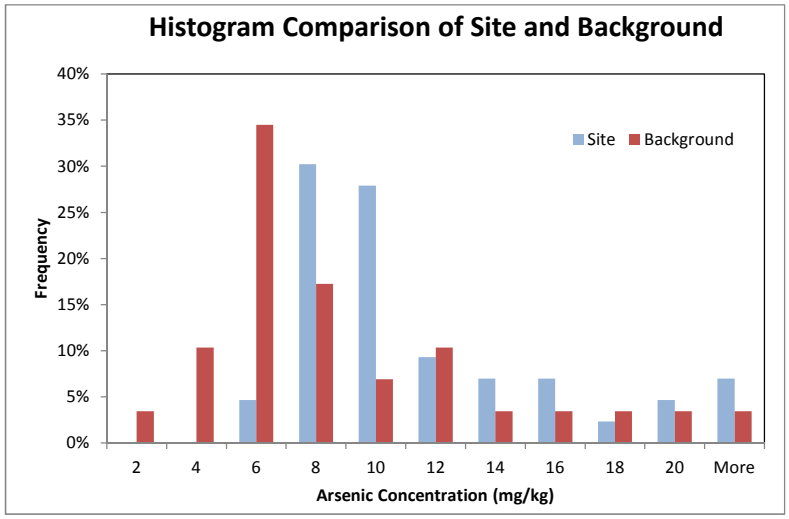
Subsurface Soil Exposure Area 2 - Arsenic



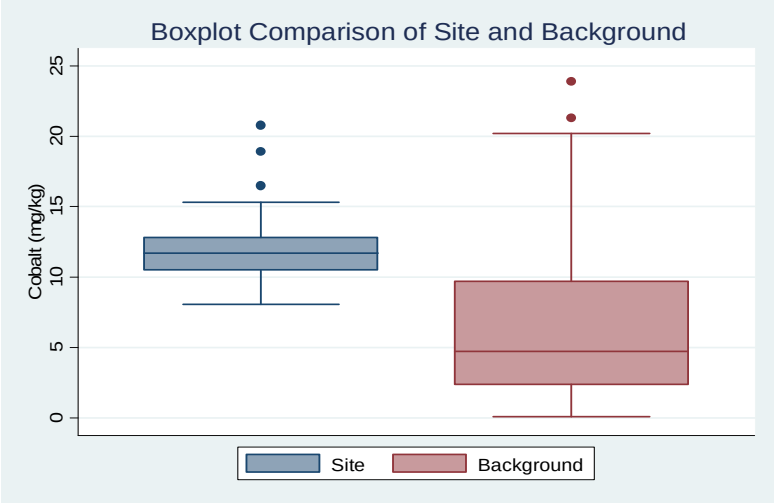


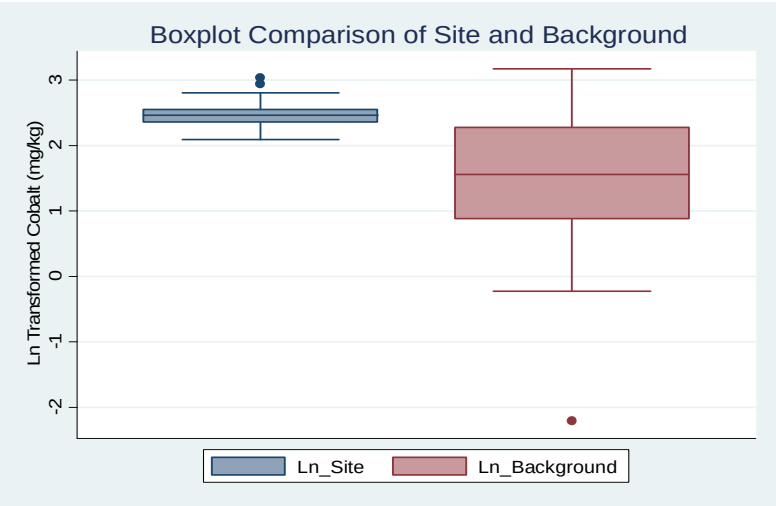


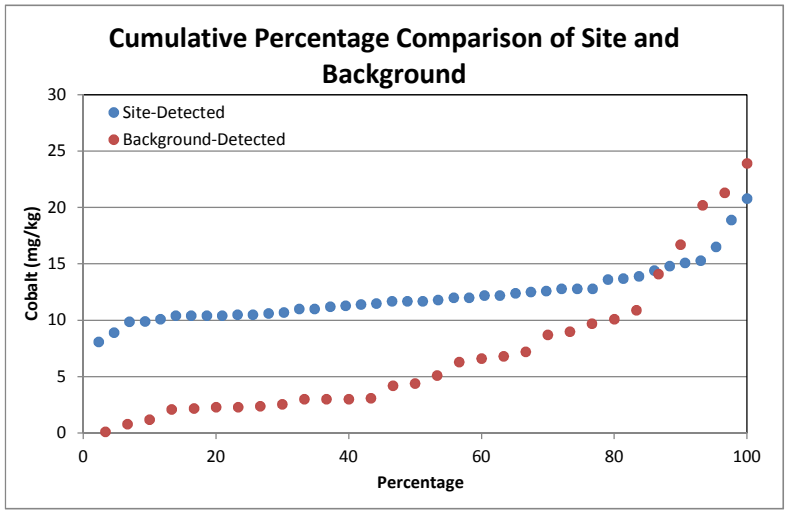


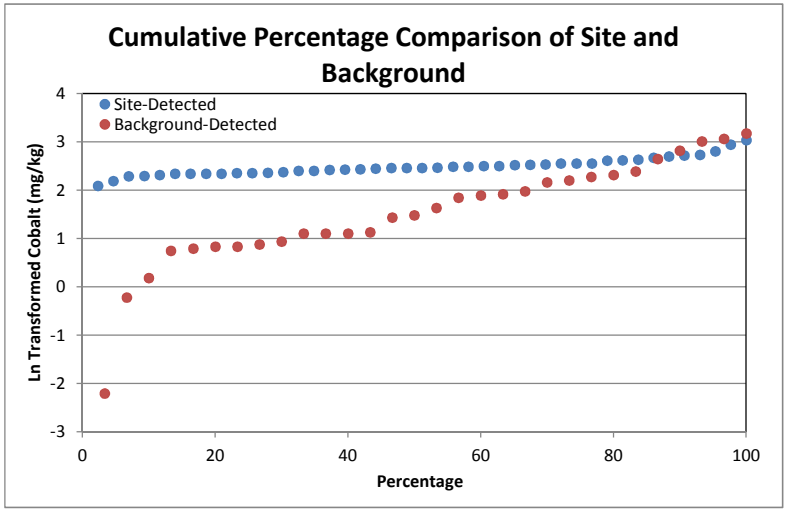

Histogram Comparison of Site and Background
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
2
4
6
8
10
12
14
16
18
20
More
Arsenic Concentration (mg/kg)

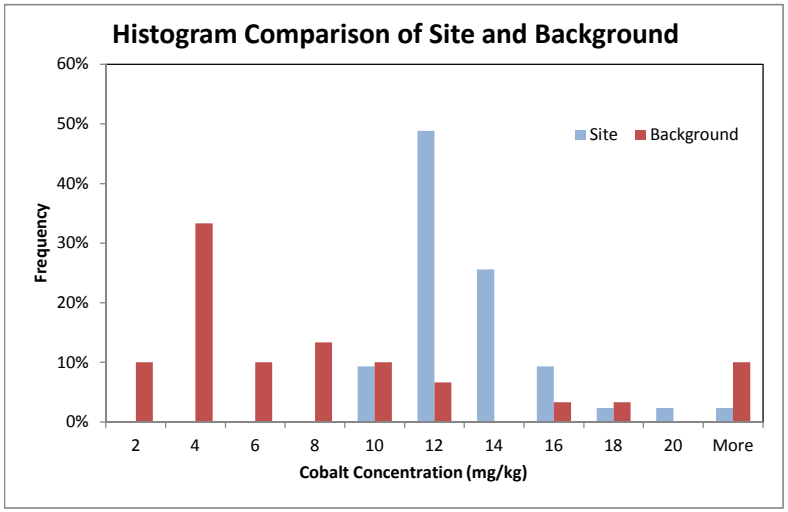
Subsurface Soil Exposure Area 2 - Cobalt



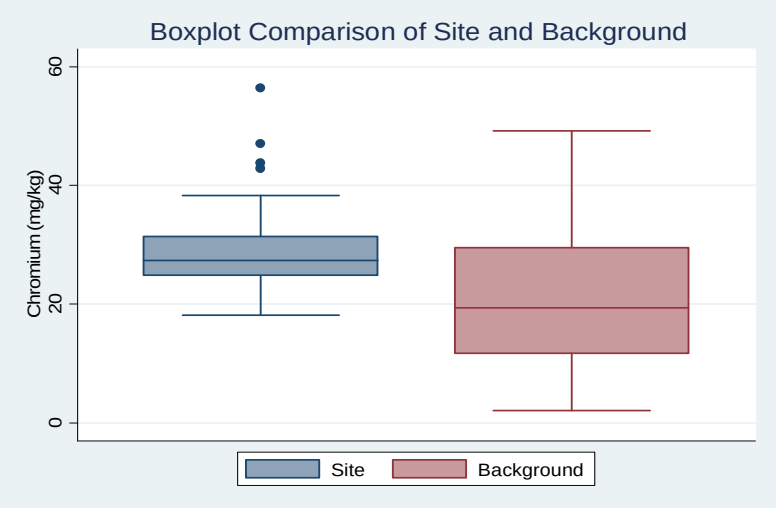


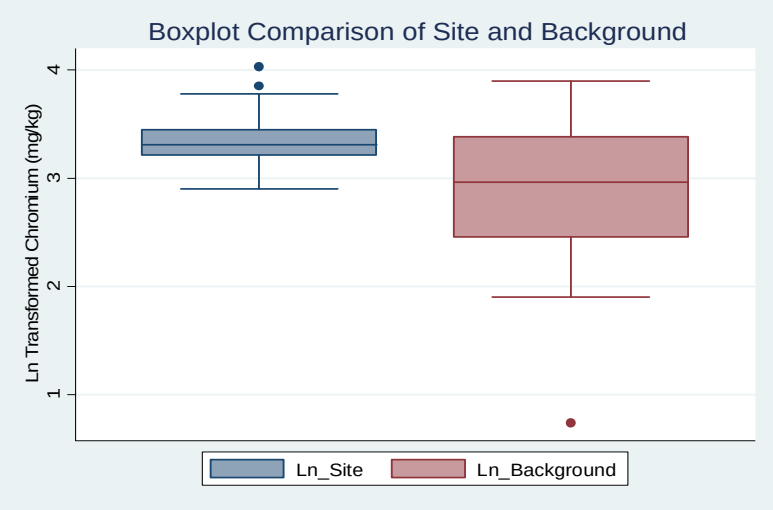


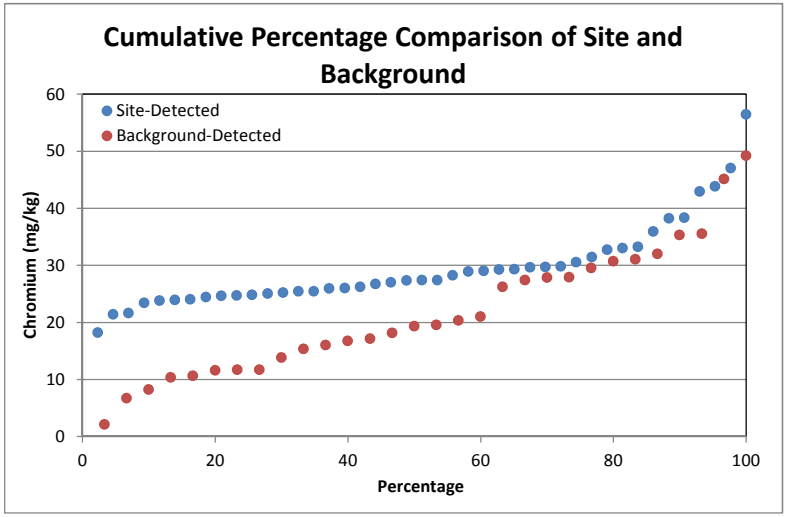


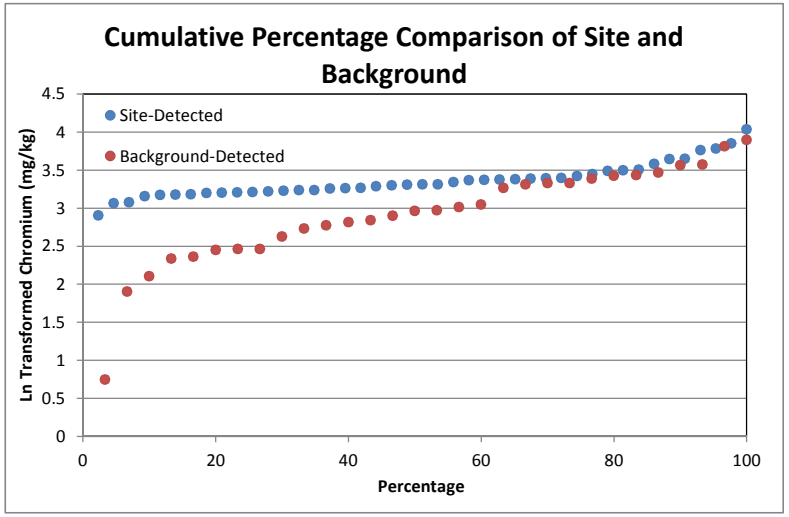

Histogram Comparison of Site and Background
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
2
4
6
8
10
12
14
16
18
20
More
Cobalt Concentration (mg/kg)

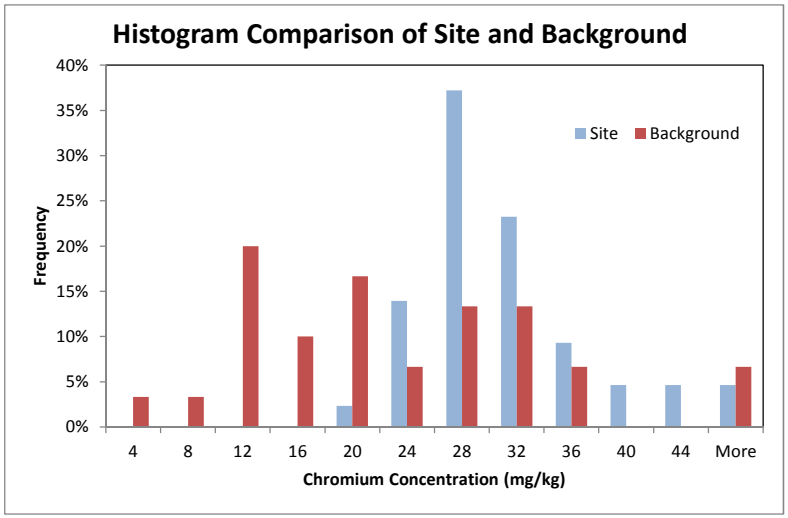
Subsurface Soil Exposure Area 2 - Chromium



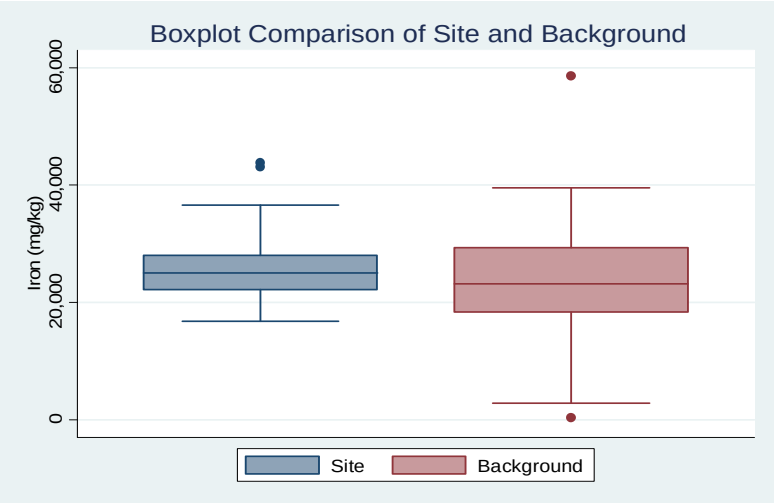


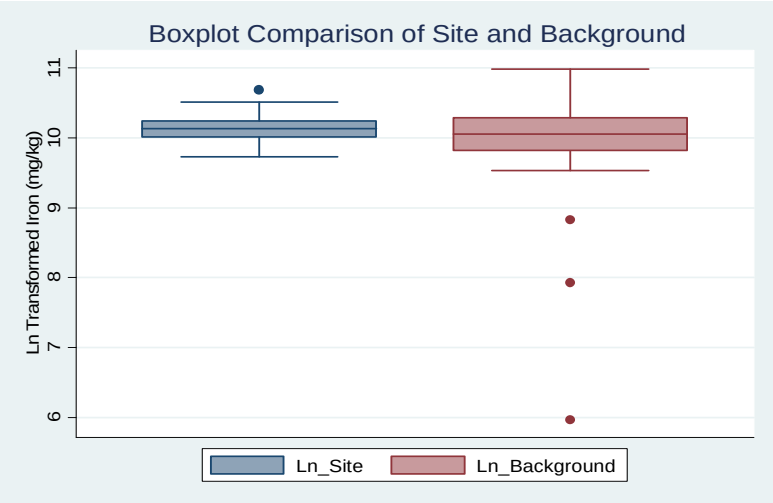


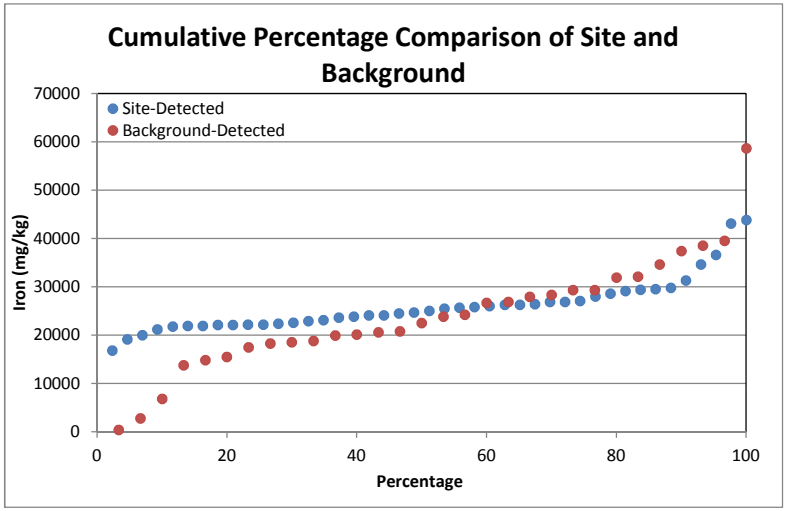


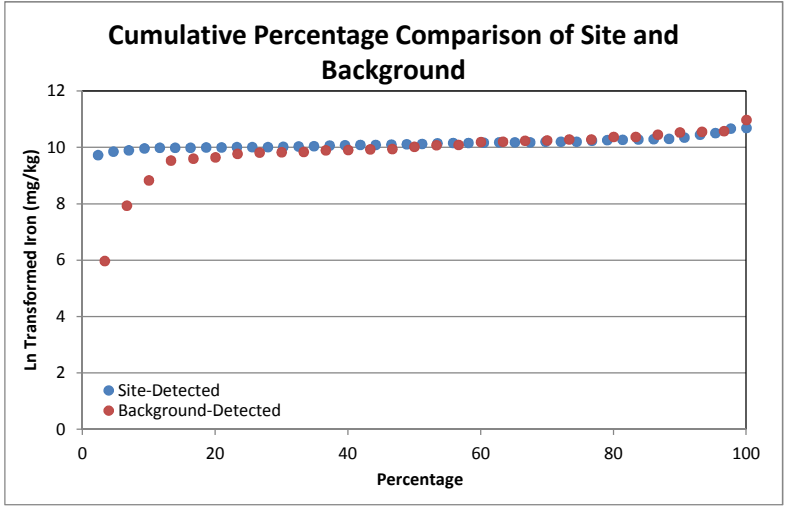

Histogram Comparison of Site and Background
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
4
8
12
16
20
24
28
32
36
40
44
More
Chromium Concentration (mg/kg)

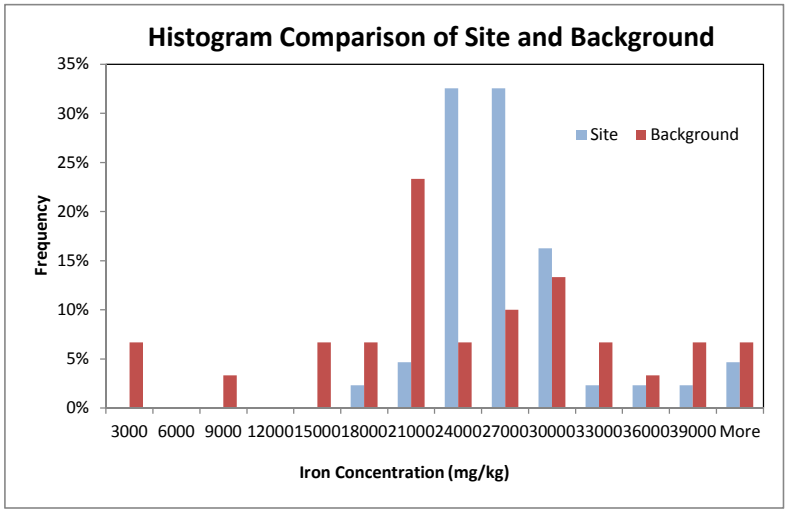
Subsurface Soil Exposure Area 2 - Iron



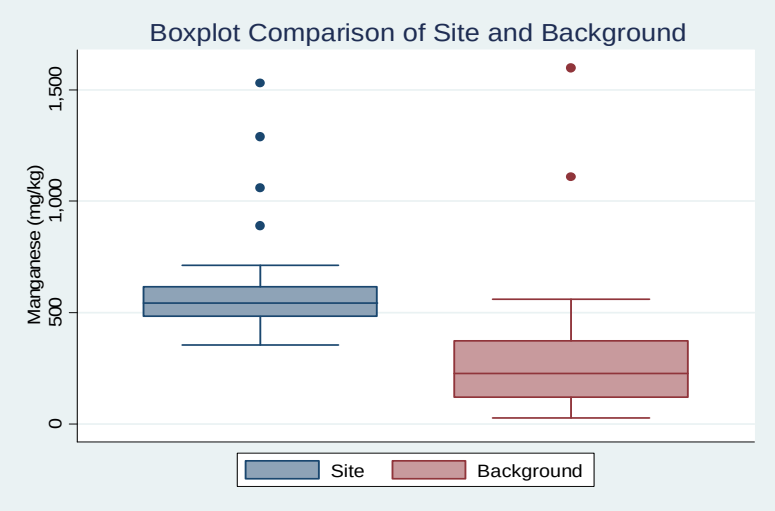


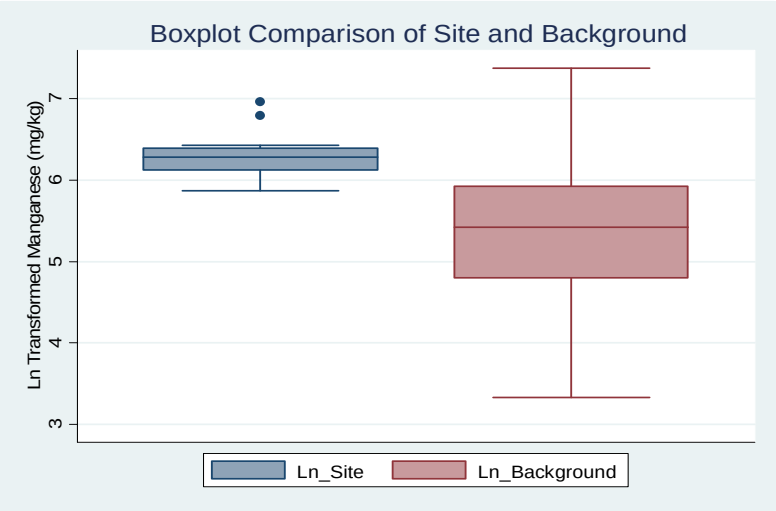


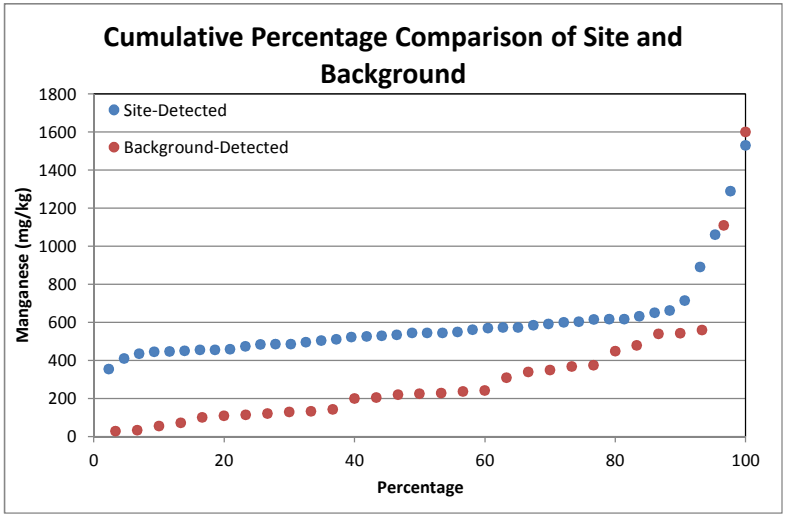


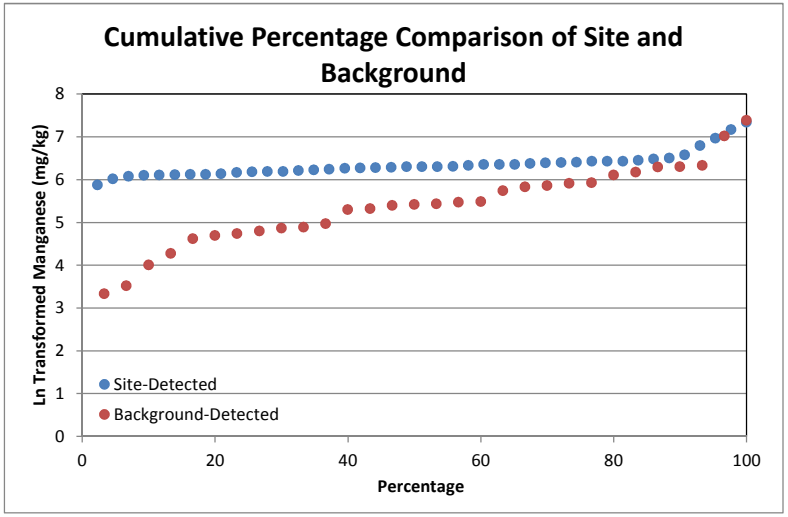

Histogram Comparison of Site and Background
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
3000
6000
9000
12000
15000
18000
21000
24000
27000
30000
33000
36000
39000
More
Iron Concentration (mg/kg)

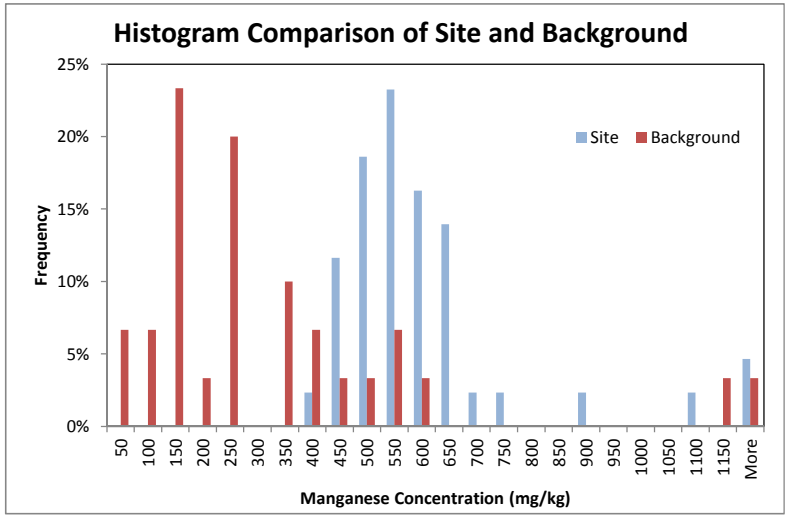
Subsurface Soil Exposure Area 2 - Manganese



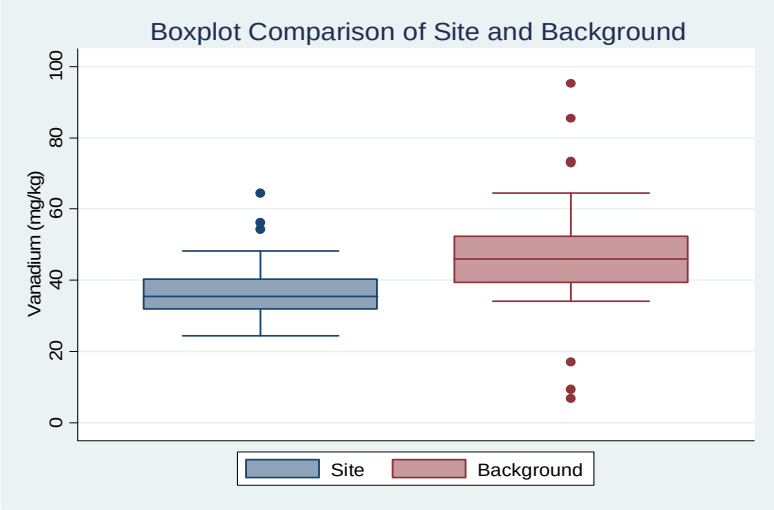


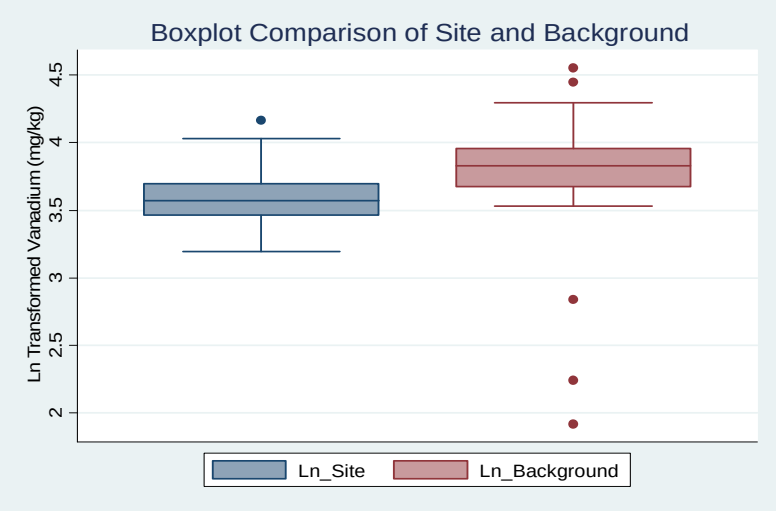


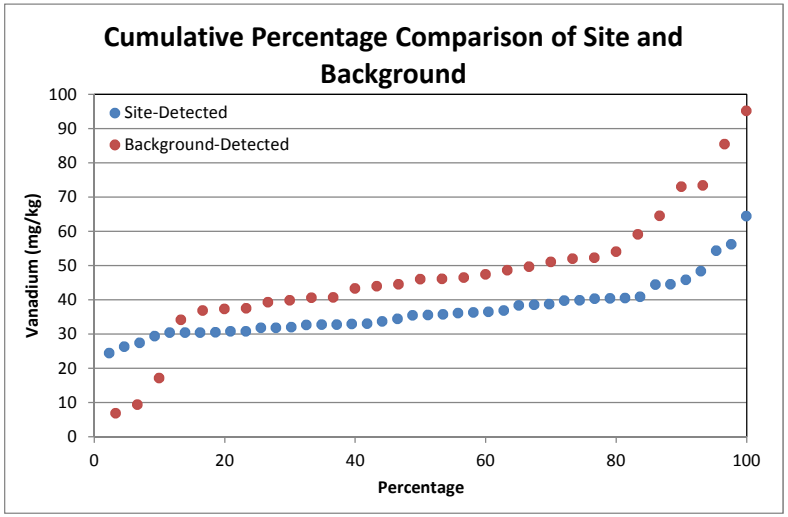


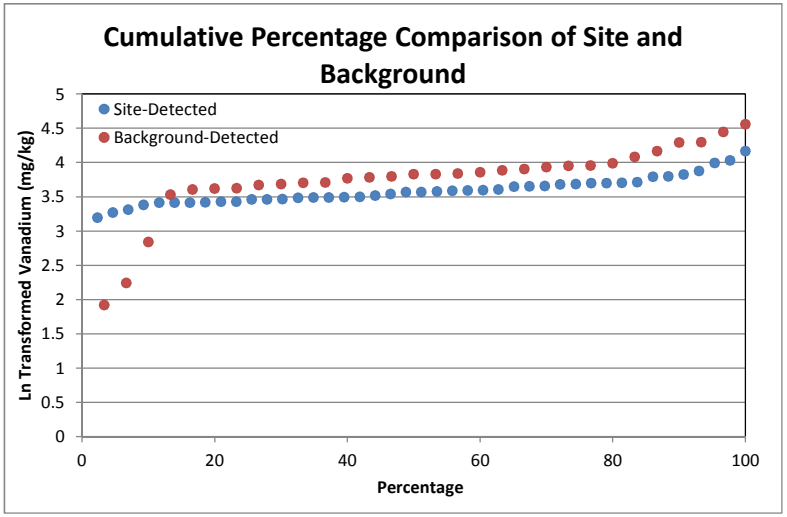

Histogram Comparison of Site and Background
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
More
Manganese Concentration (mg/kg)

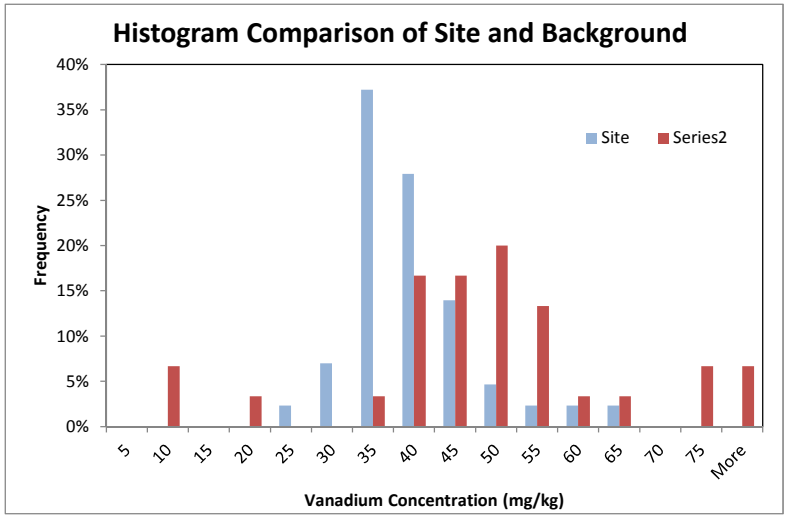
Subsurface Soil Exposure Area 2 - Vanadium










Histogram Comparison of Site and Background
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Series2
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
More
Vanadium Concentration (mg/kg)

ATTACHMENT 10

GRAPHICAL COMPARISONS OF SITE SUBSURFACE SOIL-EXPOSURE AREA 2 AND BACKGROUND SOILS FOR COPCS NOT EVALUATED WITH TWO-SAMPLE HYPOTHESIS TESTS

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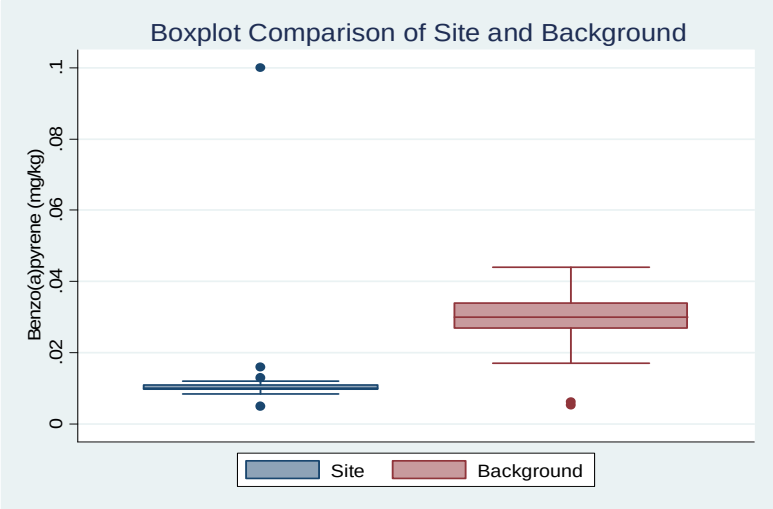
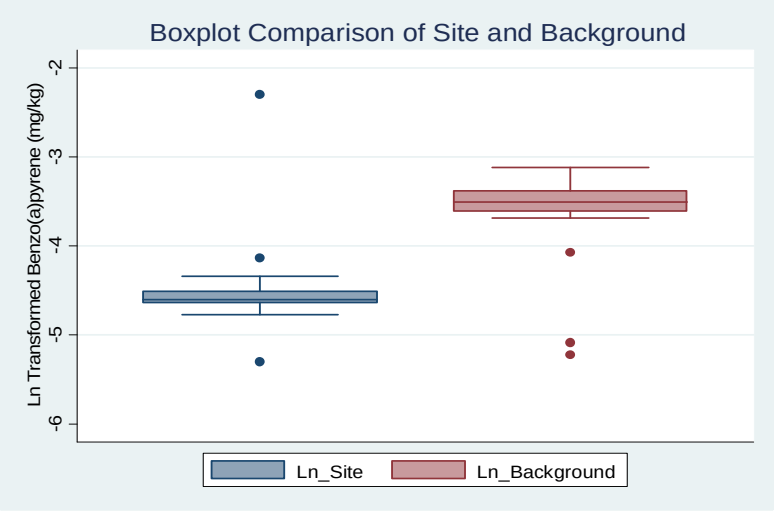
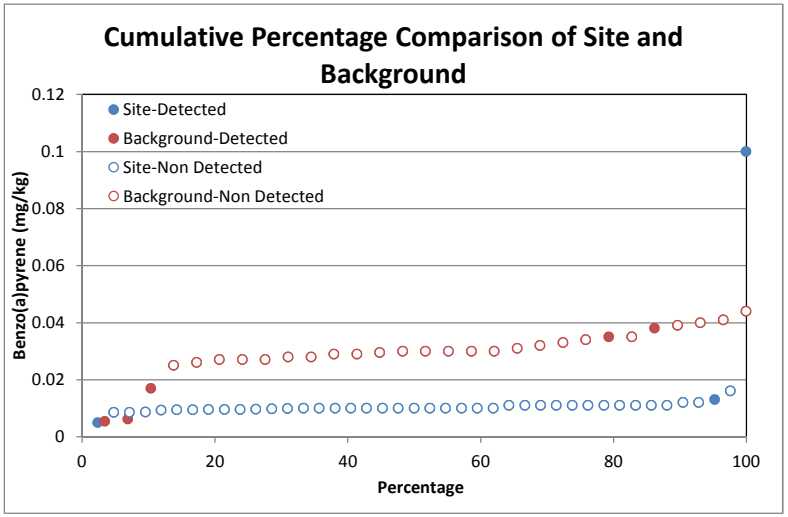
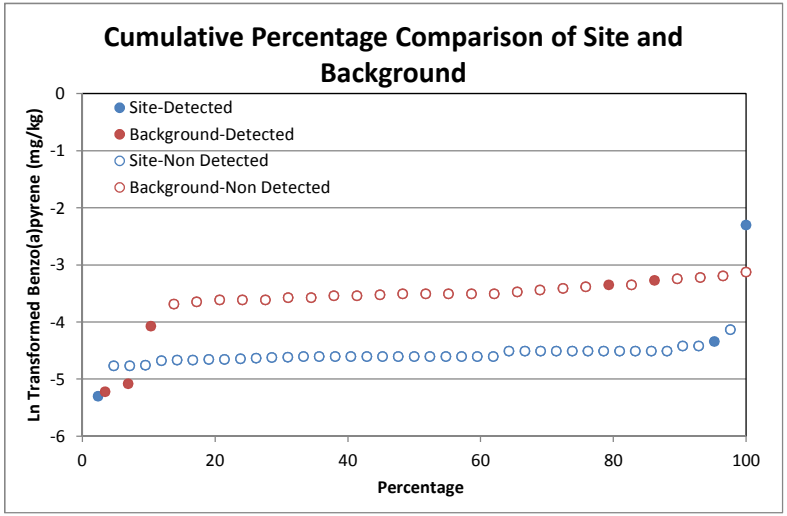
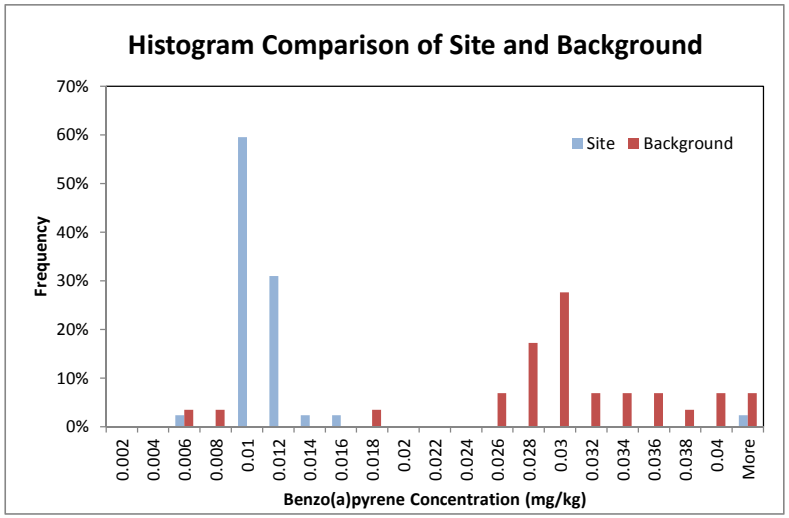
Subsurface Soil Exposure Area 2 - Benzo(a)pyrene



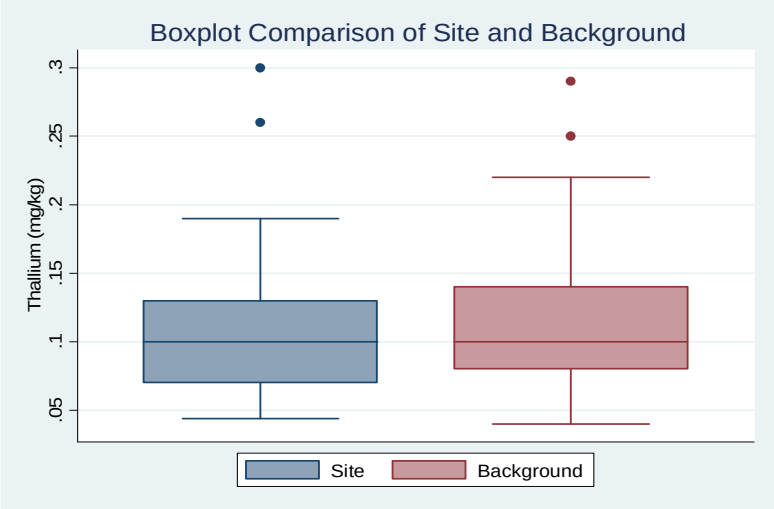


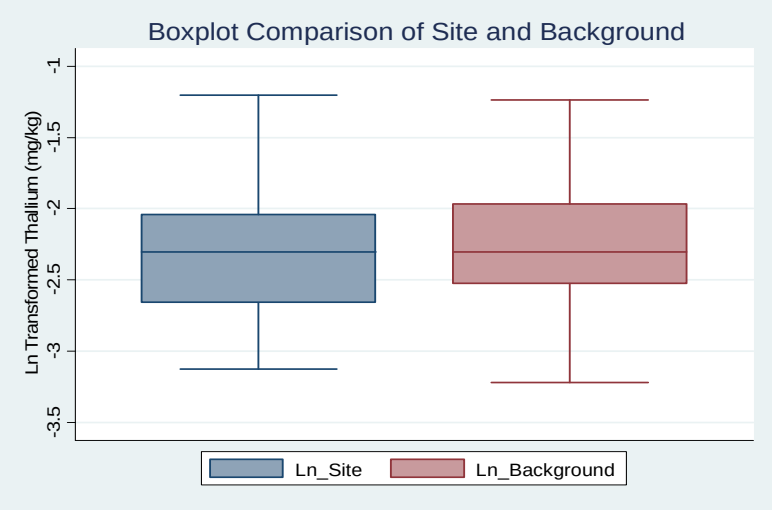


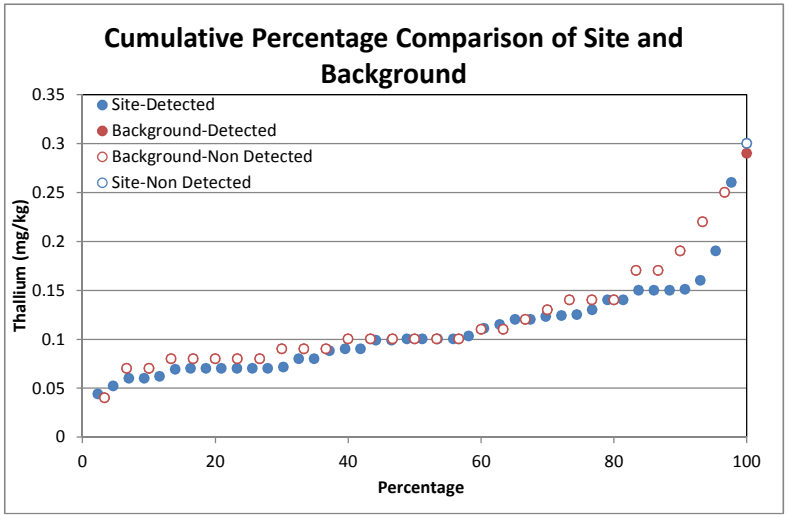


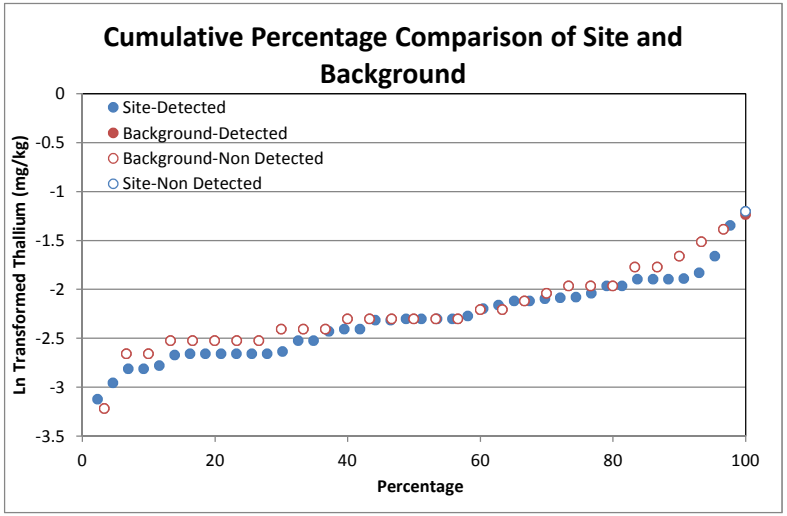

Histogram Comparison of Site and Background
70%
60%
50%
40%
30%
20%
10%
0%
Frequency
Site
Background
0.002
0.004
0.006
0.008
0.01
0.012
0.014
0.016
0.018
0.02
0.022
0.024
0.026
0.028
0.03
0.032
0.034
0.036
0.038
0.04
More
Benzo(a)pyrene Concentration (mg/kg)

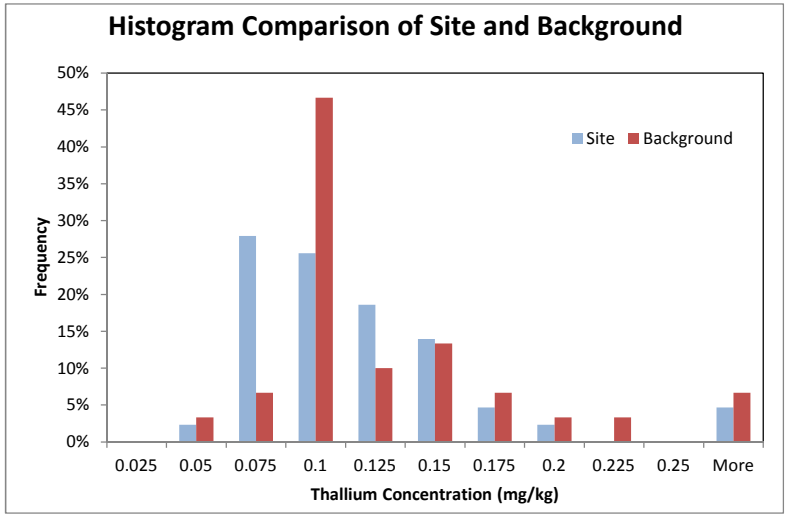
Subsurface Soil Exposure Area 2 - Thallium










Histogram Comparison of Site and Background
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Frequency
Site
Background
0.025
0.05
0.075
0.1
0.125
0.15
0.175
0.2
0.225
0.25
More
Thallium Concentration (mg/kg)

ATTACHMENT 11

GRAPHICAL COMPARISONS OF SITE AND BACKGROUND SEDIMENTS

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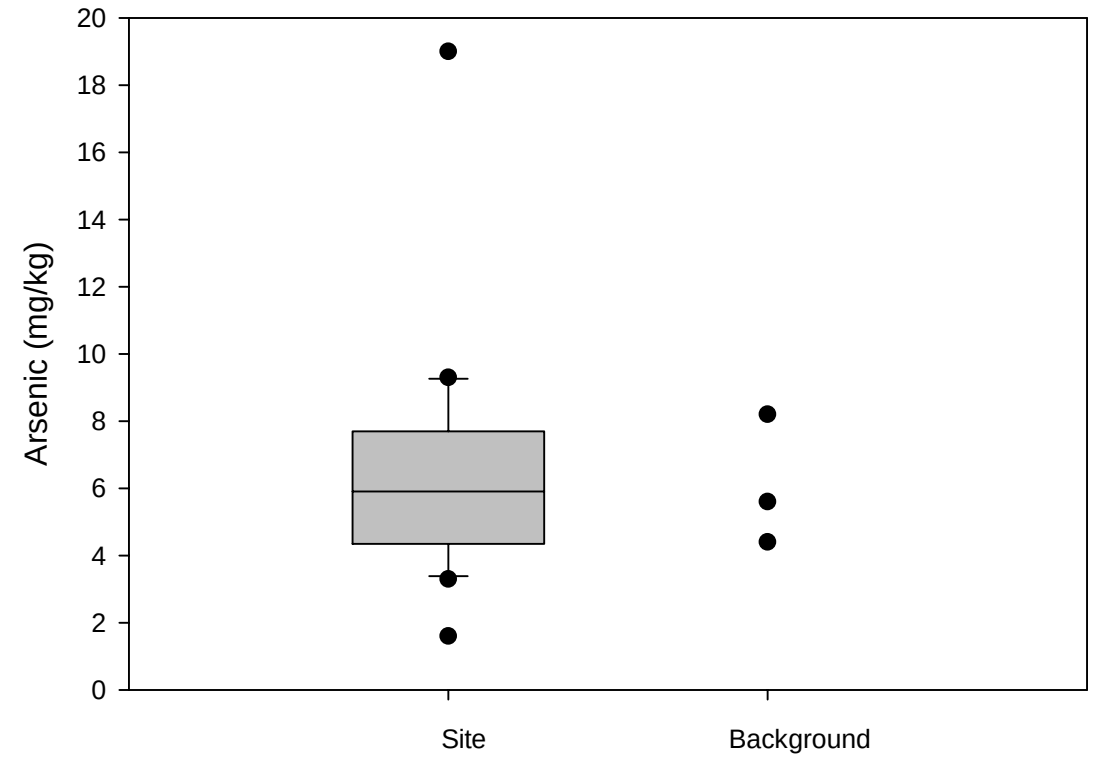
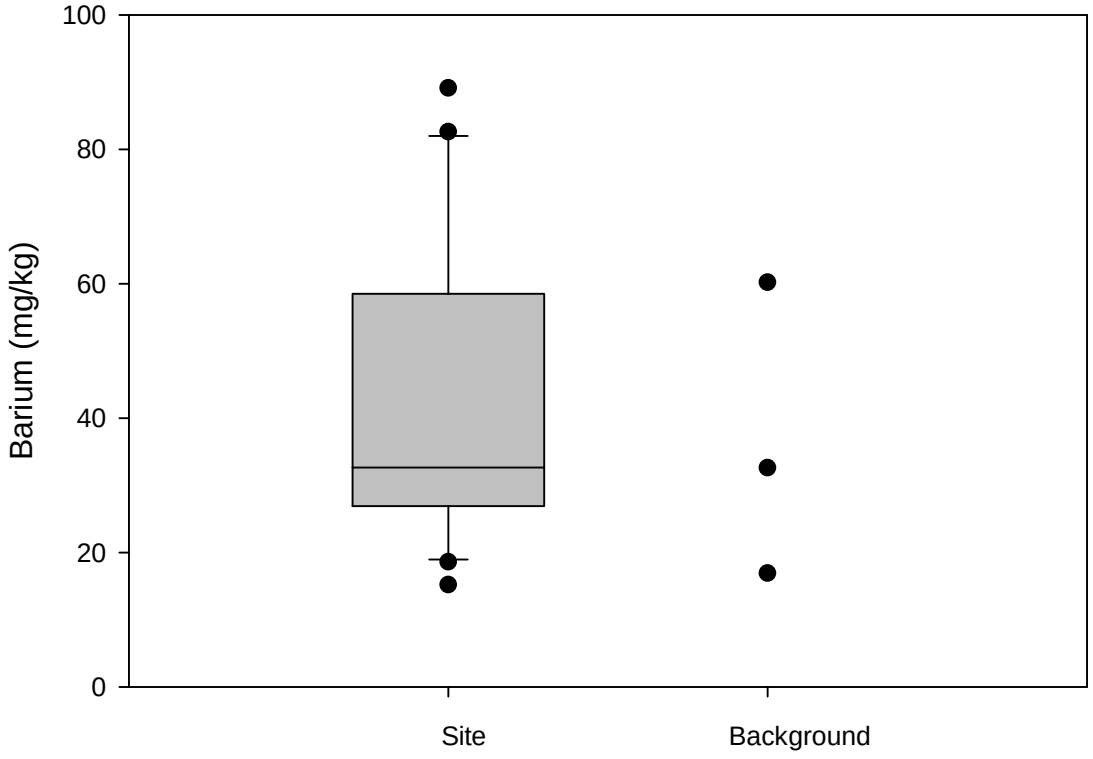
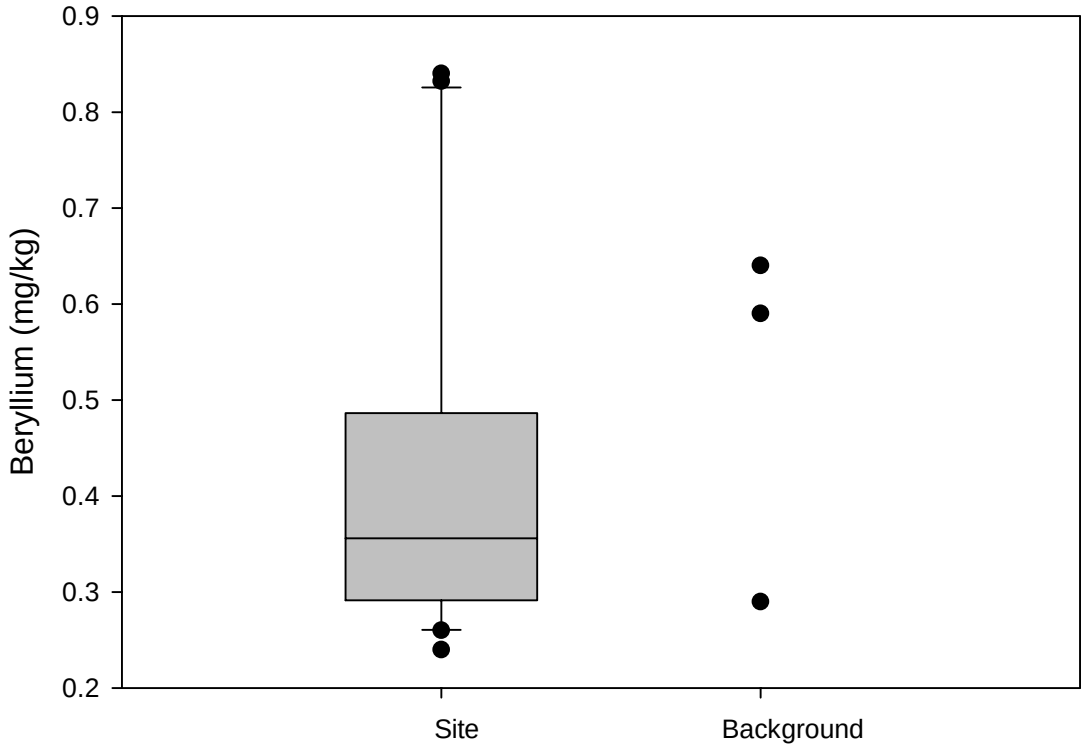
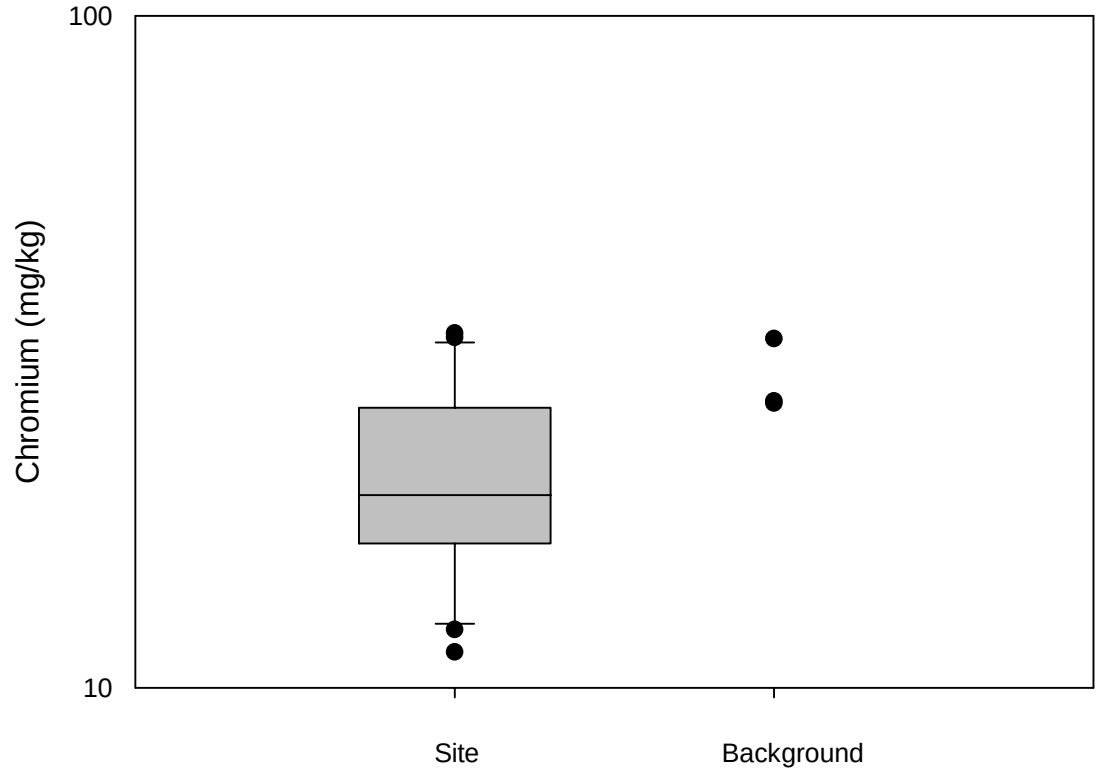
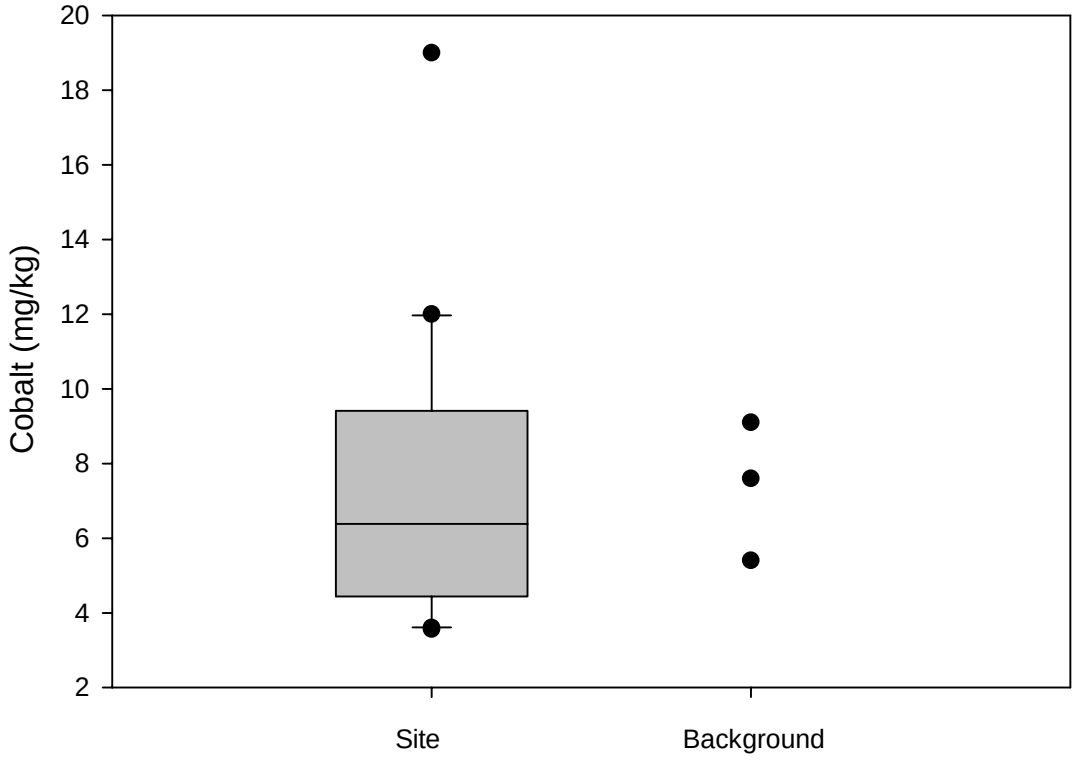
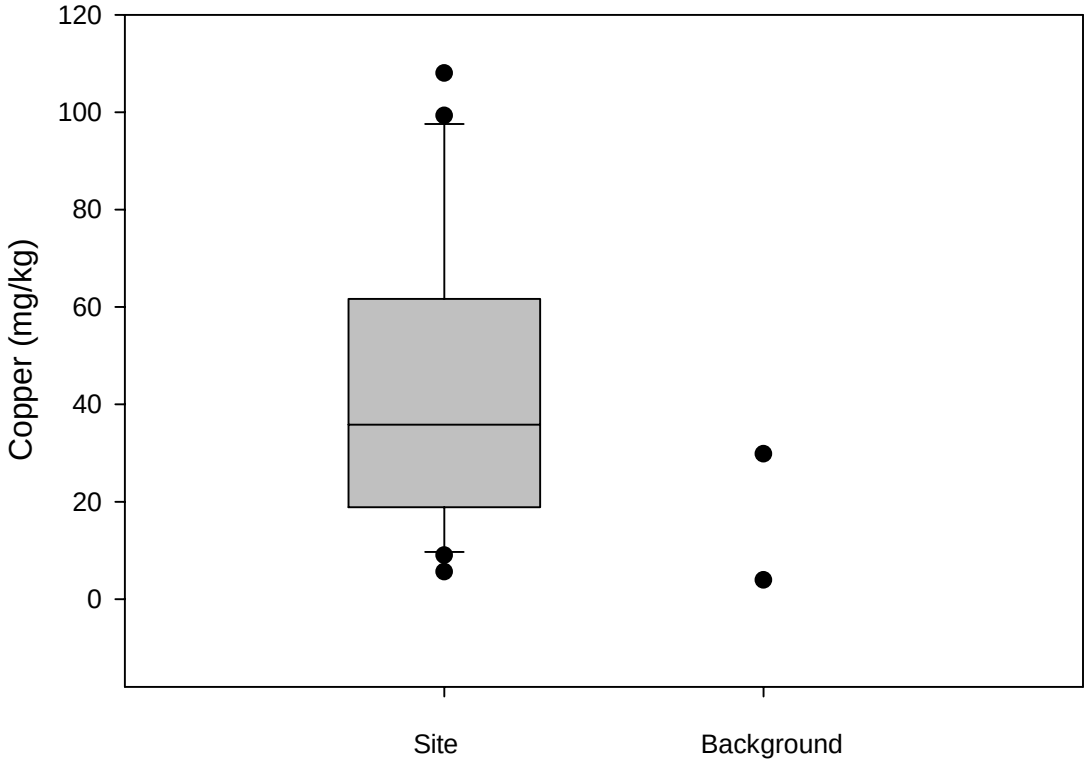

Arsenic (mg/kg)
20
18
16
14
12
10
8
6
4
2
0
Site
Background

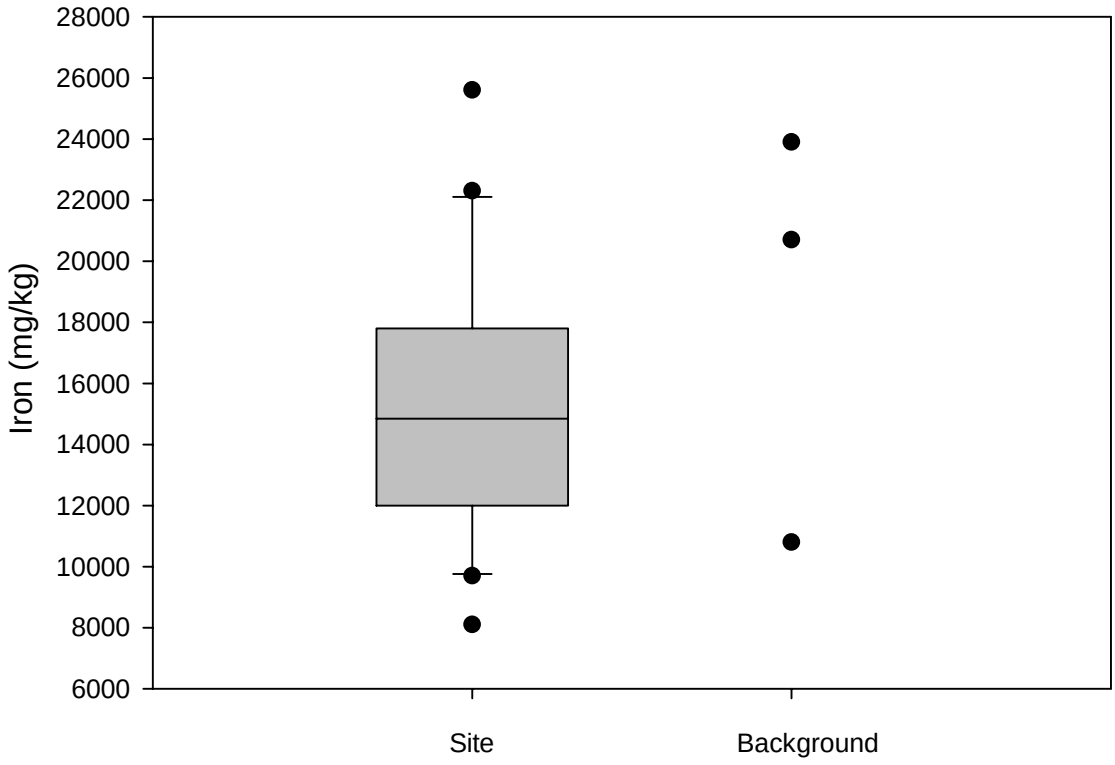

Barium (mg/kg)
100
80
60
40
20
0
Site
Background

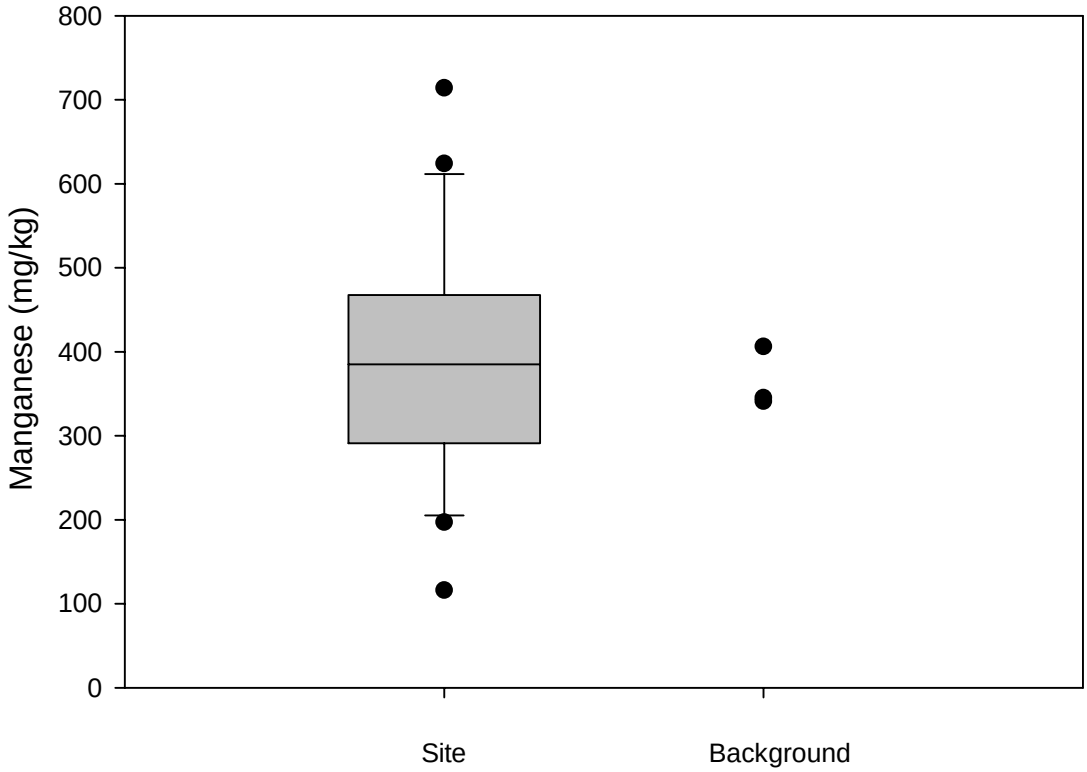

0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
Beryllium (mg/kg)
Site
Background

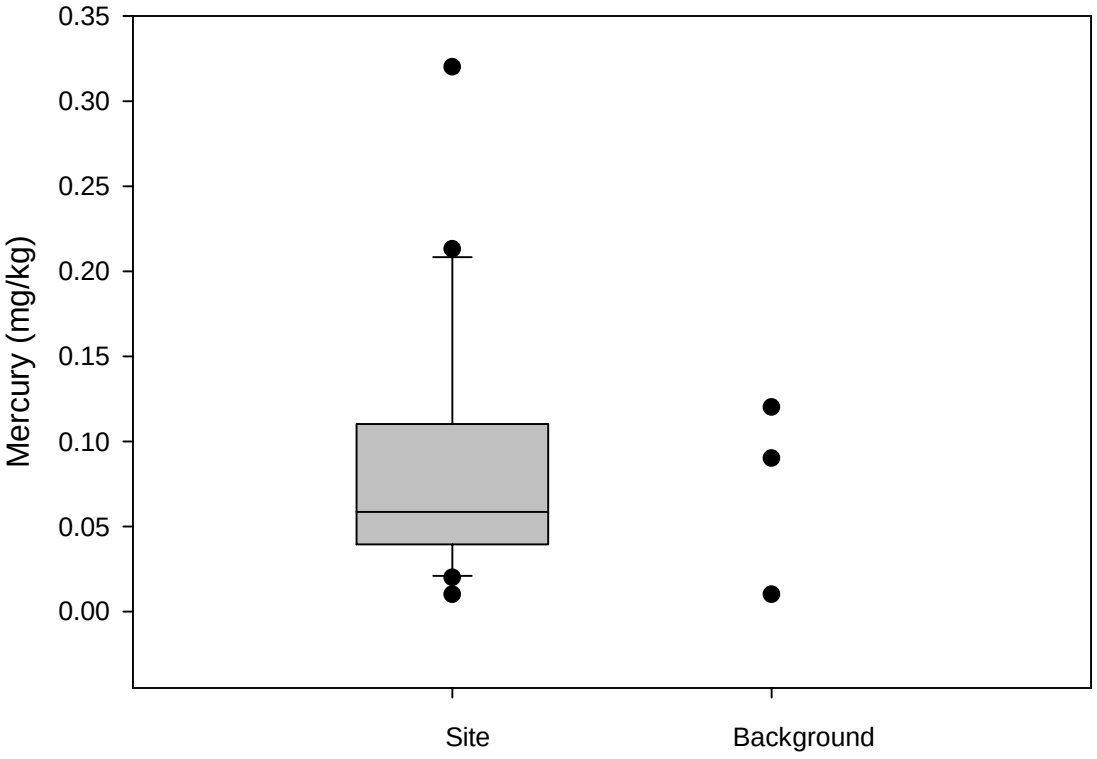

100
10
Chromium (mg/kg)
Site
Background

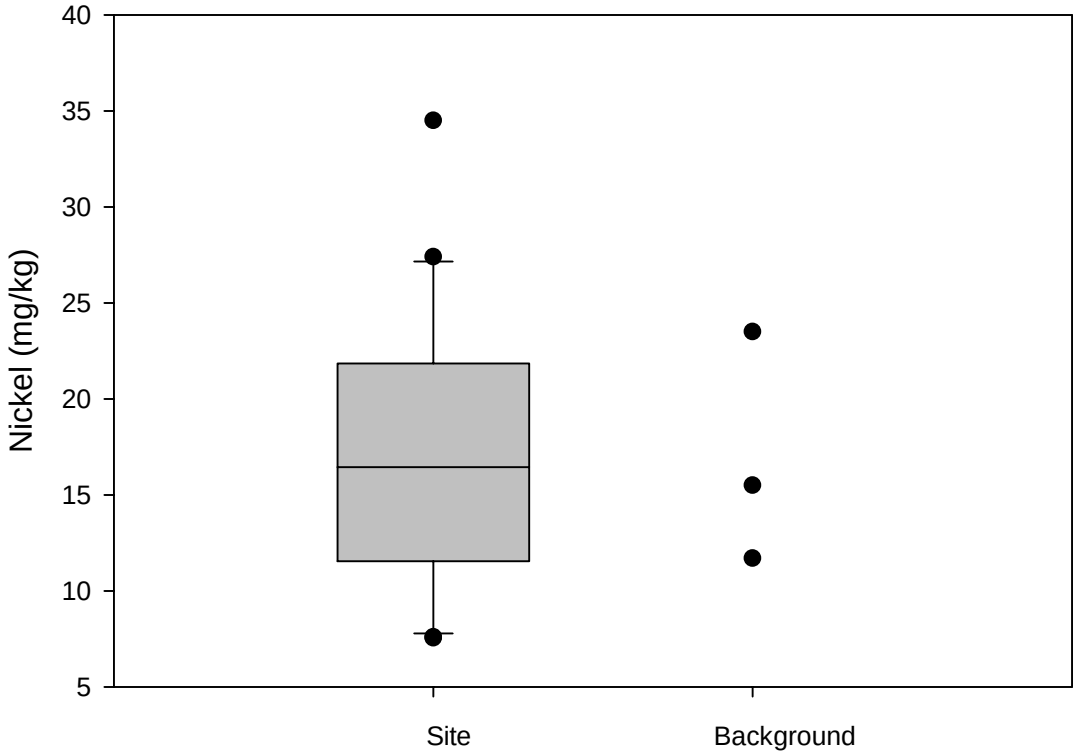

Cobalt (mg/kg)
20
18
16
14
12
10
8
6
4
2
Site
Background

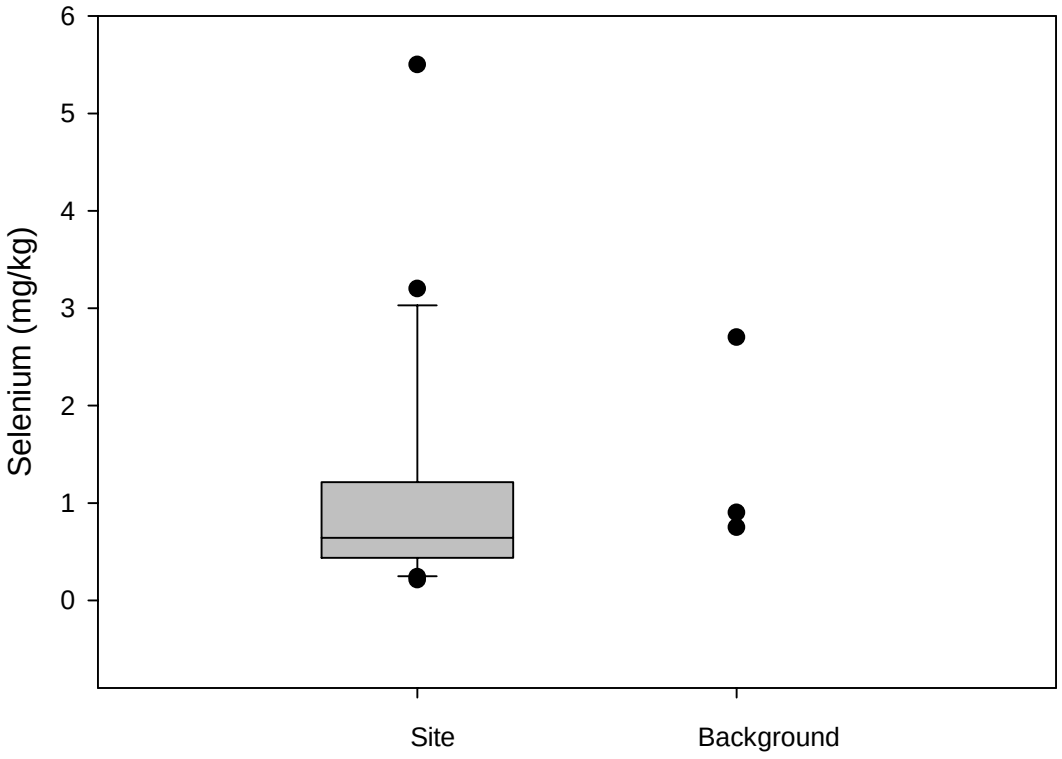

Copper (mg/kg)
120
100
80
60
40
20
0
Site
Background

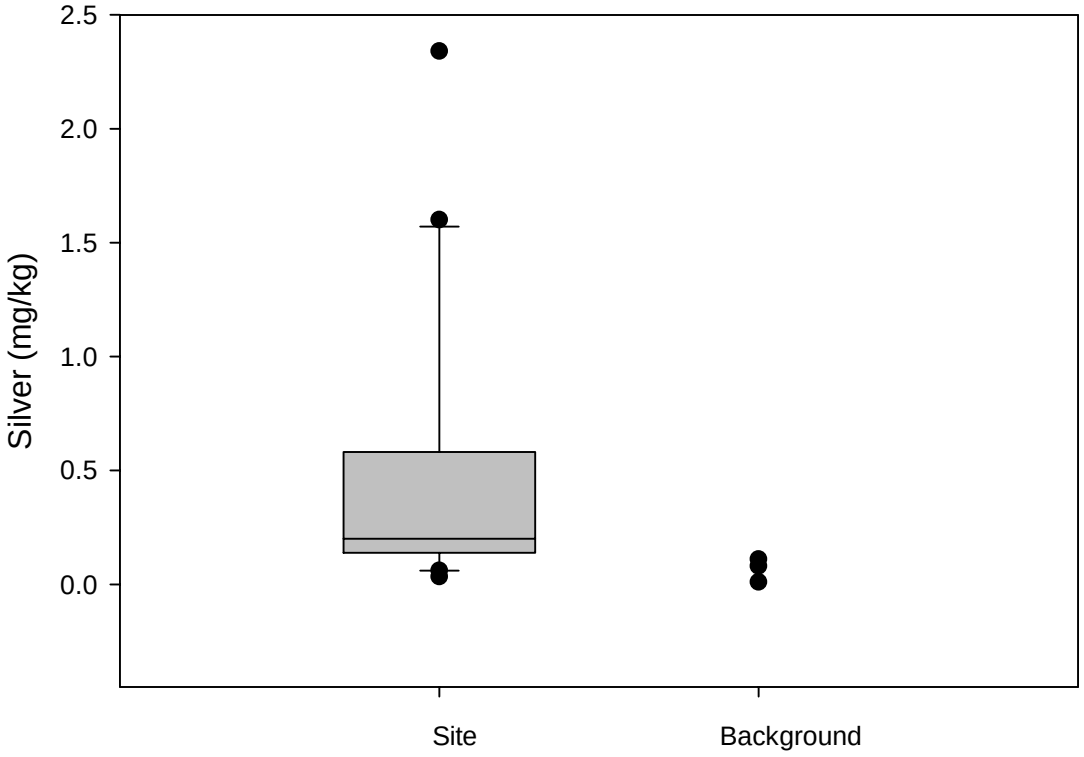

28000
26000
24000
22000
20000
18000
16000
14000
12000
10000
8000
6000
Iron (mg/kg)
Site
Background

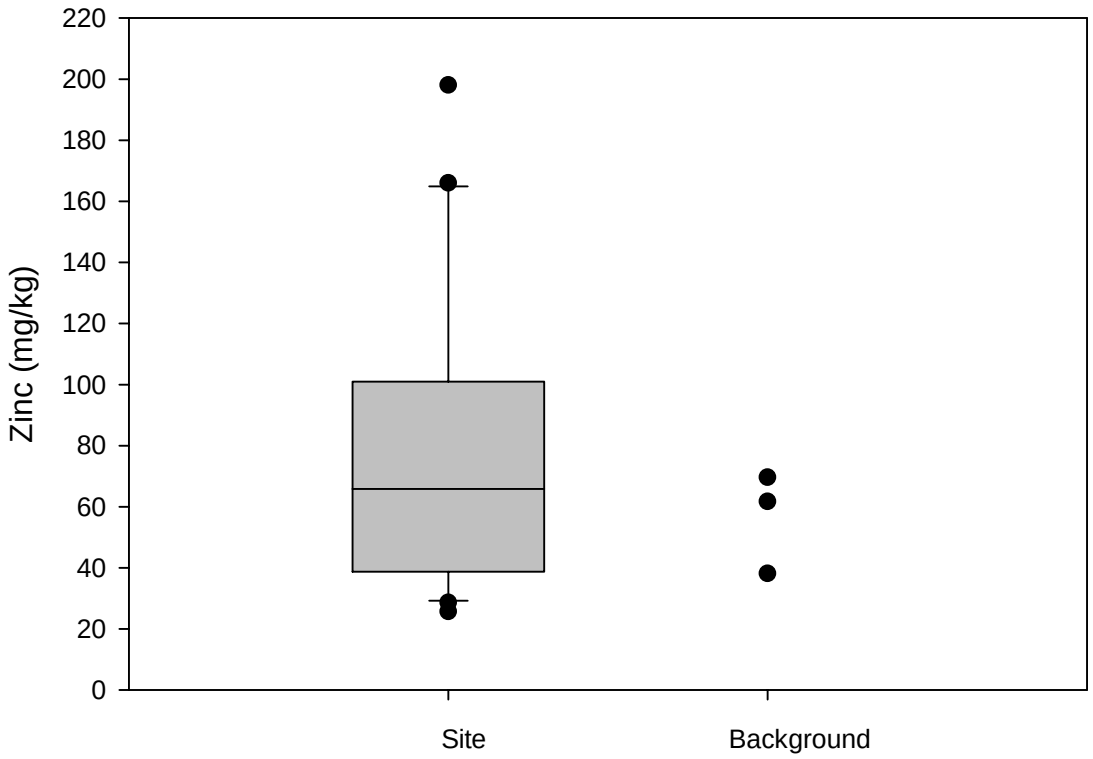

800
700
600
500
400
300
200
100
0
Manganese (mg/kg)
Site
Background

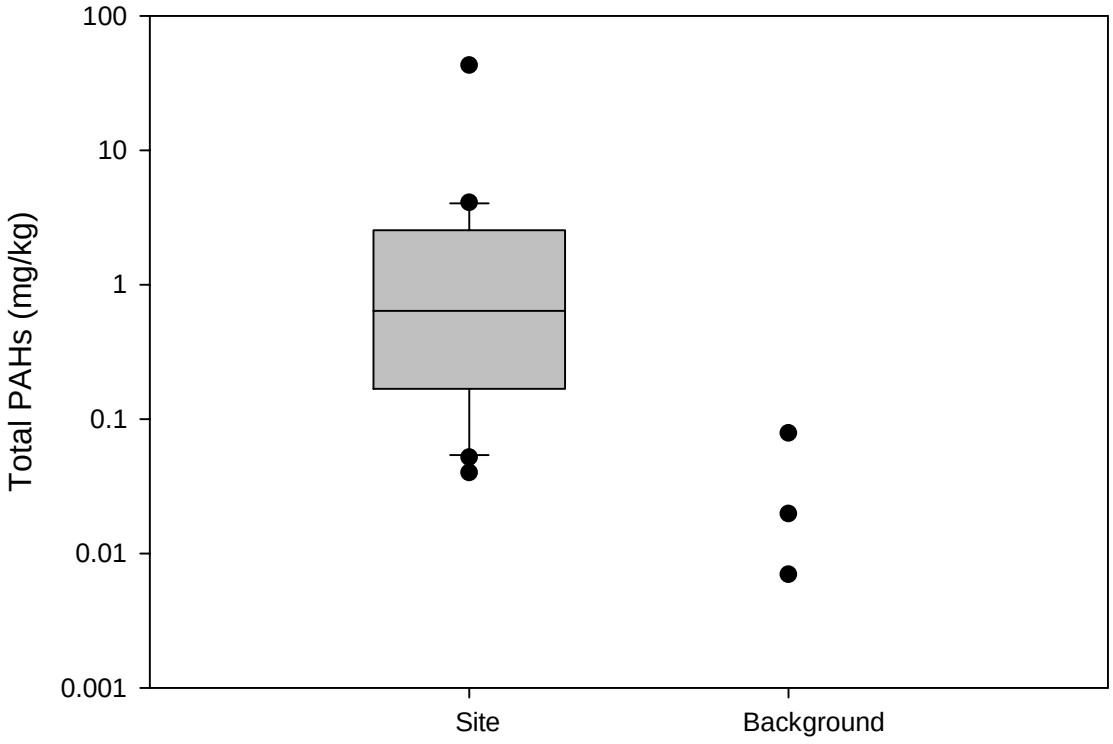

0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Mercury (mg/kg)
Site
Background

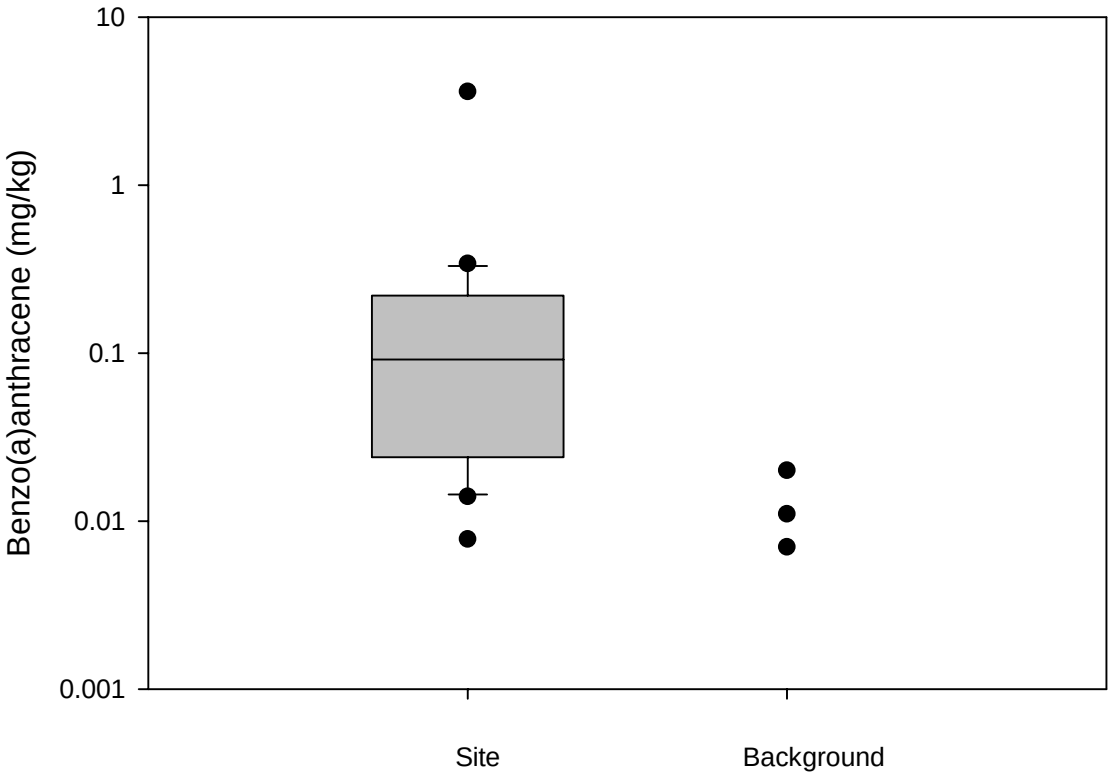

40
35
30
25
20
15
10
5
Nickel (mg/kg)
Site
Background

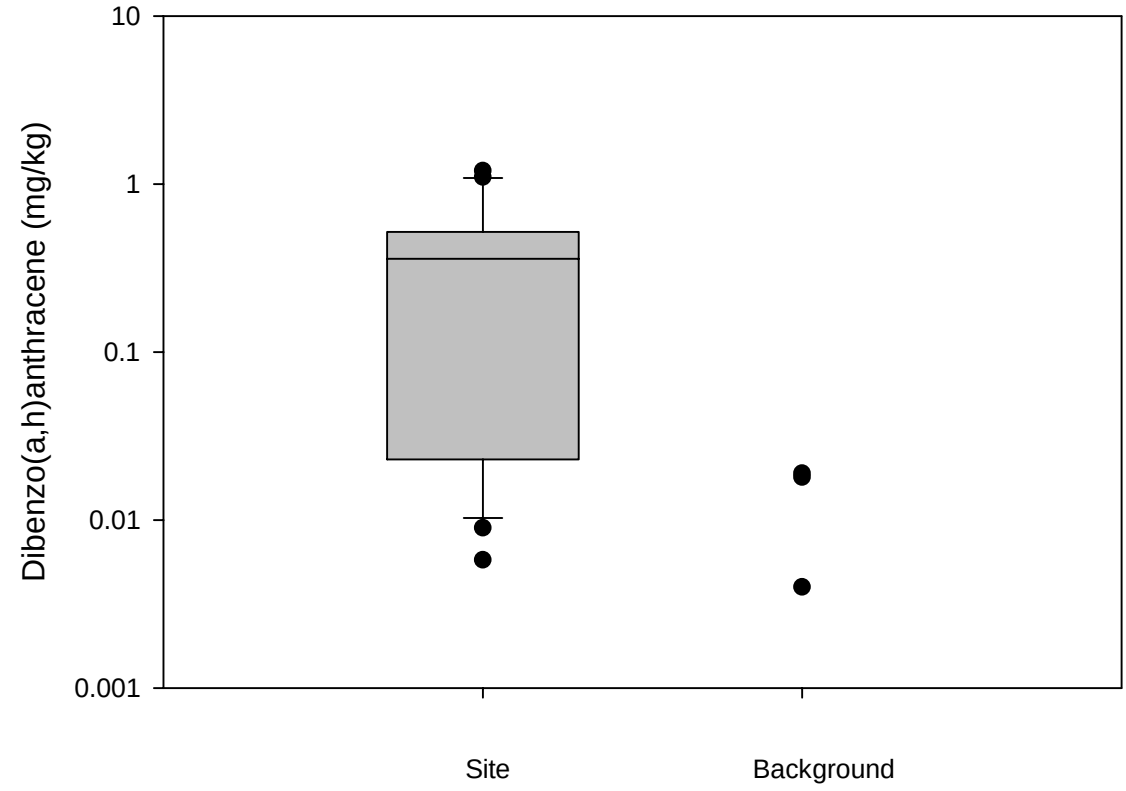

Selenium (mg/kg)
6
5
4
3
2
1
0
Site
Background

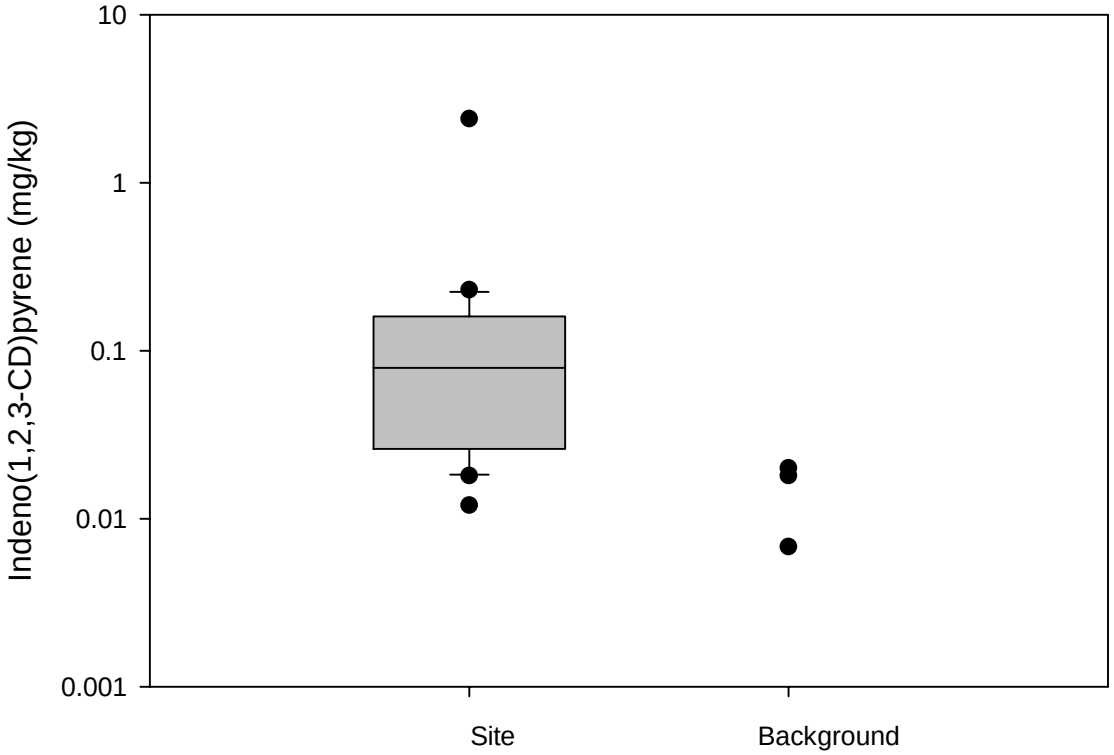

Silver (mg/kg)
2.5
2.0
1.5
1.0
0.5
0.0
Site
Background


220
200
180
160
140
120
100
80
60
40
20
0
Zinc (mg/kg)
Site
Background


100
10
1
0.1
0.01
0.001
Total PAHs (mg/kg)
Site
Background


10
1
0.1
0.01
0.001
Benzo(a)anthracene (mg/kg)
Site
Background


10
1
0.1
0.01
0.001
Dibenzo(a,h)anthracene (mg/kg)
Site
Background


10
1
0.1
0.01
0.001
Indeno(1,2,3-CD)pyrene (mg/kg)
Site
Background

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ATTACHMENT 12

GRAPHICAL COMPARISONS OF SITE AND BACKGROUND SURFACE WATER

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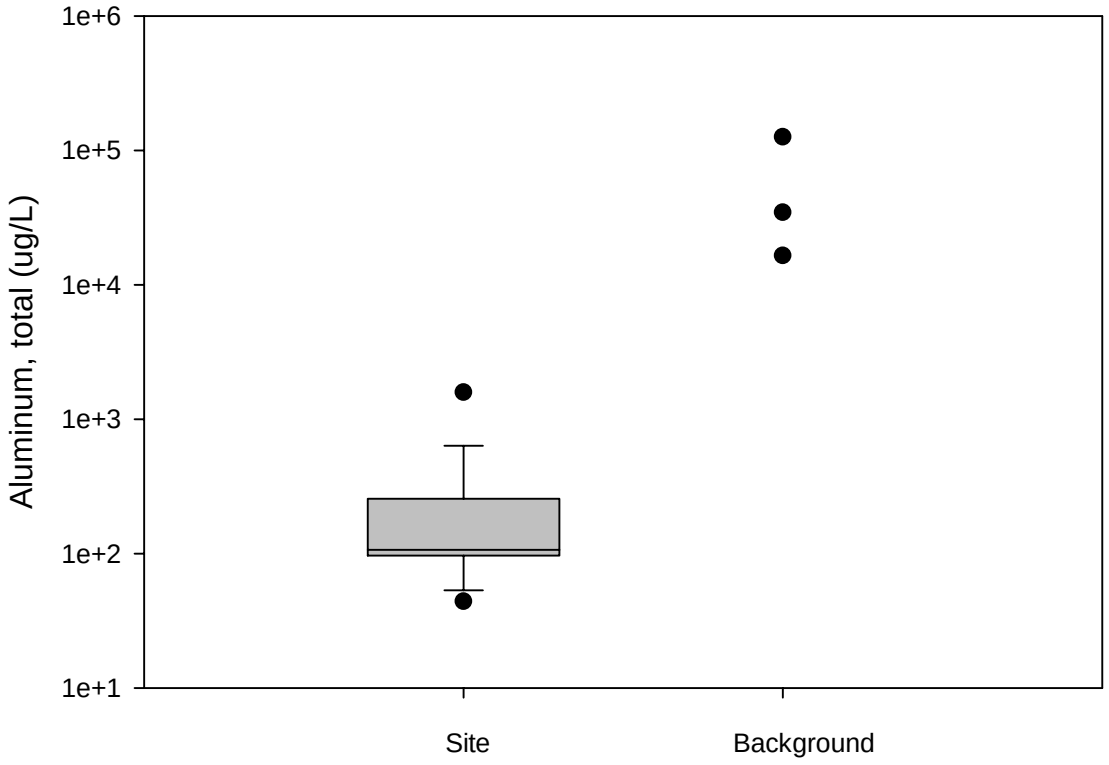
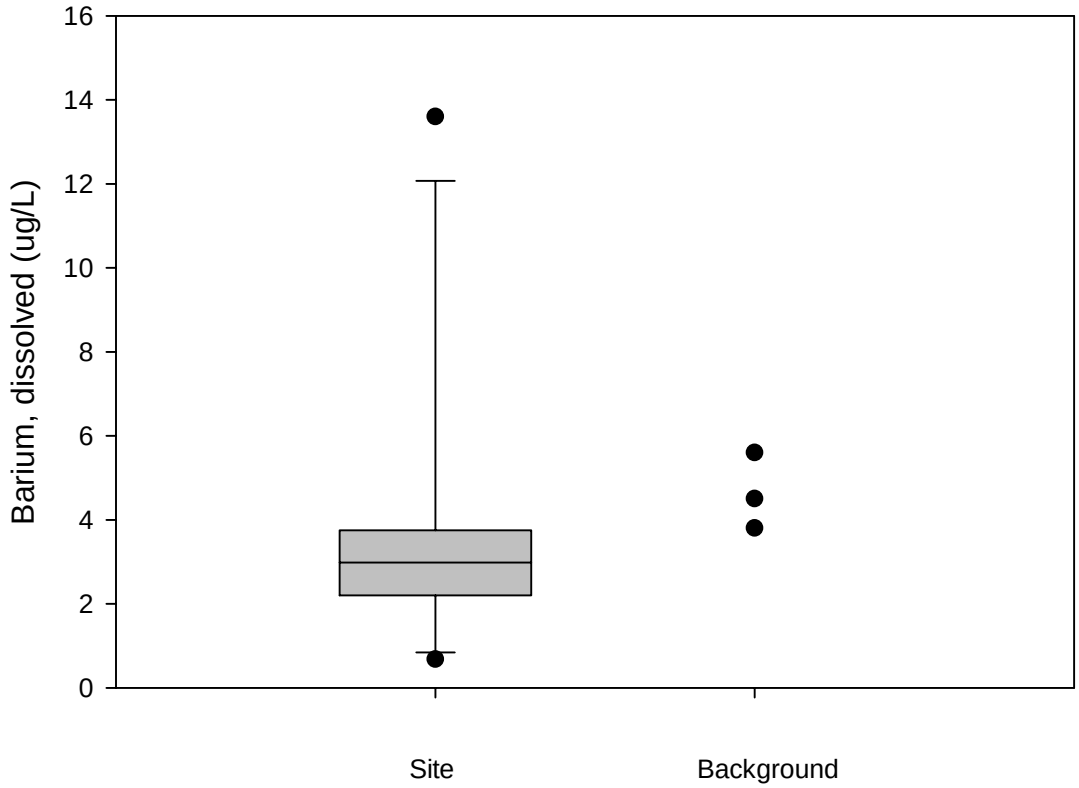
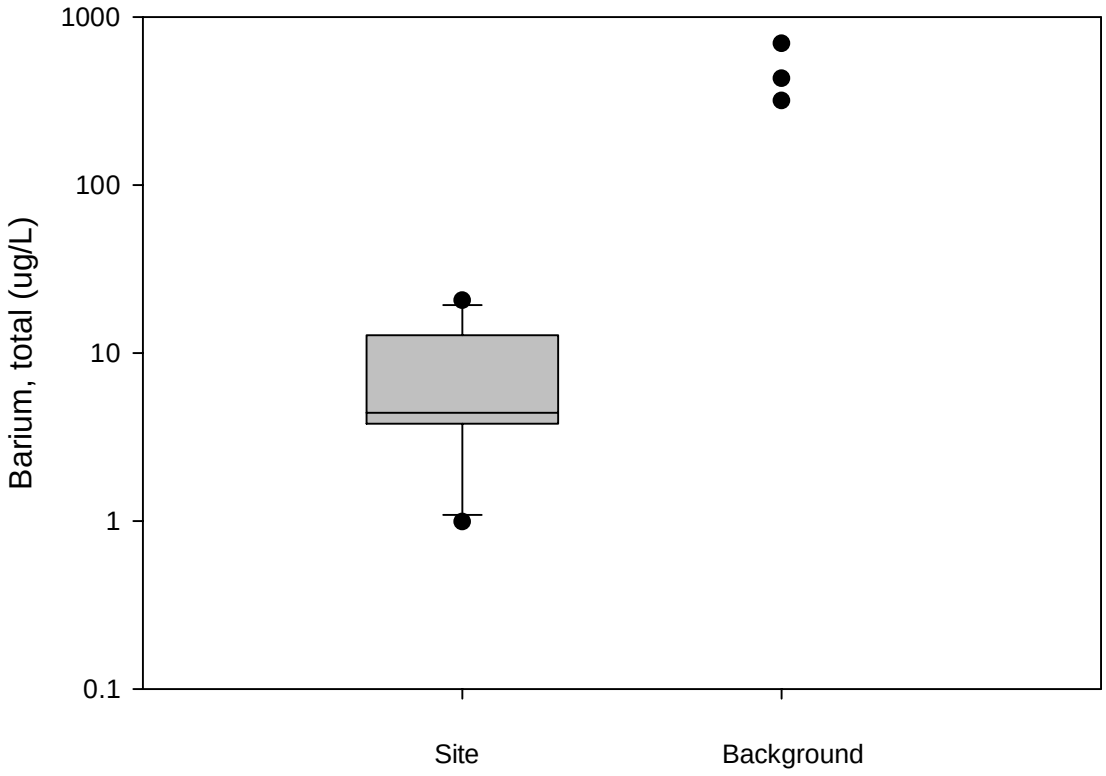
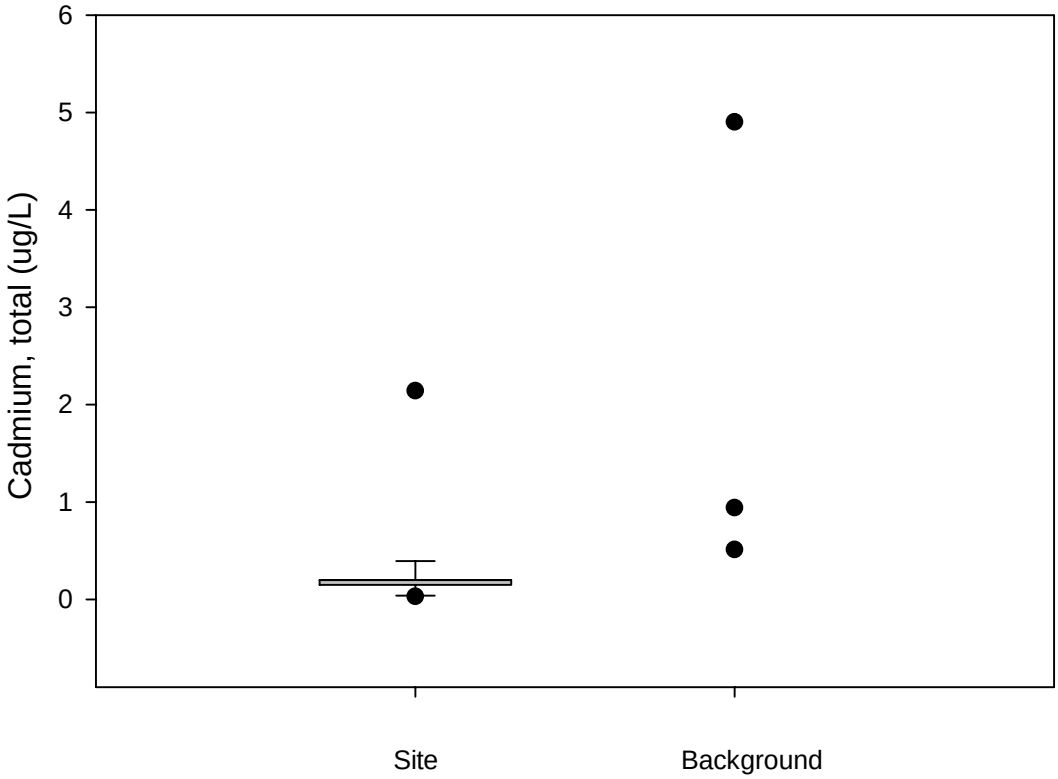
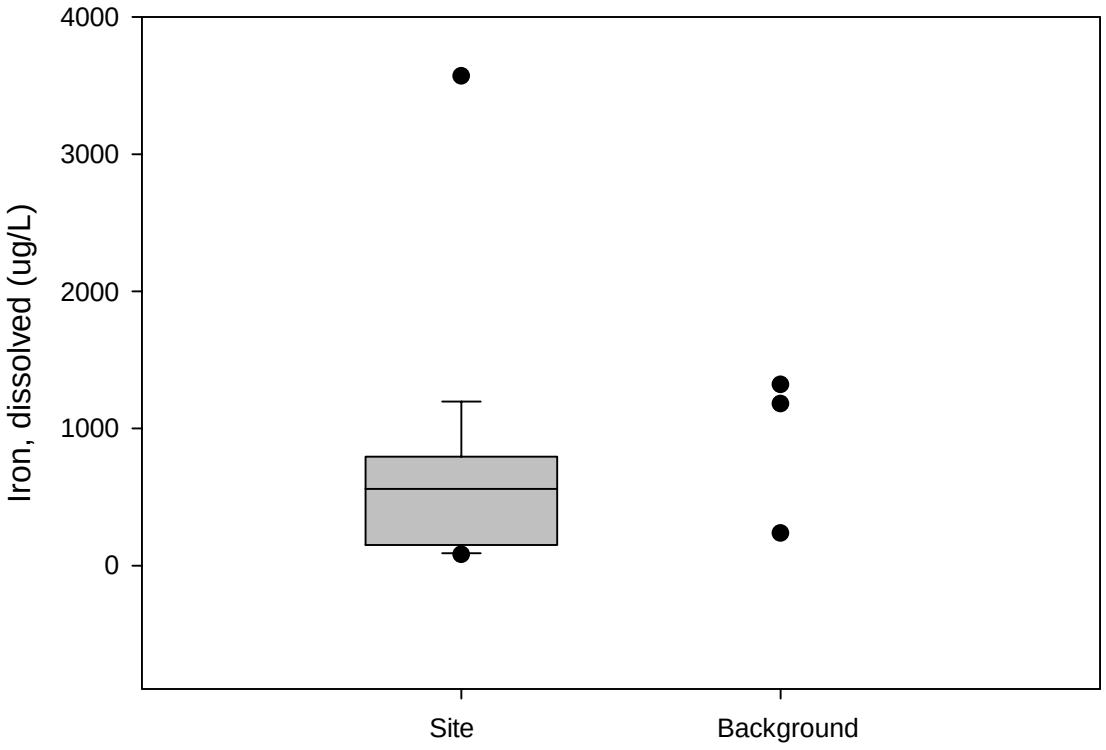
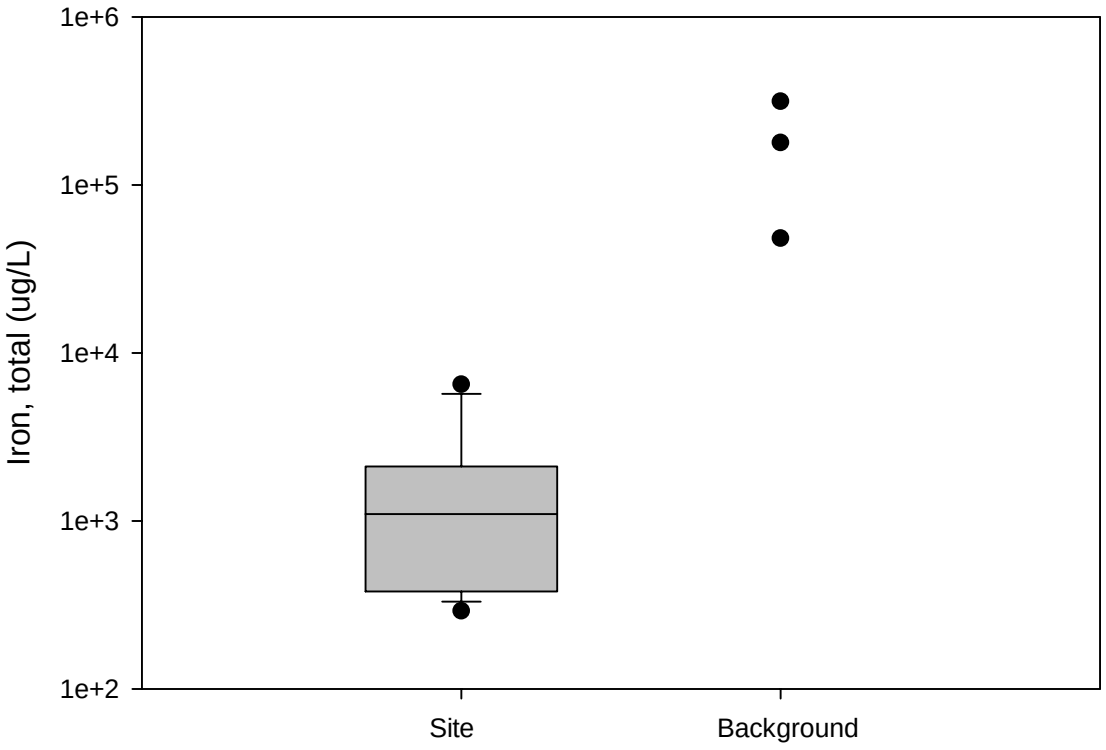

1e+6
1e+5
1e+4
1e+3
1e+2
1e+1
Aluminum, total (ug/L)
Site
Background

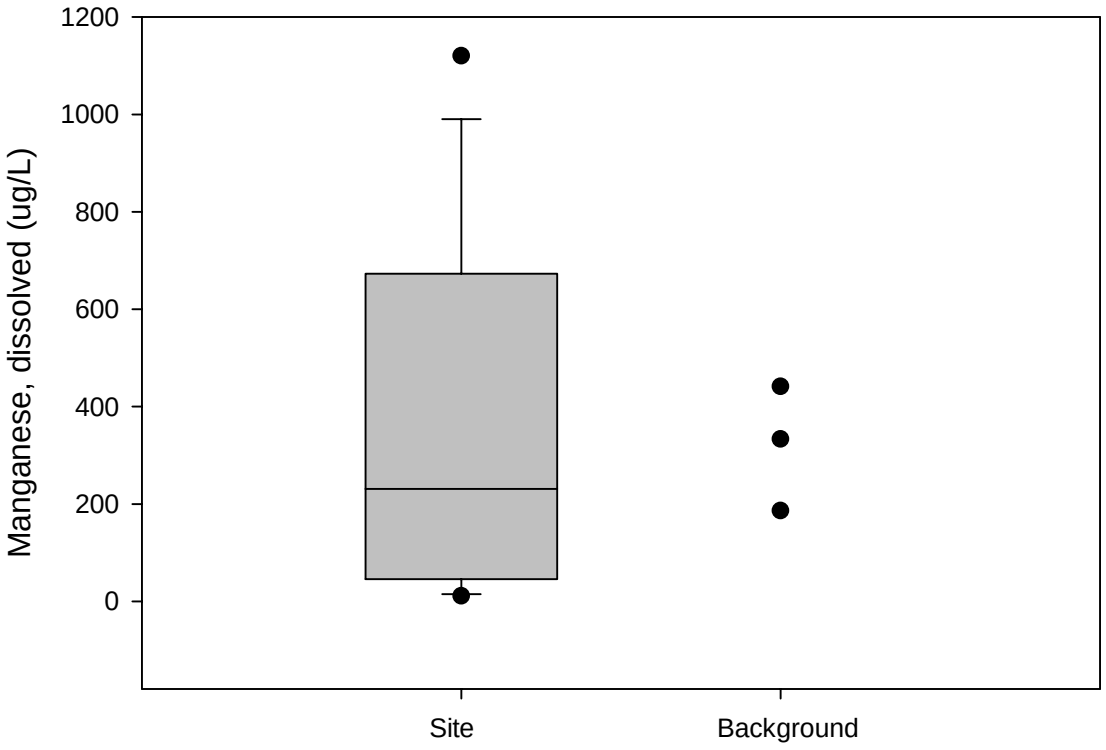

16
14
12
10
8
6
4
2
0
Barium, dissolved (ug/L)
Site
Background

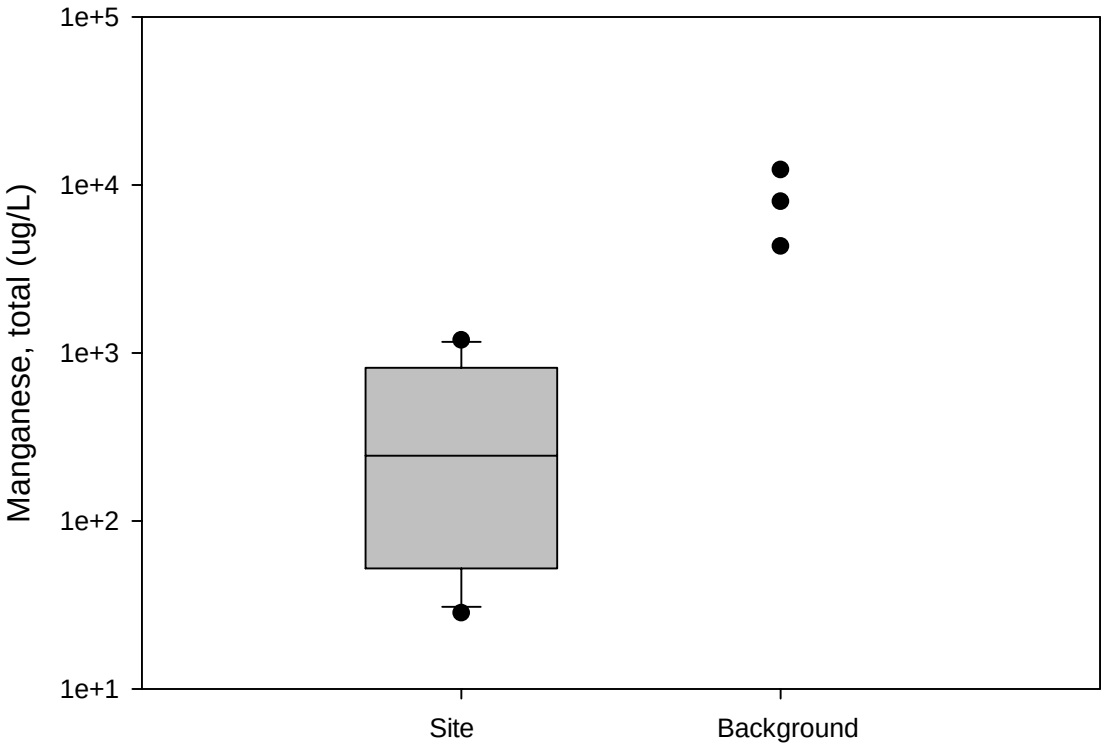

1000
100
10
1
0.1
Barium, total (ug/L)
Site
Background

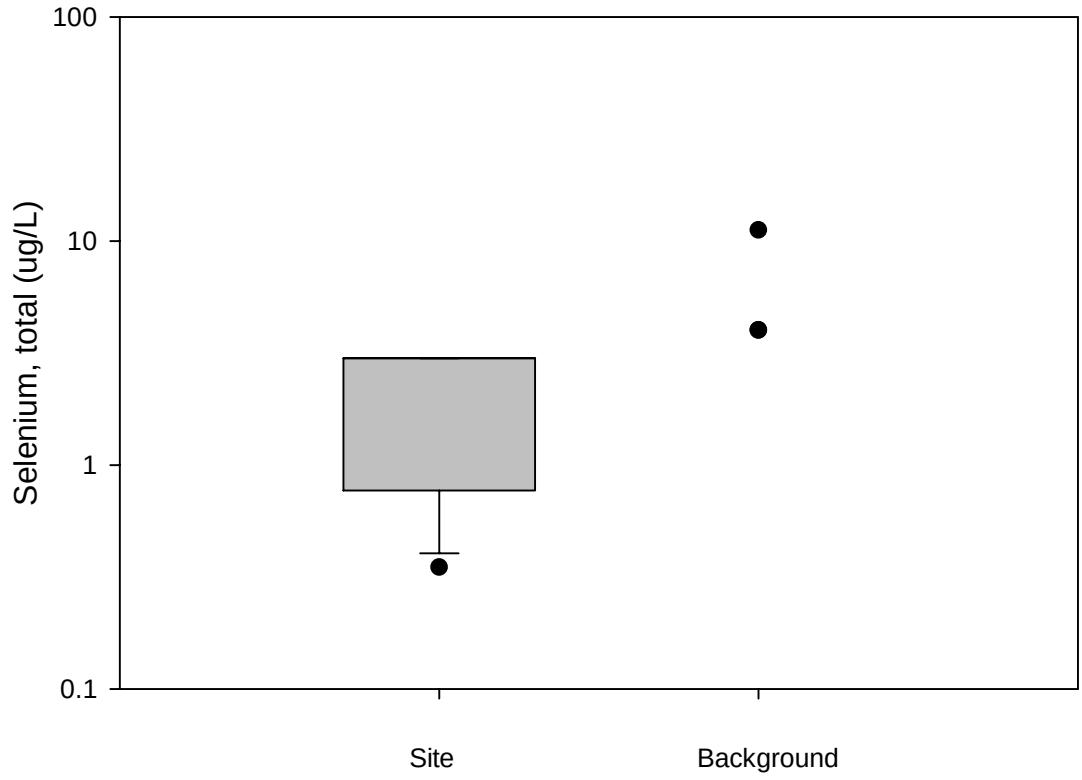

6
5
4
3
2
1
0
Cadmium, total (ug/L)
Site
Background

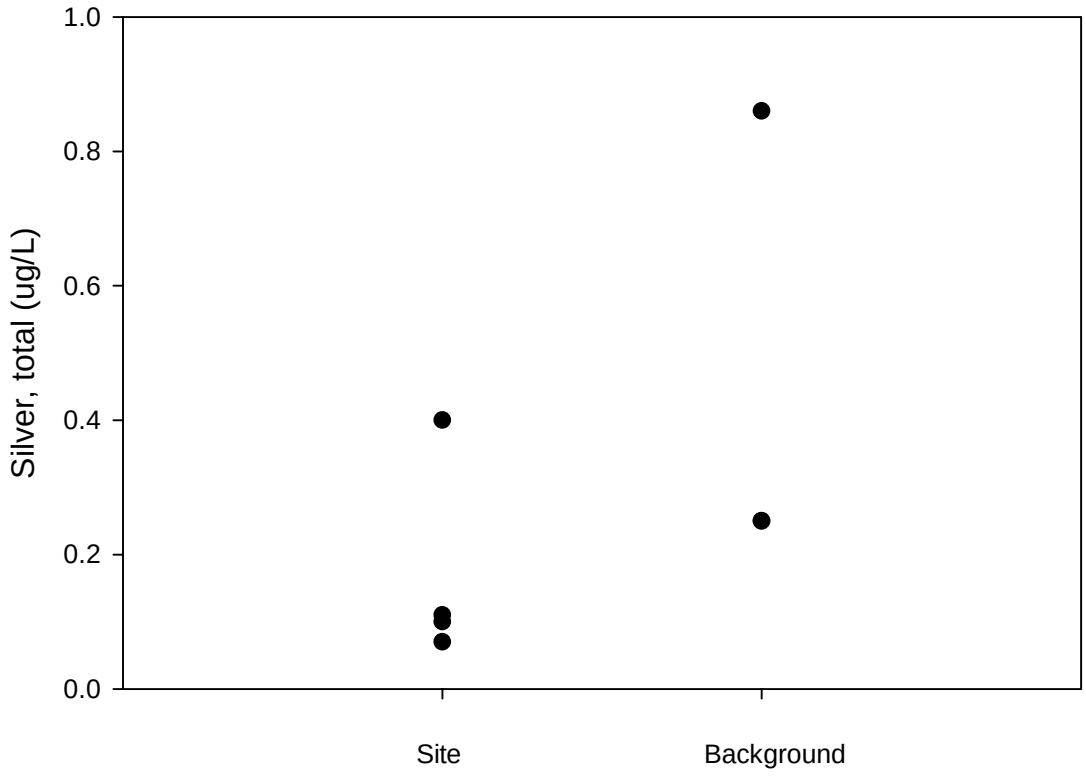

4000
3000
2000
1000
0
Iron, dissolved (ug/L)
Site
Background


1e+6
1e+5
1e+4
1e+3
1e+2
Iron, total (ug/L)
Site
Background


1200
1000
800
600
400
200
0
Manganese, dissolved (ug/L)
Site
Background


1e+5
1e+4
1e+3
1e+2
1e+1
Manganese, total (ug/L)
Site
Background





Total silver was detected in three out of 14 site samples. Therefore, a stacked dot chart was used to present the three detected site concentrations and the value for non-detect samples (reporting limit of 0.4 ug/L).

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ATTACHMENT 13

PROUCL OUTPUT FILES

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Background Soil

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BACKGROUND_CHROMIUM

Raw Statistics

Number of Valid Observations	30
Number of Distinct Observations	29
Minimum	2.1
Maximum	49.2
Mean of Raw Data	21.59
Standard Deviation of Raw Data	11.29
Khat	3.209
Theta hat	6.727
Kstar	2.91
Theta star	7.417
Mean of Log Transformed Data	2.908
Standard Deviation of Log Transformed Data	0.647

Normal GOF Test Results

Correlation Coefficient R	0.981
Shapiro Wilk Test Statistic	0.96
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.352
Lilliefors Test Statistic	0.121
Lilliefors Critical (0.05) Value	0.159

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.988
A-D Test Statistic	0.253
A-D Critical (0.05) Value	0.752
K-S Test Statistic	0.106
K-S Critical(0.05) Value	0.161

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.953
Shapiro Wilk Test Statistic	0.921
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.0322
Lilliefors Test Statistic	0.11
Lilliefors Critical (0.05) Value	0.159

Data appear Approximate_Lognormal at (0.05) Significance Level

BACKGROUND_COBALT

Raw Statistics

Number of Valid Observations	30
Number of Distinct Observations	27
Minimum	0.11
Maximum	23.9
Mean of Raw Data	7.109
Standard Deviation of Raw Data	6.383
Khat	1.255
Theta hat	5.663
Kstar	1.152
Theta star	6.17
Mean of Log Transformed Data	1.513
Standard Deviation of Log Transformed Data	1.113

Normal GOF Test Results

Correlation Coefficient R	0.919
Shapiro Wilk Test Statistic	0.839
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	2.3845E-4
Lilliefors Test Statistic	0.168
Lilliefors Critical (0.05) Value	0.159

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.986
A-D Test Statistic	0.355
A-D Critical (0.05) Value	0.769
K-S Test Statistic	0.125
K-S Critical(0.05) Value	0.164

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.953
Shapiro Wilk Test Statistic	0.92
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.0302
Lilliefors Test Statistic	0.144
Lilliefors Critical (0.05) Value	0.159

Data appear Approximate_Lognormal at (0.05) Significance Level

BACKGROUND_MANGANESE

Raw Statistics

Number of Valid Observations	30
Number of Distinct Observations	30
Minimum	27.9
Maximum	1600
Mean of Raw Data	320.3
Standard Deviation of Raw Data	327.6
Khat	1.417
Theta hat	226.1
Kstar	1.297
Theta star	246.9
Mean of Log Transformed Data	5.377
Standard Deviation of Log Transformed Data	0.925

Normal GOF Test Results

Correlation Coefficient R	0.838
Shapiro Wilk Test Statistic	0.721
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	6.5299E-7
Lilliefors Test Statistic	0.202
Lilliefors Critical (0.05) Value	0.159

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.958
A-D Test Statistic	0.382
A-D Critical (0.05) Value	0.765
K-S Test Statistic	0.114
K-S Critical(0.05) Value	0.163

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.99
Shapiro Wilk Test Statistic	0.98
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.85
Lilliefors Test Statistic	0.0996
Lilliefors Critical (0.05) Value	0.159

Data appear Lognormal at (0.05) Significance Level

BACKGROUND_VANADIUM

Raw Statistics

Number of Valid Observations	30
Number of Distinct Observations	30
Minimum	6.8
Maximum	95.2
Mean of Raw Data	47.18
Standard Deviation of Raw Data	18.89
Khat	4.679
Theta hat	10.08
Kstar	4.233
Theta star	11.14
Mean of Log Transformed Data	3.743
Standard Deviation of Log Transformed Data	0.552

Normal GOF Test Results

Correlation Coefficient R	0.961
Shapiro Wilk Test Statistic	0.932
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.0647
Lilliefors Test Statistic	0.16
Lilliefors Critical (0.05) Value	0.159

Data appear Approximate Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.96
A-D Test Statistic	1.58
A-D Critical (0.05) Value	0.747
K-S Test Statistic	0.227
K-S Critical(0.05) Value	0.16

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.877
Shapiro Wilk Test Statistic	0.786
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	1.4237E-5
Lilliefors Test Statistic	0.268
Lilliefors Critical (0.05) Value	0.159

Data not Lognormal at (0.05) Significance Level

BACKGROUND_ALUMINUM

Raw Statistics

Number of Valid Observations	30
Number of Distinct Observations	30
Minimum	3440
Maximum	40200
Mean of Raw Data	15659
Standard Deviation of Raw Data	8240
Khat	3.5
Theta hat	4474
Kstar	3.172
Theta star	4937
Mean of Log Transformed Data	9.509
Standard Deviation of Log Transformed Data	0.588

Normal GOF Test Results

Correlation Coefficient R	0.972
Shapiro Wilk Test Statistic	0.947
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.171
Lilliefors Test Statistic	0.0932
Lilliefors Critical (0.05) Value	0.159

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.987
A-D Test Statistic	0.257
A-D Critical (0.05) Value	0.751
K-S Test Statistic	0.122
K-S Critical(0.05) Value	0.161

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.982
Shapiro Wilk Test Statistic	0.962
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.391
Lilliefors Test Statistic	0.141
Lilliefors Critical (0.05) Value	0.159

Data appear Lognormal at (0.05) Significance Level

BACKGROUND_ARSENIC

Raw Statistics

Number of Valid Observations	29
Number of Distinct Observations	28
Minimum	0.58
Maximum	26.1
Mean of Raw Data	8.072
Standard Deviation of Raw Data	5.623
Khat	2.279
Theta hat	3.542
Kstar	2.066
Theta star	3.907
Mean of Log Transformed Data	1.853
Standard Deviation of Log Transformed Data	0.753

Normal GOF Test Results

Correlation Coefficient R	0.928
Shapiro Wilk Test Statistic	0.87
Shapiro Wilk Critical (0.05) Value	0.926
Approximate Shapiro Wilk P Value	0.00169
Lilliefors Test Statistic	0.165
Lilliefors Critical (0.05) Value	0.161

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.991
A-D Test Statistic	0.361
A-D Critical (0.05) Value	0.756
K-S Test Statistic	0.116
K-S Critical(0.05) Value	0.165

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.964
Shapiro Wilk Test Statistic	0.945
Shapiro Wilk Critical (0.05) Value	0.926
Approximate Shapiro Wilk P Value	0.156
Lilliefors Test Statistic	0.141
Lilliefors Critical (0.05) Value	0.161

Data appear Lognormal at (0.05) Significance Level

BACKGROUND_IRON

Raw Statistics

Number of Valid Observations	30
Number of Distinct Observations	29
Minimum	392
Maximum	58600
Mean of Raw Data	24006
Standard Deviation of Raw Data	11631
Khat	2.415
Theta hat	9941
Kstar	2.196
Theta star	10934
Mean of Log Transformed Data	9.865
Standard Deviation of Log Transformed Data	0.924

Normal GOF Test Results

Correlation Coefficient R	0.974
Shapiro Wilk Test Statistic	0.963
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.418
Lilliefors Test Statistic	0.0912
Lilliefors Critical (0.05) Value	0.159

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.965
A-D Test Statistic	1.567
A-D Critical (0.05) Value	0.756
K-S Test Statistic	0.203
K-S Critical(0.05) Value	0.162

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.808
Shapiro Wilk Test Statistic	0.683
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	1.2155E-7
Lilliefors Test Statistic	0.259
Lilliefors Critical (0.05) Value	0.159

Data not Lognormal at (0.05) Significance Level

BACKGROUND_LEAD

Raw Statistics

Number of Valid Observations	28
Number of Distinct Observations	28
Minimum	2.9
Maximum	32.9
Mean of Raw Data	18.07
Standard Deviation of Raw Data	7.052
Khat	5.494
Theta hat	3.288
Kstar	4.93
Theta star	3.665
Mean of Log Transformed Data	2.8
Standard Deviation of Log Transformed Data	0.488

Normal GOF Test Results

Correlation Coefficient R	0.991
Shapiro Wilk Test Statistic	0.981
Shapiro Wilk Critical (0.05) Value	0.924
Approximate Shapiro Wilk P Value	0.872
Lilliefors Test Statistic	0.0938
Lilliefors Critical (0.05) Value	0.164

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.983
A-D Test Statistic	0.344
A-D Critical (0.05) Value	0.748
K-S Test Statistic	0.0993
K-S Critical(0.05) Value	0.166

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.931
Shapiro Wilk Test Statistic	0.884
Shapiro Wilk Critical (0.05) Value	0.924
Approximate Shapiro Wilk P Value	0.00478
Lilliefors Test Statistic	0.124
Lilliefors Critical (0.05) Value	0.164

Data appear Approximate_Lognormal at (0.05) Significance Level

BACKGROUND_ZINC

Raw Statistics

Number of Valid Observations	30
Number of Distinct Observations	28
Minimum	1.4
Maximum	88.8
Mean of Raw Data	35.03
Standard Deviation of Raw Data	20.43
Khat	2.437
Theta hat	14.38
Kstar	2.215
Theta star	15.81
Mean of Log Transformed Data	3.337
Standard Deviation of Log Transformed Data	0.8

Normal GOF Test Results

Correlation Coefficient R	0.972
Shapiro Wilk Test Statistic	0.945
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	0.147
Lilliefors Test Statistic	0.123
Lilliefors Critical (0.05) Value	0.159

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.992
A-D Test Statistic	0.351
A-D Critical (0.05) Value	0.756
K-S Test Statistic	0.102
K-S Critical(0.05) Value	0.162

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.914
Shapiro Wilk Test Statistic	0.856
Shapiro Wilk Critical (0.05) Value	0.927
Approximate Shapiro Wilk P Value	6.3011E-4
Lilliefors Test Statistic	0.154
Lilliefors Critical (0.05) Value	0.159

Data appear Approximate_Lognormal at (0.05) Significance Level

BACKGROUND_CADMIUM

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	30	0	30	27	3	10.00%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	3	0.04	0.07	0.0533	0.05	0.0153
Statistics (Non-Detects Only)	27	0.03	0.23	0.101	0.1	0.0473
Statistics (All: NDs treated as DL value)	30	0.03	0.23	0.0963	0.095	0.0472
Statistics (All: NDs treated as DL/2 value)	30	0.02	0.23	0.0937	0.095	0.0502
Statistics (Normal ROS Imputed Data)	30	0.00463	0.23	0.0933	0.095	0.0509
Statistics (Gamma ROS Imputed Data)	30	0.0241	0.23	0.0945	0.095	0.0492
Statistics (Lognormal ROS Imputed Data)	30	0.03	0.23	0.095	0.095	0.0485

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	4.708	4.209	0.0215	-2.401	0.495	-0.206
Statistics (NDs = DL)	4.426	4.006	0.0218	-2.457	0.504	-0.205
Statistics (NDs = DL/2)	3.313	3.004	0.0283	-2.526	0.609	-0.241
Statistics (Gamma ROS Estimates)	3.704	3.356	0.0255	-2.5	0.564	-0.225
Statistics (Lognormal ROS Estimates)	--	--	--	-2.485	0.535	-0.216

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.959	0.955	0.965	0.971

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.922	0.923	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.913	0.927	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.93	0.927	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.946	0.927	Data Appear Normal
Lilliefors (Detects Only)	0.131	0.167	Data Appear Normal
Lilliefors (NDs = DL)	0.111	0.159	Data Appear Normal
Lilliefors (NDs = DL/2)	0.111	0.159	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.113	0.159	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.977	0.98	0.978	0.98

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.425	0.748	
Kolmogorov-Smirnov (Detects Only)	0.114	0.169	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.409	0.748	
Kolmogorov-Smirnov (NDs = DL)	0.104	0.161	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.484	0.752	
Kolmogorov-Smirnov (NDs = DL/2)	0.119	0.161	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.45	0.75	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.115	0.161	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.979	0.983	0.975	0.98

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.956	0.923	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.962	0.927	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.945	0.927	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.95	0.927	Data Appear Lognormal
Lilliefors (Detects Only)	0.135	0.167	Data Appear Lognormal
Lilliefors (NDs = DL)	0.123	0.159	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.144	0.159	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.133	0.159	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

BACKGROUND_MERCURY

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	30	0	30	25	5	16.67%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	5	0.04	0.05	0.042	0.04	0.00447
Statistics (Non-Detects Only)	25	0.04	0.27	0.108	0.09	0.0528
Statistics (All: NDs treated as DL value)	30	0.04	0.27	0.0968	0.085	0.0542
Statistics (All: NDs treated as DL/2 value)	30	0.02	0.27	0.0933	0.085	0.0583
Statistics (Normal ROS Imputed Data)	30	-0.037	0.27	0.0886	0.085	0.0654
Statistics (Gamma ROS Imputed Data)	30	0.01	0.27	0.0928	0.085	0.059
Statistics (Lognormal ROS Imputed Data)	30	0.0278	0.27	0.0959	0.085	0.0552

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	5.27	4.665	0.0205	-2.325	0.442	-0.19
Statistics (NDs = DL)	3.945	3.573	0.0245	-2.467	0.516	-0.209
Statistics (NDs = DL/2)	2.526	2.296	0.0369	-2.582	0.71	-0.275
Statistics (Gamma ROS Estimates)	2.209	2.011	0.042	-2.62	0.797	-0.304
Statistics (Lognormal ROS Estimates)	--	--	--	-2.493	0.557	-0.223

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.92	0.923	0.949	0.973

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.854	0.918	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.856	0.927	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.903	0.927	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.954	0.927	Data Appear Normal
Lilliefors (Detects Only)	0.239	0.173	Data Not Normal
Lilliefors (NDs = DL)	0.21	0.159	Data Not Normal
Lilliefors (NDs = DL/2)	0.188	0.159	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.164	0.159	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.97	0.979	0.986	0.986

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.609	0.747	
Kolmogorov-Smirnov (Detects Only)	0.189	0.175	Detected Data appear Approximate Gamma Distri
Anderson-Darling (NDs = DL)	0.539	0.75	
Kolmogorov-Smirnov (NDs = DL)	0.141	0.161	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.618	0.755	
Kolmogorov-Smirnov (NDs = DL/2)	0.157	0.162	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.611	0.757	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.172	0.162	Detected Data appear Approximate Gamma Distri

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.983	0.98	0.96	0.989

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.97	0.918	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.949	0.927	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.912	0.927	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.973	0.927	Data Appear Lognormal
Lilliefors (Detects Only)	0.159	0.173	Data Appear Lognormal
Lilliefors (NDs = DL)	0.121	0.159	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.198	0.159	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.143	0.159	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

BACKGROUND_SELENIUM

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	30	0	30	29	1	3.33%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	0.19	0.19	0.19	0.19	N/A
Statistics (Non-Detects Only)	29	0.43	2.3	0.921	0.8	0.431
Statistics (All: NDs treated as DL value)	30	0.19	2.3	0.897	0.8	0.444
Statistics (All: NDs treated as DL/2 value)	30	0.095	2.3	0.894	0.8	0.45
Statistics (Normal ROS Imputed Data)	30	-0.0741	2.3	0.888	0.8	0.461
Statistics (Gamma ROS Imputed Data)	30	0.15	2.3	0.896	0.8	0.446
Statistics (Lognormal ROS Imputed Data)	30	0.31	2.3	0.901	0.8	0.438

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	6.09	5.483	0.151	-0.166	0.402	-2.417
Statistics (NDs = DL)	4.819	4.359	0.186	-0.216	0.48	-2.221
Statistics (NDs = DL/2)	4.099	3.711	0.218	-0.239	0.562	-2.348
Statistics (Gamma ROS Estimates)	4.553	4.12	0.197	-0.224	0.506	-2.259
Statistics (Lognormal ROS Estimates)	--	--	--	-0.2	0.435	-2.18

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.9	0.919	0.923	0.927

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.818	0.926	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.858	0.927	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.868	0.927	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.88	0.927	Data Not Normal
Lilliefors (Detects Only)	0.152	0.161	Data Appear Normal
Lilliefors (NDs = DL)	0.142	0.159	Data Appear Normal
Lilliefors (NDs = DL/2)	0.14	0.159	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.138	0.159	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.953	0.964	0.965	0.965

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.565	0.747	
Kolmogorov-Smirnov (Detects Only)	0.11	0.163	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.449	0.747	
Kolmogorov-Smirnov (NDs = DL)	0.0882	0.16	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.623	0.749	
Kolmogorov-Smirnov (NDs = DL/2)	0.111	0.161	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.497	0.748	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.093	0.16	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.98	0.969	0.917	0.987

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.958	0.926	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.957	0.927	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.871	0.927	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.979	0.927	Data Appear Lognormal
Lilliefors (Detects Only)	0.0837	0.161	Data Appear Lognormal
Lilliefors (NDs = DL)	0.0928	0.159	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.141	0.159	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.0776	0.159	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

BACKGROUND_HPAH

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	29	0	29	20	9	31.03%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	9	0.025	0.044	0.0322	0.03	0.00632
Statistics (Non-Detects Only)	20	0.00166	0.357	0.0632	0.0213	0.0968
Statistics (All: NDs treated as DL value)	29	0.00166	0.357	0.0536	0.029	0.0811
Statistics (All: NDs treated as DL/2 value)	29	0.00166	0.357	0.0486	0.016	0.0828
Statistics (Normal ROS Imputed Data)	29	0.00166	0.357	0.0484	0.0164	0.0829
Statistics (Gamma ROS Imputed Data)	29	0.00166	0.357	0.0467	0.01	0.0836
Statistics (Lognormal ROS Imputed Data)	29	0.00166	0.357	0.0462	0.0094	0.0838

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.593	0.538	0.107	-3.804	1.56	-0.41
Statistics (NDs = DL)	0.775	0.718	0.0691	-3.695	1.299	-0.352
Statistics (NDs = DL/2)	0.684	0.637	0.071	-3.91	1.299	-0.332
Statistics (Gamma ROS Estimates)	0.622	0.58	0.0751	-4.053	1.339	-0.33
Statistics (Lognormal ROS Estimates)	--	--	--	-4.112	1.368	-0.333

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.81	0.764	0.743	0.744

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.665	0.905	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.599	0.926	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.568	0.926	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.569	0.926	Data Not Normal
Lilliefors (Detects Only)	0.262	0.192	Data Not Normal
Lilliefors (NDs = DL)	0.306	0.161	Data Not Normal
Lilliefors (NDs = DL/2)	0.311	0.161	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.31	0.161	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.983	0.951	0.954	0.958

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.562	0.794	
Kolmogorov-Smirnov (Detects Only)	0.151	0.204	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.896	0.783	
Kolmogorov-Smirnov (NDs = DL)	0.172	0.169	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.632	0.791	
Kolmogorov-Smirnov (NDs = DL/2)	0.217	0.17	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	2.247	0.798	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.259	0.171	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.992	0.986	0.982	0.964

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.973	0.905	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.969	0.926	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.961	0.926	Data Appear Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.924	0.926	Data Not Lognormal
Lilliefors (Detects Only)	0.0779	0.192	Data Appear Lognormal
Lilliefors (NDs = DL)	0.157	0.161	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.128	0.161	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.19	0.161	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

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Surface Soil – Exposure Area 1

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AREA1_ALUMINUM_SS

Raw Statistics

Number of Valid Observations	10
Number of Distinct Observations	10
Minimum	4320
Maximum	17000
Mean of Raw Data	12235
Standard Deviation of Raw Data	4496
Khat	6.063
Theta hat	2018
Kstar	4.311
Theta star	2838
Mean of Log Transformed Data	9.327
Standard Deviation of Log Transformed Data	0.473

Normal GOF Test Results

Correlation Coefficient R	0.944
Shapiro Wilk Test Statistic	0.876
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.149
Lilliefors Test Statistic	0.224
Lilliefors Critical (0.05) Value	0.262

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.885
A-D Test Statistic	0.785
A-D Critical (0.05) Value	0.729
K-S Test Statistic	0.275
K-S Critical(0.05) Value	0.267

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.906
Shapiro Wilk Test Statistic	0.815
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.0249
Lilliefors Test Statistic	0.289
Lilliefors Critical (0.05) Value	0.262

Data not Lognormal at (0.05) Significance Level

AREA1_ARSENIC_SS

Raw Statistics

Number of Valid Observations	10
Number of Distinct Observations	9
Minimum	3.6
Maximum	12
Mean of Raw Data	6.79
Standard Deviation of Raw Data	2.274
Khat	10.72
Theta hat	0.633
Kstar	7.574
Theta star	0.896
Mean of Log Transformed Data	1.868
Standard Deviation of Log Transformed Data	0.323

Normal GOF Test Results

Correlation Coefficient R	0.943
Shapiro Wilk Test Statistic	0.911
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.189
Lilliefors Test Statistic	0.211
Lilliefors Critical (0.05) Value	0.262

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.966
A-D Test Statistic	0.267
A-D Critical (0.05) Value	0.725
K-S Test Statistic	0.166
K-S Critical(0.05) Value	0.267

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.976
Shapiro Wilk Test Statistic	0.971
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.746
Lilliefors Test Statistic	0.155
Lilliefors Critical (0.05) Value	0.262

Data appear Lognormal at (0.05) Significance Level

AREA1_COBALT_SS

Raw Statistics

Number of Valid Observations	10
Number of Distinct Observations	10
Minimum	6.8
Maximum	24.2
Mean of Raw Data	11.44
Standard Deviation of Raw Data	4.869
Khat	8.252
Theta hat	1.386
Kstar	5.843
Theta star	1.958
Mean of Log Transformed Data	2.375
Standard Deviation of Log Transformed Data	0.35

Normal GOF Test Results

Correlation Coefficient R	0.84
Shapiro Wilk Test Statistic	0.734
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.00156
Lilliefors Test Statistic	0.346
Lilliefors Critical (0.05) Value	0.262

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.892
A-D Test Statistic	0.678
A-D Critical (0.05) Value	0.727
K-S Test Statistic	0.29
K-S Critical(0.05) Value	0.267

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.927
Shapiro Wilk Test Statistic	0.88
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.0836
Lilliefors Test Statistic	0.268
Lilliefors Critical (0.05) Value	0.262

Data appear Approximate_Lognormal at (0.05) Significance Level

AREA1_IRON_SS

Raw Statistics

Number of Valid Observations	10
Number of Distinct Observations	10
Minimum	6840
Maximum	24800
Mean of Raw Data	18580
Standard Deviation of Raw Data	5992
Khat	7.445
Theta hat	2496
Kstar	5.278
Theta star	3520
Mean of Log Transformed Data	9.761
Standard Deviation of Log Transformed Data	0.431

Normal GOF Test Results

Correlation Coefficient R	0.914
Shapiro Wilk Test Statistic	0.834
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.0385
Lilliefors Test Statistic	0.281
Lilliefors Critical (0.05) Value	0.262

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.857
A-D Test Statistic	1.084
A-D Critical (0.05) Value	0.727
K-S Test Statistic	0.332
K-S Critical(0.05) Value	0.267

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.862
Shapiro Wilk Test Statistic	0.747
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.00336
Lilliefors Test Statistic	0.349
Lilliefors Critical (0.05) Value	0.262

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significance

AREA1_MANGANESE_SS

Raw Statistics

Number of Valid Observations	10
Number of Distinct Observations	10
Minimum	342
Maximum	8600
Mean of Raw Data	1703
Standard Deviation of Raw Data	2558
Khat	0.926
Theta hat	1840
Kstar	0.715
Theta star	2383
Mean of Log Transformed Data	6.811
Standard Deviation of Log Transformed Data	1.044

Normal GOF Test Results

Correlation Coefficient R	0.748
Shapiro Wilk Test Statistic	0.583
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	4.2622E-5
Lilliefors Test Statistic	0.363
Lilliefors Critical (0.05) Value	0.262

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.938
A-D Test Statistic	1.292
A-D Critical (0.05) Value	0.751
K-S Test Statistic	0.375
K-S Critical(0.05) Value	0.274

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.889
Shapiro Wilk Test Statistic	0.794
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.0119
Lilliefors Test Statistic	0.338
Lilliefors Critical (0.05) Value	0.262

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significance

AREA1_VANADIUM_SS

Raw Statistics

Number of Valid Observations	10
Number of Distinct Observations	10
Minimum	17.8
Maximum	42.7
Mean of Raw Data	30.28
Standard Deviation of Raw Data	7.677
Khat	15.48
Theta hat	1.956
Kstar	10.9
Theta star	2.778
Mean of Log Transformed Data	3.378
Standard Deviation of Log Transformed Data	0.279

Normal GOF Test Results

Correlation Coefficient R	0.972
Shapiro Wilk Test Statistic	0.944
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.596
Lilliefors Test Statistic	0.193
Lilliefors Critical (0.05) Value	0.262

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.96
A-D Test Statistic	0.456
A-D Critical (0.05) Value	0.725
K-S Test Statistic	0.224
K-S Critical(0.05) Value	0.266

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.948
Shapiro Wilk Test Statistic	0.898
Shapiro Wilk Critical (0.05) Value	0.842
Approximate Shapiro Wilk P Value	0.206
Lilliefors Test Statistic	0.245
Lilliefors Critical (0.05) Value	0.262

Data appear Lognormal at (0.05) Significance Level

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.13/7/2017 1:25:08 PM
From File	proUCL Input Surface Soil Area 1_REV.xls
Full Precision	OFF
Confidence Coefficient	0.95

AREA1_CHROMIUM_SS

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	15	0	15	14	1	6.67%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	10.6	10.6	10.6	10.6	N/A
Statistics (Non-Detects Only)	14	13.9	37.3	24.24	24.05	5.461
Statistics (All: NDs treated as DL value)	15	10.6	37.3	23.33	23.4	6.331
Statistics (All: NDs treated as DL/2 value)	15	5.3	37.3	22.97	23.4	7.183
Statistics (Normal ROS Imputed Data)	15	11.18	37.3	23.37	23.4	6.249
Statistics (Gamma ROS Imputed Data)	15	12.78	37.3	23.47	23.4	6.036
Statistics (Lognormal ROS Imputed Data)	15	13.73	37.3	23.54	23.4	5.921

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	21.11	16.64	1.148	3.164	0.23	0.0725
Statistics (NDs = DL)	12.93	10.39	1.805	3.11	0.303	0.0975
Statistics (NDs = DL/2)	7.293	5.879	3.15	3.064	0.445	0.145
Statistics (Gamma ROS Estimates)	15.36	12.33	1.528	3.123	0.272	0.0872
Statistics (Lognormal ROS Estimates)	--	--	--	3.128	0.262	0.0838

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.967	0.973	0.954	0.974

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.957	0.874	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.964	0.881	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.935	0.881	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.965	0.881	Data Appear Normal
Lilliefors (Detects Only)	0.132	0.226	Data Appear Normal
Lilliefors (NDs = DL)	0.145	0.22	Data Appear Normal
Lilliefors (NDs = DL/2)	0.181	0.22	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.141	0.22	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.976	0.969	0.928	0.976

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.257	0.734	
Kolmogorov-Smirnov (Detects Only)	0.128	0.228	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.454	0.737	
Kolmogorov-Smirnov (NDs = DL)	0.178	0.221	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.993	0.738	
Kolmogorov-Smirnov (NDs = DL/2)	0.245	0.222	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.359	0.736	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.153	0.221	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.969	0.947	0.848	0.967

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.962	0.874	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.914	0.881	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.749	0.881	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.942	0.881	Data Appear Lognormal
Lilliefors (Detects Only)	0.144	0.226	Data Appear Lognormal
Lilliefors (NDs = DL)	0.202	0.22	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.274	0.22	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.162	0.22	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/22/2016 5:10:17 PM
From File	proUCL Input Surface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA1_ALUMINUM_SS

Sample 2 Data: BACKGROUND_ALUMINUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	30
Number of Distinct Observations	10	30
Minimum	4320	3440
Maximum	17000	40200
Mean	12235	15659
Median	13750	14500
SD	4496	8240
SE of Mean	1422	1504

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	38	-1.246	1.686	0.890
Welch-Satterthwaite (Unequal Varian	29.1	-1.654	1.699	0.946

Pooled SD 7523.169

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	20209850
Variance of Sample 2	67890975

Numerator DF	Denominator DF	F-Test Value	P-Value
29	9	3.359	0.061

Conclusion with Alpha = 0.05

Two variances appear to be equal

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/22/2016 5:10:39 PM
From File	proUCL Input Surface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA1_VANADIUM_SS

Sample 2 Data: BACKGROUND_VANADIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	30
Number of Distinct Observations	10	30
Minimum	17.8	6.8
Maximum	42.7	95.2
Mean	30.28	47.18
Median	30.45	46.05
SD	7.677	18.89
SE of Mean	2.428	3.45

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	38	-2.734	1.686	0.995
Welch-Satterthwaite (Unequal Varian	36.2	-4.005	1.688	1.000

Pooled SD 16.923

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	58.94
Variance of Sample 2	357

Numerator DF	Denominator DF	F-Test Value	P-Value
29	9	6.057	0.008

Conclusion with Alpha = 0.05

Two variances are not equal

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/22/2016 5:14:27 PM
From File	proUCL Input Surface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_ARSENIC_SS

Sample 2 Data: BACKGROUND_ARSENIC

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	29
Number of Distinct Observations	9	28
Minimum	3.6	0.58
Maximum	12	26.1
Mean	6.79	8.072
Median	6.75	6.2
SD	2.274	5.623
SE of Mean	0.719	1.044

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	203.5
Standardized WMW U-Stat	0.0965
Mean (U)	145
SD(U) - Adj ties	31.08
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.462

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:30:30 PM
From File	proUCL Input Surface Soil Area 1_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_CHROMIUM_SS

Sample 2 Data: BACKGROUND_CHROMIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	15	30
Number of Non-Detects	1	0
Number of Detect Data	14	30
Minimum Non-Detect	10.6	N/A
Maximum Non-Detect	10.6	N/A
Percent Non-detects	6.67%	0.00%
Minimum Detect	13.9	2.1
Maximum Detect	37.3	49.2
Mean of Detects	24.24	21.59
Median of Detects	24.05	19.4
SD of Detects	5.461	11.29

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	378
Standardized WMW U-Stat	0.784
Mean (U)	225
SD(U) - Adj ties	41.53
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.217

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/22/2016 5:18:39 PM
From File	proUCL Input Surface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_COBALT_SS

Sample 2 Data: BACKGROUND_COBALT

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	30
Number of Distinct Observations	10	27
Minimum	6.8	0.11
Maximum	24.2	23.9
Mean	11.44	7.109
Median	10.95	4.75
SD	4.869	6.383
SE of Mean	1.54	1.165

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	290.5
Standardized WMW U-Stat	2.656
Mean (U)	150
SD(U) - Adj ties	32.01
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.00396

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/22/2016 5:20:28 PM
From File	proUCL Input Surface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_IRON_SS

Sample 2 Data: BACKGROUND_IRON

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	30
Number of Distinct Observations	10	29
Minimum	6840	392
Maximum	24800	58600
Mean	18580	24006
Median	19650	23150
SD	5992	11631
SE of Mean	1895	2124

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	159
Standardized WMW U-Stat	-1.453
Mean (U)	150
SD(U) - Adj ties	32.01
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.927

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/22/2016 5:21:46 PM
From File	proUCL Input Surface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_MANGANESE_SS

Sample 2 Data: BACKGROUND_MANGANESE

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	10	30
Number of Distinct Observations	10	30
Minimum	342	27.9
Maximum	8600	1600
Mean	1703	320.3
Median	561.5	226.3
SD	2558	327.6
SE of Mean	808.9	59.81

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	319
Standardized WMW U-Stat	3.545
Mean (U)	150
SD(U) - Adj ties	32.02
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	1.9620E-4

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Surface Soil – Exposure Area 2

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Goodness-of-Fit Test Statistics for Uncensored Full Data Sets without Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.13/7/2017 1:39:22 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	0.95

AREA2_ALUMINUM_SS

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	23
Minimum	8970
Maximum	19700
Mean of Raw Data	13733
Standard Deviation of Raw Data	2462
Khat	32.89
Theta hat	417.6
Kstar	29.26
Theta star	469.4
Mean of Log Transformed Data	9.512
Standard Deviation of Log Transformed Data	0.178

Normal GOF Test Results

Correlation Coefficient R	0.975
Shapiro Wilk Test Statistic	0.955
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.302
Lilliefors Test Statistic	0.141
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.983
A-D Test Statistic	0.422
A-D Critical (0.05) Value	0.744
K-S Test Statistic	0.123
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.983
Shapiro Wilk Test Statistic	0.97
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.616
Lilliefors Test Statistic	0.12
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

AREA2_ARSENIC_SS

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	25
Minimum	4.6
Maximum	11.3
Mean of Raw Data	7.904
Standard Deviation of Raw Data	1.821
Khat	19.39
Theta hat	0.408
Kstar	17.26
Theta star	0.458
Mean of Log Transformed Data	2.041
Standard Deviation of Log Transformed Data	0.234

Normal GOF Test Results

Correlation Coefficient R	0.989
Shapiro Wilk Test Statistic	0.967
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.542
Lilliefors Test Statistic	0.105
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.989
A-D Test Statistic	0.193
A-D Critical (0.05) Value	0.744
K-S Test Statistic	0.0917
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.992
Shapiro Wilk Test Statistic	0.977
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.785
Lilliefors Test Statistic	0.0869
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

AREA2_CHROMIUM_SS

Raw Statistics

Number of Valid Observations	33
Number of Distinct Observations	27
Minimum	18.4
Maximum	42.3
Mean of Raw Data	28.4
Standard Deviation of Raw Data	5.909
Khat	24.38
Theta hat	1.165
Kstar	22.19
Theta star	1.28
Mean of Log Transformed Data	3.326
Standard Deviation of Log Transformed Data	0.206

Normal GOF Test Results

Correlation Coefficient R	0.982
Shapiro Wilk Test Statistic	0.957
Shapiro Wilk Critical (0.05) Value	0.931
Approximate Shapiro Wilk P Value	0.252
Lilliefors Test Statistic	0.143
Lilliefors Critical (0.05) Value	0.152

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.989
A-D Test Statistic	0.334
A-D Critical (0.05) Value	0.746
K-S Test Statistic	0.116
K-S Critical(0.05) Value	0.153

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.991
Shapiro Wilk Test Statistic	0.974
Shapiro Wilk Critical (0.05) Value	0.931
Approximate Shapiro Wilk P Value	0.668
Lilliefors Test Statistic	0.103
Lilliefors Critical (0.05) Value	0.152

Data appear Lognormal at (0.05) Significance Level

AREA2_COBALT_SS

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	22
Minimum	7.8
Maximum	15.2
Mean of Raw Data	11.05
Standard Deviation of Raw Data	1.885
Khat	35.68
Theta hat	0.31
Kstar	31.74
Theta star	0.348
Mean of Log Transformed Data	2.388
Standard Deviation of Log Transformed Data	0.172

Normal GOF Test Results

Correlation Coefficient R	0.971
Shapiro Wilk Test Statistic	0.939
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.126
Lilliefors Test Statistic	0.16
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.974
A-D Test Statistic	0.659
A-D Critical (0.05) Value	0.744
K-S Test Statistic	0.163
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.975
Shapiro Wilk Test Statistic	0.945
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.174
Lilliefors Test Statistic	0.173
Lilliefors Critical (0.05) Value	0.167

Data appear Approximate_Lognormal at (0.05) Significance Level

AREA2_IRON_SS

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	25
Minimum	16400
Maximum	32000
Mean of Raw Data	23100
Standard Deviation of Raw Data	3575
Khat	43.73
Theta hat	528.2
Kstar	38.9
Theta star	593.8
Mean of Log Transformed Data	10.04
Standard Deviation of Log Transformed Data	0.155

Normal GOF Test Results

Correlation Coefficient R	0.973
Shapiro Wilk Test Statistic	0.95
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.231
Lilliefors Test Statistic	0.173
Lilliefors Critical (0.05) Value	0.167

Data appear Approximate Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.978
A-D Test Statistic	0.57
A-D Critical (0.05) Value	0.743
K-S Test Statistic	0.154
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.978
Shapiro Wilk Test Statistic	0.958
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.361
Lilliefors Test Statistic	0.149
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

AREA2_MANGANESE_SS

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	26
Minimum	315
Maximum	686
Mean of Raw Data	498.2
Standard Deviation of Raw Data	94.33
Khat	28.45
Theta hat	17.51
Kstar	25.31
Theta star	19.68
Mean of Log Transformed Data	6.193
Standard Deviation of Log Transformed Data	0.194

Normal GOF Test Results

Correlation Coefficient R	0.98
Shapiro Wilk Test Statistic	0.956
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.311
Lilliefors Test Statistic	0.13
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.98
A-D Test Statistic	0.494
A-D Critical (0.05) Value	0.744
K-S Test Statistic	0.112
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.979
Shapiro Wilk Test Statistic	0.956
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.317
Lilliefors Test Statistic	0.124
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

AREA2_VANADIUM_SS

Raw Statistics

Number of Valid Observations	27
Number of Distinct Observations	26
Minimum	23.2
Maximum	47
Mean of Raw Data	34.63
Standard Deviation of Raw Data	6.051
Khat	33.41
Theta hat	1.037
Kstar	29.72
Theta star	1.165
Mean of Log Transformed Data	3.53
Standard Deviation of Log Transformed Data	0.178

Normal GOF Test Results

Correlation Coefficient R	0.995
Shapiro Wilk Test Statistic	0.984
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.929
Lilliefors Test Statistic	0.0917
Lilliefors Critical (0.05) Value	0.167

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.994
A-D Test Statistic	0.169
A-D Critical (0.05) Value	0.744
K-S Test Statistic	0.0946
K-S Critical(0.05) Value	0.168

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.993
Shapiro Wilk Test Statistic	0.98
Shapiro Wilk Critical (0.05) Value	0.923
Approximate Shapiro Wilk P Value	0.869
Lilliefors Test Statistic	0.0926
Lilliefors Critical (0.05) Value	0.167

Data appear Lognormal at (0.05) Significance Level

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:40:25 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA2_ALUMINUM_SS

Sample 2 Data: BACKGROUND_ALUMINUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	27	30
Number of Distinct Observations	23	30
Minimum	8970	3440
Maximum	19700	40200
Mean	13733	15659
Median	13400	14500
SD	2462	8240
SE of Mean	473.8	1504

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	55	-1.168	1.673	0.876
Welch-Satterthwaite (Unequal Varian	34.7	-1.221	1.690	0.885

Pooled SD 6217.925

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	6061691
Variance of Sample 2	67890975

Numerator DF	Denominator DF	F-Test Value	P-Value
29	26	11.200	0.000

Conclusion with Alpha = 0.05

Two variances are not equal

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:43:37 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA2_CHROMIUM_SS

Sample 2 Data: BACKGROUND_CHROMIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	33	30
Number of Distinct Observations	27	29
Minimum	18.4	2.1
Maximum	42.3	49.2
Mean	28.4	21.59
Median	27.7	19.4
SD	5.909	11.29
SE of Mean	1.029	2.061

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	61	3.039	1.670	0.002
Welch-Satterthwaite (Unequal Varian	42.8	2.957	1.681	0.003

Pooled SD 8.884

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Reject H0, Conclude Sample 1 > Sample 2

Welch-Satterthwaite Test: Reject H0, Conclude Sample 1 > Sample 2

Test of Equality of Variances

Variance of Sample 1	34.92
Variance of Sample 2	127.5

Numerator DF	Denominator DF	F-Test Value	P-Value
29	32	3.651	0.001

Conclusion with Alpha = 0.05

Two variances are not equal

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:46:01 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA2_IRON_SS

Sample 2 Data: BACKGROUND_IRON

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	27	30
Number of Distinct Observations	25	29
Minimum	16400	392
Maximum	32000	58600
Mean	23100	24006
Median	22800	23150
SD	3575	11631
SE of Mean	688.1	2124

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	55	-0.388	1.673	0.650
Welch-Satterthwaite (Unequal Varian	35.0	-0.406	1.690	0.656

Pooled SD 8796.455

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	12783077
Variance of Sample 2	1.353E+8

Numerator DF	Denominator DF	F-Test Value	P-Value
29	26	10.584	0.000

Conclusion with Alpha = 0.05

Two variances are not equal

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:47:59 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA2_VANADIUM_SS

Sample 2 Data: BACKGROUND_VANADIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	27	30
Number of Distinct Observations	26	30
Minimum	23.2	6.8
Maximum	47	95.2
Mean	34.63	47.18
Median	34.8	46.05
SD	6.051	18.89
SE of Mean	1.165	3.45

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	55	-3.298	1.673	0.999
Welch-Satterthwaite (Unequal Varian	35.5	-3.445	1.690	0.999

Pooled SD 14.336

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	36.62
Variance of Sample 2	357

Numerator DF	Denominator DF	F-Test Value	P-Value
29	26	9.749	0.000

Conclusion with Alpha = 0.05

Two variances are not equal

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:42:36 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_ARSENIC_SS

Sample 2 Data: BACKGROUND_ARSENIC

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	27	29
Number of Distinct Observations	25	28
Minimum	4.6	0.58
Maximum	11.3	26.1
Mean	7.904	8.072
Median	7.7	6.2
SD	1.821	5.623
SE of Mean	0.35	1.044

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	849
Standardized WMW U-Stat	1.296
Mean (U)	391.5
SD(U) - Adj ties	60.98
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.0976

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:44:52 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_COBALT_SS

Sample 2 Data: BACKGROUND_COBALT

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	27	30
Number of Distinct Observations	22	27
Minimum	7.8	0.11
Maximum	15.2	23.9
Mean	11.05	7.109
Median	11.2	4.75
SD	1.885	6.383
SE of Mean	0.363	1.165

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1021
Standardized WMW U-Stat	3.796
Mean (U)	405
SD(U) - Adj ties	62.56
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	7.3380E-5

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 1:47:10 PM
From File	proUCL Input Surface Soil Area 2_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_MANGANESE_SS

Sample 2 Data: BACKGROUND_MANGANESE

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	27	30
Number of Distinct Observations	26	30
Minimum	315	27.9
Maximum	686	1600
Mean	498.2	320.3
Median	498	226.3
SD	94.33	327.6
SE of Mean	18.15	59.81

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1045
Standardized WMW U-Stat	4.171
Mean (U)	405
SD(U) - Adj ties	62.57
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	1.5132E-5

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

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Surface Soil – Site-Wide

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Goodness-of-Fit Test Statistics for Uncensored Full Data Sets without Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.13/7/2017 2:40:31 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	0.95

SITE_CADMIUM_SS

Raw Statistics

Number of Valid Observations	37
Number of Distinct Observations	26
Minimum	0.04
Maximum	1.3
Mean of Raw Data	0.148
Standard Deviation of Raw Data	0.226
Khat	1.506
Theta hat	0.0983
Kstar	1.402
Theta star	0.106
Mean of Log Transformed Data	-2.277
Standard Deviation of Log Transformed Data	0.669

Normal GOF Test Results

Correlation Coefficient R	0.605
Shapiro Wilk Test Statistic	0.399
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	5.218E-15
Lilliefors Test Statistic	0.397
Lilliefors Critical (0.05) Value	0.144

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.796
A-D Test Statistic	5.64
A-D Critical (0.05) Value	0.766
K-S Test Statistic	0.317
K-S Critical(0.05) Value	0.148

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.846
Shapiro Wilk Test Statistic	0.738
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	5.5466E-8
Lilliefors Test Statistic	0.245
Lilliefors Critical (0.05) Value	0.144

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significanc

SITE_COBALT_SS

Raw Statistics

Number of Valid Observations	37

Number of Distinct Observations	29
Minimum	6.8
Maximum	24.2
Mean of Raw Data	11.15
Standard Deviation of Raw Data	2.92
Khat	18.61
Theta hat	0.599
Kstar	17.12
Theta star	0.651
Mean of Log Transformed Data	2.385
Standard Deviation of Log Transformed Data	0.228

Normal GOF Test Results

Correlation Coefficient R	0.871
Shapiro Wilk Test Statistic	0.791
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	1.3583E-6
Lilliefors Test Statistic	0.214
Lilliefors Critical (0.05) Value	0.144

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.899
A-D Test Statistic	1.18
A-D Critical (0.05) Value	0.747
K-S Test Statistic	0.174
K-S Critical(0.05) Value	0.145

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.947
Shapiro Wilk Test Statistic	0.919
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	0.012
Lilliefors Test Statistic	0.16
Lilliefors Critical (0.05) Value	0.144

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significanc

SITE_LEAD_SS

Raw Statistics

Number of Valid Observations	37
Number of Distinct Observations	29
Minimum	5.2
Maximum	47.5
Mean of Raw Data	12.57
Standard Deviation of Raw Data	6.416
Khat	7.587
Theta hat	1.657
Kstar	6.99
Theta star	1.798
Mean of Log Transformed Data	2.464
Standard Deviation of Log Transformed Data	0.333

Normal GOF Test Results

Correlation Coefficient R	0.697
Shapiro Wilk Test Statistic	0.532
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	1.535E-12
Lilliefors Test Statistic	0.262
Lilliefors Critical (0.05) Value	0.144

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.762
A-D Test Statistic	2.277
A-D Critical (0.05) Value	0.749
K-S Test Statistic	0.189
K-S Critical(0.05) Value	0.145

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.897
Shapiro Wilk Test Statistic	0.848
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	5.9718E-5
Lilliefors Test Statistic	0.157
Lilliefors Critical (0.05) Value	0.144

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significanc

SITE_MANGANESE_SS

Raw Statistics

Number of Valid Observations	37
Number of Distinct Observations	33
Minimum	315
Maximum	8600
Mean of Raw Data	823.9
Standard Deviation of Raw Data	1392
Khat	1.559
Theta hat	528.4
Kstar	1.451
Theta star	567.9
Mean of Log Transformed Data	6.36
Standard Deviation of Log Transformed Data	0.614

Normal GOF Test Results

Correlation Coefficient R	0.532
Shapiro Wilk Test Statistic	0.32
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	2.220E-16
Lilliefors Test Statistic	0.458
Lilliefors Critical (0.05) Value	0.144

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.722
A-D Test Statistic	7.427
A-D Critical (0.05) Value	0.765
K-S Test Statistic	0.398
K-S Critical(0.05) Value	0.148

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.764
Shapiro Wilk Test Statistic	0.612
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	6.383E-11
Lilliefors Test Statistic	0.309
Lilliefors Critical (0.05) Value	0.144

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significanc

SITE_VANADIUM_SS

Raw Statistics

Number of Valid Observations	37
Number of Distinct Observations	35
Minimum	17.8
Maximum	47
Mean of Raw Data	33.46
Standard Deviation of Raw Data	6.71
Khat	23.37
Theta hat	1.431
Kstar	21.5
Theta star	1.556
Mean of Log Transformed Data	3.489
Standard Deviation of Log Transformed Data	0.217

Normal GOF Test Results

Correlation Coefficient R	0.992
Shapiro Wilk Test Statistic	0.981
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	0.822
Lilliefors Test Statistic	0.0805
Lilliefors Critical (0.05) Value	0.144

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.984
A-D Test Statistic	0.396
A-D Critical (0.05) Value	0.747
K-S Test Statistic	0.0957
K-S Critical(0.05) Value	0.145

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.971
Shapiro Wilk Test Statistic	0.942
Shapiro Wilk Critical (0.05) Value	0.936

Approximate Shapiro Wilk P Value	0.0717
Lilliefors Test Statistic	0.109
Lilliefors Critical (0.05) Value	0.144

Data appear Lognormal at (0.05) Significance Level

SITE_ZINC_SS

Raw Statistics

Number of Valid Observations	37
Number of Distinct Observations	37
Minimum	34.5
Maximum	72
Mean of Raw Data	49.63
Standard Deviation of Raw Data	8.94
Khat	32.35
Theta hat	1.534
Kstar	29.75
Theta star	1.668
Mean of Log Transformed Data	3.889
Standard Deviation of Log Transformed Data	0.179

Normal GOF Test Results

Correlation Coefficient R	0.986
Shapiro Wilk Test Statistic	0.967
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	0.405
Lilliefors Test Statistic	0.11
Lilliefors Critical (0.05) Value	0.144

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.993
A-D Test Statistic	0.218
A-D Critical (0.05) Value	0.746
K-S Test Statistic	0.0881
K-S Critical(0.05) Value	0.145

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.994
Shapiro Wilk Test Statistic	0.98
Shapiro Wilk Critical (0.05) Value	0.936
Approximate Shapiro Wilk P Value	0.791
Lilliefors Test Statistic	0.0813
Lilliefors Critical (0.05) Value	0.144

Data appear Lognormal at (0.05) Significance Level

Goodness-of-Fit Test Statistics for Data Sets with Non-Detects

User Selected Options

Date/Time of Computation	ProUCL 5.13/7/2017 2:41:41 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	0.95

SITE_MERCURY_SS

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	37	0	37	29	8	21.62%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	8	0.014	0.018	0.0163	0.016	0.00167
Statistics (Non-Detects Only)	29	0.0043	0.21	0.0271	0.01	0.043
Statistics (All: NDs treated as DL value)	37	0.0043	0.21	0.0247	0.014	0.0382
Statistics (All: NDs treated as DL/2 value)	37	0.0043	0.21	0.023	0.01	0.0388
Statistics (Normal ROS Imputed Data)	37	-0.00562	0.21	0.0235	0.011	0.0389
Statistics (Gamma ROS Imputed Data)	37	0.0043	0.21	0.0236	0.01	0.0386
Statistics (Lognormal ROS Imputed Data)	37	0.0043	0.21	0.0232	0.01	0.0387

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.954	0.878	0.0284	-4.219	0.993	-0.235
Statistics (NDs = DL)	1.142	1.067	0.0216	-4.198	0.878	-0.209
Statistics (NDs = DL/2)	1.005	0.941	0.0228	-4.348	0.912	-0.21
Statistics (Gamma ROS Estimates)	1.066	0.997	0.0221	-4.286	0.888	-0.207
Statistics (Lognormal ROS Estimates)	--	--	--	-4.333	0.918	-0.212

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.713	0.685	0.671	0.71

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.532	0.926	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.499	0.936	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.48	0.936	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.536	0.936	Data Not Normal
Lilliefors (Detects Only)	0.298	0.161	Data Not Normal
Lilliefors (NDs = DL)	0.306	0.144	Data Not Normal
Lilliefors (NDs = DL/2)	0.315	0.144	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.271	0.144	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.912	0.877	0.882	0.877

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	2.017	0.776	
Kolmogorov-Smirnov (Detects Only)	0.253	0.168	Data Not Gamma Distributed
Anderson-Darling (NDs = DL)	2.168	0.774	
Kolmogorov-Smirnov (NDs = DL)	0.216	0.149	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	3.572	0.777	
Kolmogorov-Smirnov (NDs = DL/2)	0.297	0.149	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	3.305	0.776	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.279	0.149	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.949	0.962	0.921	0.936

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.897	0.926	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.925	0.936	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.848	0.936	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.875	0.936	Data Not Lognormal
Lilliefors (Detects Only)	0.202	0.161	Data Not Lognormal
Lilliefors (NDs = DL)	0.129	0.144	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.246	0.144	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.198	0.144	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SITE_SELENIUM_SS

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	37	0	37	25	12	32.43%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	12	0.21	4	0.615	0.3	1.068
Statistics (Non-Detects Only)	25	0.056	6.4	0.587	0.23	1.293
Statistics (All: NDs treated as DL value)	37	0.056	6.4	0.596	0.27	1.209
Statistics (All: NDs treated as DL/2 value)	37	0.056	6.4	0.496	0.21	1.104
Statistics (Normal ROS Imputed Data)	37	-0.214	6.4	0.448	0.23	1.085
Statistics (Gamma ROS Imputed Data)	37	0.01	6.4	0.408	0.2	1.088
Statistics (Lognormal ROS Imputed Data)	37	0.056	6.4	0.454	0.21	1.074

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.794	0.725	0.74	-1.282	0.979	-0.764
Statistics (NDs = DL)	0.876	0.823	0.68	-1.187	0.919	-0.774
Statistics (NDs = DL/2)	0.83	0.781	0.598	-1.412	0.928	-0.658
Statistics (Gamma ROS Estimates)	0.485	0.464	0.841	-2.21	1.677	-0.759
Statistics (Lognormal ROS Estimates)	--	--	--	-1.444	0.851	-0.589

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.588	0.605	0.58	0.589

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.375	0.918	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.396	0.936	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.372	0.936	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.386	0.936	Data Not Normal
Lilliefors (Detects Only)	0.438	0.173	Data Not Normal
Lilliefors (NDs = DL)	0.44	0.144	Data Not Normal
Lilliefors (NDs = DL/2)	0.427	0.144	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.409	0.144	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.829	0.84	0.823	0.838

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	3.514	0.782	
Kolmogorov-Smirnov (Detects Only)	0.362	0.181	Data Not Gamma Distributed
Anderson-Darling (NDs = DL)	5.577	0.783	
Kolmogorov-Smirnov (NDs = DL)	0.357	0.15	Data Not Gamma Distributed

Anderson-Darling (NDs = DL/2)	5.081	0.785	
Kolmogorov-Smirnov (NDs = DL/2)	0.343	0.15	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	2.307	0.816	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.25	0.154	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.901	0.887	0.9	0.885

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.831	0.918	Data Not Lognormal
Shapiro-Wilk (NDs = DL)	0.805	0.936	Data Not Lognormal
Shapiro-Wilk (NDs = DL/2)	0.827	0.936	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.809	0.936	Data Not Lognormal
Lilliefors (Detects Only)	0.258	0.173	Data Not Lognormal
Lilliefors (NDs = DL)	0.251	0.144	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.225	0.144	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.226	0.144	Data Not Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SITE_CHROMIUM_SS

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	48	0	48	47	1	2.08%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	10.6	10.6	10.6	10.6	N/A
Statistics (Non-Detects Only)	47	13.9	42.3	27.16	26.7	6.035
Statistics (All: NDs treated as DL value)	48	10.6	42.3	26.81	26.65	6.431
Statistics (All: NDs treated as DL/2 value)	48	5.3	42.3	26.7	26.65	6.753
Statistics (Normal ROS Imputed Data)	48	11.62	42.3	26.83	26.65	6.378
Statistics (Gamma ROS Imputed Data)	48	13.9	42.3	26.88	26.65	6.269
Statistics (Lognormal ROS Imputed Data)	48	13.9	42.3	26.9	26.65	6.227

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	20.85	19.53	1.303	3.277	0.224	0.0683
Statistics (NDs = DL)	16.57	15.54	1.619	3.258	0.258	0.0791
Statistics (NDs = DL/2)	12.42	11.66	2.15	3.244	0.321	0.0989
Statistics (Gamma ROS Estimates)	18.41	17.28	1.46	3.264	0.24	0.0736
Statistics (Lognormal ROS Estimates)	--	--	--	3.265	0.236	0.0724

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.983	0.986	0.977	0.987

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.966	0.946	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.975	0.947	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.968	0.947	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.974	0.947	Data Appear Normal
Lilliefors (Detects Only)	0.127	0.128	Data Appear Normal
Lilliefors (NDs = DL)	0.117	0.127	Data Appear Normal
Lilliefors (NDs = DL/2)	0.115	0.127	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.117	0.127	Data Appear Normal

Gamma GOF Test Results

No NDs	NDs = DL	NDs = DL/2	Gamma ROS

Correlation Coefficient R	0.99	0.986	0.97	0.99

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.338	0.748	
Kolmogorov-Smirnov (Detects Only)	0.0987	0.129	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.46	0.749	
Kolmogorov-Smirnov (NDs = DL)	0.0891	0.128	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	1.046	0.749	
Kolmogorov-Smirnov (NDs = DL/2)	0.109	0.128	Detected Data appear Approximate Gamma Distril
Anderson-Darling (Gamma ROS Estimates)	0.357	0.748	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.0904	0.128	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.989	0.968	0.882	0.988

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.981	0.946	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.948	0.947	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.813	0.947	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.975	0.947	Data Appear Lognormal
Lilliefors (Detects Only)	0.0872	0.128	Data Appear Lognormal
Lilliefors (NDs = DL)	0.0813	0.127	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.14	0.127	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.0801	0.127	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

SITE_HPAH_SS

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	37	0	37	26	11	29.73%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	11	0.22	0.29	0.259	0.25	0.023
Statistics (Non-Detects Only)	26	0.002	57	2.399	0.063	11.14
Statistics (All: NDs treated as DL value)	37	0.002	57	1.763	0.16	9.338
Statistics (All: NDs treated as DL/2 value)	37	0.002	57	1.724	0.12	9.345
Statistics (Normal ROS Imputed Data)	37	-1.946	57	1.937	0.071	9.361
Statistics (Gamma ROS Imputed Data)	37	0.002	57	1.689	0.015	9.351
Statistics (Lognormal ROS Imputed Data)	37	0.002	57	1.699	0.0329	9.35

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	0.206	0.208	11.66	-2.686	2.236	-0.833
Statistics (NDs = DL)	0.249	0.247	7.084	-2.29	1.964	-0.858
Statistics (NDs = DL/2)	0.236	0.235	7.312	-2.496	1.888	-0.756
Statistics (Gamma ROS Estimates)	0.195	0.198	8.643	-3.256	2.065	-0.634
Statistics (Lognormal ROS Estimates)	--	--	--	-2.902	1.944	-0.67

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.439	0.392	0.389	0.457

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.222	0.92	Data Not Normal
Shapiro-Wilk (NDs = DL)	0.187	0.936	Data Not Normal
Shapiro-Wilk (NDs = DL/2)	0.185	0.936	Data Not Normal
Shapiro-Wilk (Normal ROS Estimates)	0.247	0.936	Data Not Normal
Lilliefors (Detects Only)	0.494	0.17	Data Not Normal

Lilliefors (NDs = DL)	0.484	0.144	Data Not Normal
Lilliefors (NDs = DL/2)	0.483	0.144	Data Not Normal
Lilliefors (Normal ROS Estimates)	0.415	0.144	Data Not Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.82	0.752	0.757	0.779

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	4.043	0.898	
Kolmogorov-Smirnov (Detects Only)	0.311	0.19	Data Not Gamma Distributed
Anderson-Darling (NDs = DL)	5.424	0.883	
Kolmogorov-Smirnov (NDs = DL)	0.371	0.159	Data Not Gamma Distributed
Anderson-Darling (NDs = DL/2)	6.472	0.89	
Kolmogorov-Smirnov (NDs = DL/2)	0.375	0.16	Data Not Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	7.173	0.913	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.324	0.161	Data Not Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.964	0.964	0.951	0.949

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.939	0.92	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.943	0.936	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.925	0.936	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.917	0.936	Data Not Lognormal
Lilliefors (Detects Only)	0.0992	0.17	Data Appear Lognormal
Lilliefors (NDs = DL)	0.161	0.144	Data Not Lognormal
Lilliefors (NDs = DL/2)	0.173	0.144	Data Not Lognormal
Lilliefors (Lognormal ROS Estimates)	0.128	0.144	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:51:45 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: SITE_VANADIUM_SS

Sample 2 Data: BACKGROUND_VANADIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	37	30
Number of Distinct Observations	35	30
Minimum	17.8	6.8
Maximum	47	95.2
Mean	33.46	47.18
Median	33.7	46.05
SD	6.71	18.89
SE of Mean	1.103	3.45

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	65	-4.114	1.669	1.000
Welch-Satterthwaite (Unequal Varian	34.9	-3.788	1.690	1.000

Pooled SD 13.572

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	45.02
Variance of Sample 2	357

Numerator DF	Denominator DF	F-Test Value	P-Value
29	36	7.929	0.000

Conclusion with Alpha = 0.05

Two variances are not equal

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:52:22 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: SITE_ZINC_SS

Sample 2 Data: BACKGROUND_ZINC

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	37	30
Number of Distinct Observations	37	28
Minimum	34.5	1.4
Maximum	72	88.8
Mean	49.63	35.03
Median	49	31.45
SD	8.94	20.43
SE of Mean	1.47	3.729

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	65	3.916	1.669	0.000
Welch-Satterthwaite (Unequal Varian	38.0	3.643	1.686	0.000

Pooled SD 15.179

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Reject H0, Conclude Sample 1 > Sample 2

Welch-Satterthwaite Test: Reject H0, Conclude Sample 1 > Sample 2

Test of Equality of Variances

Variance of Sample 1	79.93
Variance of Sample 2	417.2

Numerator DF	Denominator DF	F-Test Value	P-Value
29	36	5.219	0.000

Conclusion with Alpha = 0.05

Two variances are not equal

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:45:41 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_CHROMIUM_SS

Sample 2 Data: BACKGROUND_CHROMIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	48	30
Number of Non-Detects	1	0
Number of Detect Data	47	30
Minimum Non-Detect	10.6	N/A
Maximum Non-Detect	10.6	N/A
Percent Non-detects	2.08%	0.00%
Minimum Detect	13.9	2.1
Maximum Detect	42.3	49.2
Mean of Detects	27.16	21.59
Median of Detects	26.7	19.4
SD of Detects	6.035	11.29

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	2138
Standardized WMW U-Stat	2.481
Mean (U)	720
SD(U) - Adj ties	97.36
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.00655

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:46:44 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_COBALT_SS

Sample 2 Data: BACKGROUND_COBALT

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	37	30
Number of Distinct Observations	29	27
Minimum	6.8	0.11
Maximum	24.2	23.9
Mean	11.15	7.109
Median	11.2	4.75
SD	2.92	6.383
SE of Mean	0.48	1.165

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1582
Standardized WMW U-Stat	4.073
Mean (U)	555
SD(U) - Adj ties	79.29
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	2.3160E-5

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 3:08:55 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_LEAD_SS

Sample 2 Data: BACKGROUND_LEAD

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	37	28
Number of Distinct Observations	29	28
Minimum	5.2	2.9
Maximum	47.5	32.9
Mean	12.57	18.07
Median	11.2	18.3
SD	6.416	7.052
SE of Mean	1.055	1.333

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	929.5
Standardized WMW U-Stat	-3.869
Mean (U)	518
SD(U) - Adj ties	75.47
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:48:22 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_MANGANESE_SS

Sample 2 Data: BACKGROUND_MANGANESE

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	37	30
Number of Distinct Observations	33	30
Minimum	315	27.9
Maximum	8600	1600
Mean	823.9	320.3
Median	503	226.3
SD	1392	327.6
SE of Mean	228.8	59.81

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1634
Standardized WMW U-Stat	4.729
Mean (U)	555
SD(U) - Adj ties	79.31
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	1.1307E-6

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:44:24 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_CADMIUM_SS

Sample 2 Data: BACKGROUND_CADMIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	37	30
Number of Non-Detects	0	3
Number of Detect Data	37	27
Minimum Non-Detect	N/A	0.04
Maximum Non-Detect	N/A	0.07
Percent Non-detects	0.00%	10.00%
Minimum Detect	0.04	0.03
Maximum Detect	1.3	0.23
Mean of Detects	0.148	0.101
Median of Detects	0.0826	0.1
SD of Detects	0.226	0.0473
KM Mean	0.148	0.0946
KM SD	0.226	0.0482

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

Gehan z Test Value	0.0252
Critical z (0.05)	1.645
P-Value	0.49

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/26/2016 5:25:27 PM
From File	proUCL Input Surface Soil.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_HPAH_SS

Sample 2 Data: BACKGROUND_HPAH

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	37	29
Number of Non-Detects	11	9
Number of Detect Data	26	20
Minimum Non-Detect	0.22	0.025
Maximum Non-Detect	0.29	0.044
Percent Non-detects	29.73%	31.03%
Minimum Detect	0.002	0.00166
Maximum Detect	57	0.357
Mean of Detects	2.399	0.0632
Median of Detects	0.063	0.0213
SD of Detects	11.14	0.0968
KM Mean	1.702	0.0467
KM SD	9.222	0.0822

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

Gehan z Test Value	2.283
Critical z (0.05)	1.645
P-Value	0.0112

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:49:20 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_MERCURY_SS

Sample 2 Data: BACKGROUND_MERCURY

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	37	30
Number of Non-Detects	8	5
Number of Detect Data	29	25
Minimum Non-Detect	0.014	0.04
Maximum Non-Detect	0.018	0.05
Percent Non-detects	21.62%	16.67%
Minimum Detect	0.0043	0.04
Maximum Detect	0.21	0.27
Mean of Detects	0.0271	0.108
Median of Detects	0.01	0.09
SD of Detects	0.043	0.0528
KM Mean	0.0229	0.0965
KM SD	0.0383	0.0536

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

Gehan z Test Value	-5.39
Critical z (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Gehan Sample 1 vs Sample 2 Comparison Hypothesis Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/7/2017 2:50:05 PM
From File	proUCL Input Surface Soil_REV.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: SITE_SELENIUM_SS

Sample 2 Data: BACKGROUND_SELENIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	37	30
Number of Non-Detects	12	1
Number of Detect Data	25	29
Minimum Non-Detect	0.21	0.19
Maximum Non-Detect	4	0.19
Percent Non-detects	32.43%	3.33%
Minimum Detect	0.056	0.43
Maximum Detect	6.4	2.3
Mean of Detects	0.587	0.921
Median of Detects	0.23	0.8
SD of Detects	1.293	0.431
KM Mean	0.459	0.897
KM SD	1.06	0.437

Sample 1 vs Sample 2 Gehan Test

H0: Mean/Median of Sample 1 <= Mean/Median of background

Gehan z Test Value	-5.881
Critical z (0.05)	1.645
P-Value	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Subsurface Soil – Exposure Area 1

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AREA1_ALUMINUM_SB

Raw Statistics

Number of Valid Observations	11
Number of Distinct Observations	11
Minimum	3550
Maximum	19100
Mean of Raw Data	13488
Standard Deviation of Raw Data	4769
Khat	6.096
Theta hat	2213
Kstar	4.494
Theta star	3002
Mean of Log Transformed Data	9.425
Standard Deviation of Log Transformed Data	0.485

Normal GOF Test Results

Correlation Coefficient R	0.968
Shapiro Wilk Test Statistic	0.934
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.467
Lilliefors Test Statistic	0.131
Lilliefors Critical (0.05) Value	0.251

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.92
A-D Test Statistic	0.548
A-D Critical (0.05) Value	0.731
K-S Test Statistic	0.163
K-S Critical(0.05) Value	0.256

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.89
Shapiro Wilk Test Statistic	0.807
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.0101
Lilliefors Test Statistic	0.199
Lilliefors Critical (0.05) Value	0.251

Data appear Approximate_Lognormal at (0.05) Significance Level

AREA1_ARSENIC_SB

Raw Statistics

Number of Valid Observations	11
Number of Distinct Observations	11
Minimum	3.4
Maximum	12.9
Mean of Raw Data	8.109
Standard Deviation of Raw Data	3.039
Khat	6.747
Theta hat	1.202
Kstar	4.967
Theta star	1.633
Mean of Log Transformed Data	2.017
Standard Deviation of Log Transformed Data	0.431

Normal GOF Test Results

Correlation Coefficient R	0.981
Shapiro Wilk Test Statistic	0.953
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.753
Lilliefors Test Statistic	0.15
Lilliefors Critical (0.05) Value	0.251

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.968
A-D Test Statistic	0.377
A-D Critical (0.05) Value	0.731
K-S Test Statistic	0.186
K-S Critical(0.05) Value	0.256

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.955
Shapiro Wilk Test Statistic	0.904
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.227
Lilliefors Test Statistic	0.213
Lilliefors Critical (0.05) Value	0.251

Data appear Lognormal at (0.05) Significance Level

AREA1_COBALT_SB

Raw Statistics

Number of Valid Observations	11
Number of Distinct Observations	11
Minimum	2.2
Maximum	15.8
Mean of Raw Data	10.25
Standard Deviation of Raw Data	4.038
Khat	4.609
Theta hat	2.225
Kstar	3.413
Theta star	3.005
Mean of Log Transformed Data	2.215
Standard Deviation of Log Transformed Data	0.57

Normal GOF Test Results

Correlation Coefficient R	0.973
Shapiro Wilk Test Statistic	0.947
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.589
Lilliefors Test Statistic	0.174
Lilliefors Critical (0.05) Value	0.251

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.917
A-D Test Statistic	0.642
A-D Critical (0.05) Value	0.732
K-S Test Statistic	0.208
K-S Critical(0.05) Value	0.256

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.89
Shapiro Wilk Test Statistic	0.805
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.00977
Lilliefors Test Statistic	0.249
Lilliefors Critical (0.05) Value	0.251

Data appear Approximate_Lognormal at (0.05) Significance Level

AREA1_IRON_SB

Raw Statistics

Number of Valid Observations	11
Number of Distinct Observations	11
Minimum	2490
Maximum	34700
Mean of Raw Data	22126
Standard Deviation of Raw Data	9702
Khat	3.114
Theta hat	7106
Kstar	2.325
Theta star	9516
Mean of Log Transformed Data	9.835
Standard Deviation of Log Transformed Data	0.75

Normal GOF Test Results

Correlation Coefficient R	0.977
Shapiro Wilk Test Statistic	0.952
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.68
Lilliefors Test Statistic	0.15
Lilliefors Critical (0.05) Value	0.251

Data appear Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.909
A-D Test Statistic	0.729
A-D Critical (0.05) Value	0.733
K-S Test Statistic	0.251
K-S Critical(0.05) Value	0.257

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.851
Shapiro Wilk Test Statistic	0.743
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.00162
Lilliefors Test Statistic	0.295
Lilliefors Critical (0.05) Value	0.251

Data not Lognormal at (0.05) Significance Level

AREA1_MANGANESE_SB

Raw Statistics

Number of Valid Observations	11
Number of Distinct Observations	11
Minimum	249
Maximum	1460
Mean of Raw Data	587.8
Standard Deviation of Raw Data	313.4
Khat	5.435
Theta hat	108.2
Kstar	4.013
Theta star	146.5
Mean of Log Transformed Data	6.282
Standard Deviation of Log Transformed Data	0.433

Normal GOF Test Results

Correlation Coefficient R	0.832
Shapiro Wilk Test Statistic	0.725
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	8.0370E-4
Lilliefors Test Statistic	0.311
Lilliefors Critical (0.05) Value	0.251

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.895
A-D Test Statistic	0.65
A-D Critical (0.05) Value	0.731
K-S Test Statistic	0.239
K-S Critical(0.05) Value	0.256

Data appear Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.938
Shapiro Wilk Test Statistic	0.912
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.142
Lilliefors Test Statistic	0.215
Lilliefors Critical (0.05) Value	0.251

Data appear Lognormal at (0.05) Significance Level

AREA1_VANADIUM_SB

Raw Statistics

Number of Valid Observations	11
Number of Distinct Observations	11
Minimum	11.6
Maximum	42.4
Mean of Raw Data	33.41
Standard Deviation of Raw Data	9.832
Khat	8.796
Theta hat	3.798
Kstar	6.458
Theta star	5.173
Mean of Log Transformed Data	3.451
Standard Deviation of Log Transformed Data	0.396

Normal GOF Test Results

Correlation Coefficient R	0.899
Shapiro Wilk Test Statistic	0.81
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.014
Lilliefors Test Statistic	0.283
Lilliefors Critical (0.05) Value	0.251

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.835
A-D Test Statistic	1.183
A-D Critical (0.05) Value	0.73
K-S Test Statistic	0.302
K-S Critical(0.05) Value	0.256

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.848
Shapiro Wilk Test Statistic	0.731
Shapiro Wilk Critical (0.05) Value	0.85
Approximate Shapiro Wilk P Value	0.00136
Lilliefors Test Statistic	0.296
Lilliefors Critical (0.05) Value	0.251

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significance

AREA1_CHROMIUM_SB

	Num Obs	Num Miss	Num Valid	Detects	NDs	% NDs
Raw Statistics	11	0	11	10	1	9.09%

	Number	Minimum	Maximum	Mean	Median	SD
Statistics (Non-Detects Only)	1	18.9	18.9	18.9	18.9	N/A
Statistics (Non-Detects Only)	10	20.6	38.1	30.06	31.35	5.858
Statistics (All: NDs treated as DL value)	11	18.9	38.1	29.05	30.9	6.496
Statistics (All: NDs treated as DL/2 value)	11	9.45	38.1	28.19	30.9	8.336
Statistics (Normal ROS Imputed Data)	11	15.72	38.1	28.76	30.9	7.041
Statistics (Gamma ROS Imputed Data)	11	17.33	38.1	28.9	30.9	6.754
Statistics (Lognormal ROS Imputed Data)	11	18	38.1	28.96	30.9	6.641

	K hat	K Star	Theta hat	Log Mean	Log Stdv	Log CV
Statistics (Non-Detects Only)	27.53	19.34	1.092	3.385	0.205	0.0606
Statistics (NDs = DL)	20.6	15.05	1.41	3.344	0.236	0.0707
Statistics (NDs = DL/2)	8.866	6.509	3.179	3.281	0.395	0.12
Statistics (Gamma ROS Estimates)	18.39	13.44	1.571	3.336	0.252	0.0756
Statistics (Lognormal ROS Estimates)	--	--	--	3.34	0.245	0.0734

Normal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Normal ROS
Correlation Coefficient R	0.983	0.981	0.956	0.982

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.951	0.842	Data Appear Normal
Shapiro-Wilk (NDs = DL)	0.945	0.85	Data Appear Normal
Shapiro-Wilk (NDs = DL/2)	0.919	0.85	Data Appear Normal
Shapiro-Wilk (Normal ROS Estimates)	0.955	0.85	Data Appear Normal
Lilliefors (Detects Only)	0.157	0.262	Data Appear Normal
Lilliefors (NDs = DL)	0.158	0.251	Data Appear Normal
Lilliefors (NDs = DL/2)	0.173	0.251	Data Appear Normal
Lilliefors (Normal ROS Estimates)	0.165	0.251	Data Appear Normal

Gamma GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Gamma ROS
Correlation Coefficient R	0.97	0.968	0.91	0.966

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Anderson-Darling (Detects Only)	0.312	0.725	
Kolmogorov-Smirnov (Detects Only)	0.183	0.266	Detected Data Appear Gamma Distributed
Anderson-Darling (NDs = DL)	0.341	0.729	
Kolmogorov-Smirnov (NDs = DL)	0.185	0.255	Data Appear Gamma Distributed
Anderson-Darling (NDs = DL/2)	0.651	0.73	
Kolmogorov-Smirnov (NDs = DL/2)	0.197	0.256	Data Appear Gamma Distributed
Anderson-Darling (Gamma ROS Estimates)	0.325	0.729	
Kolmogorov-Smirnov (Gamma ROS Est.)	0.189	0.255	Data Appear Gamma Distributed

Lognormal GOF Test Results

	No NDs	NDs = DL	NDs = DL/2	Log ROS
Correlation Coefficient R	0.973	0.973	0.879	0.972

	Test value	Crit. (0.05)	Conclusion with Alpha(0.05)
Shapiro-Wilk (Detects Only)	0.936	0.842	Data Appear Lognormal
Shapiro-Wilk (NDs = DL)	0.93	0.85	Data Appear Lognormal
Shapiro-Wilk (NDs = DL/2)	0.79	0.85	Data Not Lognormal
Shapiro-Wilk (Lognormal ROS Estimates)	0.932	0.85	Data Appear Lognormal
Lilliefors (Detects Only)	0.188	0.262	Data Appear Lognormal
Lilliefors (NDs = DL)	0.188	0.251	Data Appear Lognormal
Lilliefors (NDs = DL/2)	0.193	0.251	Data Appear Lognormal
Lilliefors (Lognormal ROS Estimates)	0.19	0.251	Data Appear Lognormal

Note: Substitution methods such as DL or DL/2 are not recommended.

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 2:39:49 PM
From File	proUCL Input Subsurface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA1_ALUMINUM_SB

Sample 2 Data: BACKGROUND_ALUMINUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	11	30
Number of Distinct Observations	11	30
Minimum	3550	3440
Maximum	19100	40200
Mean	13488	15659
Median	14400	14500
SD	4769	8240
SE of Mean	1438	1504

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	39	-0.821	1.685	0.792
Welch-Satterthwaite (Unequal Varian	31.0	-1.043	1.696	0.848

Pooled SD 7504.268

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	22740936
Variance of Sample 2	67890975

Numerator DF	Denominator DF	F-Test Value	P-Value
29	10	2.985	0.072

Conclusion with Alpha = 0.05

Two variances appear to be equal

t-Test Sample 1 vs Sample 2 Comparison for Uncensored Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 2:40:50 PM
From File	proUCL Input Subsurface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference (S)	0.000
Selected Null Hypothesis	Sample 1 Mean <= Sample 2 Mean (Form 1)
Alternative Hypothesis	Sample 1 Mean > the Sample 2 Mean

Sample 1 Data: AREA1_IRON_SB

Sample 2 Data: BACKGROUND_IRON

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	11	30
Number of Distinct Observations	11	29
Minimum	2490	392
Maximum	34700	58600
Mean	22126	24006
Median	22500	23150
SD	9702	11631
SE of Mean	2925	2124

Sample 1 vs Sample 2 Two-Sample t-Test

H0: Mean of Sample 1 - Mean of Sample 2 <= 0

Method	DF	t-Test Value	Critical t (0.05)	P-Value
Pooled (Equal Variance)	39	-0.477	1.685	0.682
Welch-Satterthwaite (Unequal Varian	21.3	-0.520	1.721	0.696

Pooled SD 11168.572

Conclusion with Alpha = 0.050

Student t (Pooled) Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Welch-Satterthwaite Test: Do Not Reject H0, Conclude Sample 1 <= Sample 2

Test of Equality of Variances

Variance of Sample 1	94133445
Variance of Sample 2	1.353E+8

Numerator DF	Denominator DF	F-Test Value	P-Value
29	10	1.437	0.560

Conclusion with Alpha = 0.05

Two variances appear to be equal

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 2:42:05 PM
From File	proUCL Input Subsurface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_ARSENIC_SB

Sample 2 Data: BACKGROUND_ARSENIC

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	11	29
Number of Distinct Observations	11	28
Minimum	3.4	0.58
Maximum	12.9	26.1
Mean	8.109	8.072
Median	8	6.2
SD	3.039	5.623
SE of Mean	0.916	1.044

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	249.5
Standardized WMW U-Stat	0.712
Mean (U)	159.5
SD(U) - Adj ties	33.01
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.238

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 2:42:58 PM
From File	proUCL Input Subsurface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_CHROMIUM_SB

Sample 2 Data: BACKGROUND_CHROMIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Data	11	30
Number of Non-Detects	1	0
Number of Detect Data	10	30
Minimum Non-Detect	18.9	N/A
Maximum Non-Detect	18.9	N/A
Percent Non-detects	9.09%	0.00%
Minimum Detect	20.6	2.1
Maximum Detect	38.1	49.2
Mean of Detects	30.06	21.59
Median of Detects	31.35	19.4
SD of Detects	5.858	11.29

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	305
Standardized WMW U-Stat	2.218
Mean (U)	165
SD(U) - Adj ties	33.98
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.0133

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 2:44:45 PM
From File	proUCL Input Subsurface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_COBALT_SB

Sample 2 Data: BACKGROUND_COBALT

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	11	30
Number of Distinct Observations	11	27
Minimum	2.2	0.11
Maximum	15.8	23.9
Mean	10.25	7.109
Median	10.6	4.75
SD	4.038	6.383
SE of Mean	1.217	1.165

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	299
Standardized WMW U-Stat	1.987
Mean (U)	165
SD(U) - Adj ties	33.98
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.0235

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 2:45:56 PM
From File	proUCL Input Subsurface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_MANGANESE_SB

Sample 2 Data: BACKGROUND_MANGANESE

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	11	30
Number of Distinct Observations	11	30
Minimum	249	27.9
Maximum	1460	1600
Mean	587.8	320.3
Median	521	226.3
SD	313.4	327.6
SE of Mean	94.51	59.81

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	345
Standardized WMW U-Stat	3.34
Mean (U)	165
SD(U) - Adj ties	33.99
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	4.1937E-4

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 2:50:10 PM
From File	proUCL Input Subsurface Soil Area 1.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA1_VANADIUM_SB

Sample 2 Data: BACKGROUND_VANADIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	11	30
Number of Distinct Observations	11	30
Minimum	11.6	6.8
Maximum	42.4	95.2
Mean	33.41	47.18
Median	38.1	46.05
SD	9.832	18.89
SE of Mean	2.964	3.45

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	133
Standardized WMW U-Stat	-2.898
Mean (U)	165
SD(U) - Adj ties	33.99
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.998

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Subsurface Soil – Exposure Area 2

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AREA2_ALUMINUM_SB

Raw Statistics

Number of Valid Observations	43
Number of Distinct Observations	35
Minimum	9940
Maximum	26200
Mean of Raw Data	14954
Standard Deviation of Raw Data	3454
Khat	23.03
Theta hat	649.2
Kstar	21.44
Theta star	697.4
Mean of Log Transformed Data	9.591
Standard Deviation of Log Transformed Data	0.204

Normal GOF Test Results

Correlation Coefficient R	0.902
Shapiro Wilk Test Statistic	0.822
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	1.1145E-6
Lilliefors Test Statistic	0.196
Lilliefors Critical (0.05) Value	0.134

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.932
A-D Test Statistic	1.419
A-D Critical (0.05) Value	0.748
K-S Test Statistic	0.161
K-S Critical(0.05) Value	0.135

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.954
Shapiro Wilk Test Statistic	0.916
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	0.00365
Lilliefors Test Statistic	0.146
Lilliefors Critical (0.05) Value	0.134

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significance

AREA2_ARSENIC_SB

Raw Statistics

Number of Valid Observations	43
Number of Distinct Observations	39
Minimum	5.6
Maximum	25.1
Mean of Raw Data	10.85
Standard Deviation of Raw Data	4.785
Khat	6.599
Theta hat	1.644
Kstar	6.154
Theta star	1.763
Mean of Log Transformed Data	2.306
Standard Deviation of Log Transformed Data	0.382

Normal GOF Test Results

Correlation Coefficient R	0.911
Shapiro Wilk Test Statistic	0.826
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	1.5773E-6
Lilliefors Test Statistic	0.235
Lilliefors Critical (0.05) Value	0.134

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.963
A-D Test Statistic	1.572
A-D Critical (0.05) Value	0.751
K-S Test Statistic	0.188
K-S Critical(0.05) Value	0.135

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.967
Shapiro Wilk Test Statistic	0.924
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	0.00716
Lilliefors Test Statistic	0.161
Lilliefors Critical (0.05) Value	0.134

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significance

AREA2_CHROMIUM_SB

Raw Statistics

Number of Valid Observations	43
Number of Distinct Observations	41
Minimum	18.2
Maximum	56.4
Mean of Raw Data	29.46
Standard Deviation of Raw Data	7.351
Khat	19.67
Theta hat	1.498
Kstar	18.31
Theta star	1.609
Mean of Log Transformed Data	3.357
Standard Deviation of Log Transformed Data	0.221

Normal GOF Test Results

Correlation Coefficient R	0.912
Shapiro Wilk Test Statistic	0.847
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	8.4664E-6
Lilliefors Test Statistic	0.202
Lilliefors Critical (0.05) Value	0.134

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.945
A-D Test Statistic	1.502
A-D Critical (0.05) Value	0.748
K-S Test Statistic	0.171
K-S Critical(0.05) Value	0.135

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.96
Shapiro Wilk Test Statistic	0.932
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	0.0157
Lilliefors Test Statistic	0.154
Lilliefors Critical (0.05) Value	0.134

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significance

AREA2_COBALT_SB

Raw Statistics

Number of Valid Observations	43
Number of Distinct Observations	32
Minimum	8.08
Maximum	20.8
Mean of Raw Data	12.24
Standard Deviation of Raw Data	2.434
Khat	29.4
Theta hat	0.416
Kstar	27.37
Theta star	0.447
Mean of Log Transformed Data	2.488
Standard Deviation of Log Transformed Data	0.183

Normal GOF Test Results

Correlation Coefficient R	0.934
Shapiro Wilk Test Statistic	0.887
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	2.7008E-4
Lilliefors Test Statistic	0.177
Lilliefors Critical (0.05) Value	0.134

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.958
A-D Test Statistic	0.927
A-D Critical (0.05) Value	0.747
K-S Test Statistic	0.147
K-S Critical(0.05) Value	0.135

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.971
Shapiro Wilk Test Statistic	0.954
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	0.115
Lilliefors Test Statistic	0.135
Lilliefors Critical (0.05) Value	0.134

Data appear Approximate_Lognormal at (0.05) Significance Level

AREA2_IRON_SB

Raw Statistics

Number of Valid Observations	43
Number of Distinct Observations	37
Minimum	16800
Maximum	43800
Mean of Raw Data	26019
Standard Deviation of Raw Data	5462
Khat	26.8
Theta hat	971
Kstar	24.94
Theta star	1043
Mean of Log Transformed Data	10.15
Standard Deviation of Log Transformed Data	0.191

Normal GOF Test Results

Correlation Coefficient R	0.922
Shapiro Wilk Test Statistic	0.861
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	2.7916E-5
Lilliefors Test Statistic	0.166
Lilliefors Critical (0.05) Value	0.134

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.947
A-D Test Statistic	1.134
A-D Critical (0.05) Value	0.747
K-S Test Statistic	0.135
K-S Critical(0.05) Value	0.135

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.964
Shapiro Wilk Test Statistic	0.939
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	0.0283
Lilliefors Test Statistic	0.122
Lilliefors Critical (0.05) Value	0.134

Data appear Approximate_Lognormal at (0.05) Significance Level

AREA2_MANGANESE_SB

Raw Statistics

Number of Valid Observations	43
Number of Distinct Observations	38
Minimum	354
Maximum	1530
Mean of Raw Data	594.7
Standard Deviation of Raw Data	220.1
Khat	11.19
Theta hat	53.13
Kstar	10.43
Theta star	57.03
Mean of Log Transformed Data	6.343
Standard Deviation of Log Transformed Data	0.28

Normal GOF Test Results

Correlation Coefficient R	0.802
Shapiro Wilk Test Statistic	0.667
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	1.820E-11
Lilliefors Test Statistic	0.274
Lilliefors Critical (0.05) Value	0.134

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.862
A-D Test Statistic	3.07
A-D Critical (0.05) Value	0.748
K-S Test Statistic	0.226
K-S Critical(0.05) Value	0.135

Data not Gamma Distributed at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.903
Shapiro Wilk Test Statistic	0.833
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	2.7295E-6
Lilliefors Test Statistic	0.198
Lilliefors Critical (0.05) Value	0.134

Data not Lognormal at (0.05) Significance Level

Non-parametric GOF Test Results

Data do not follow a discernible distribution at (0.05) Level of Significance

AREA2_VANADIUM_SB

Raw Statistics

Number of Valid Observations	43
Number of Distinct Observations	38
Minimum	24.4
Maximum	64.4
Mean of Raw Data	36.88
Standard Deviation of Raw Data	7.978
Khat	24.91
Theta hat	1.48
Kstar	23.19
Theta star	1.59
Mean of Log Transformed Data	3.587
Standard Deviation of Log Transformed Data	0.198

Normal GOF Test Results

Correlation Coefficient R	0.938
Shapiro Wilk Test Statistic	0.891
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	3.8751E-4
Lilliefors Test Statistic	0.144
Lilliefors Critical (0.05) Value	0.134

Data not Normal at (0.05) Significance Level

Gamma GOF Test Results

Correlation Coefficient R	0.963
A-D Test Statistic	0.843
A-D Critical (0.05) Value	0.747
K-S Test Statistic	0.114
K-S Critical(0.05) Value	0.135

Data follow Appr. Gamma Distribution at (0.05) Significance Level

Lognormal GOF Test Results

Correlation Coefficient R	0.976
Shapiro Wilk Test Statistic	0.958
Shapiro Wilk Critical (0.05) Value	0.943
Approximate Shapiro Wilk P Value	0.152
Lilliefors Test Statistic	0.103
Lilliefors Critical (0.05) Value	0.134

Data appear Lognormal at (0.05) Significance Level

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 3:16:26 PM
From File	proUCL Input Subsurface Soil Area 2_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_ALUMINUM_SB

Sample 2 Data: BACKGROUND_ALUMINUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	43	30
Number of Distinct Observations	35	30
Minimum	9940	3440
Maximum	26200	40200
Mean	14954	15659
Median	14300	14500
SD	3454	8240
SE of Mean	526.8	1504

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1598
Standardized WMW U-Stat	0.0673
Mean (U)	645
SD(U) - Adj ties	89.18
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.473

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 3:17:55 PM
From File	proUCL Input Subsurface Soil Area 2_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_ARSENIC_SB

Sample 2 Data: BACKGROUND_ARSENIC

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	43	29
Number of Distinct Observations	39	28
Minimum	5.6	0.58
Maximum	25.1	26.1
Mean	10.85	8.072
Median	9.2	6.2
SD	4.785	5.623
SE of Mean	0.73	1.044

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1832
Standardized WMW U-Stat	3.003
Mean (U)	623.5
SD(U) - Adj ties	87.09
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.00134

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 3:18:52 PM
From File	proUCL Input Subsurface Soil Area 2_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_CHROMIUM_SB

Sample 2 Data: BACKGROUND_CHROMIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	43	30
Number of Distinct Observations	41	29
Minimum	18.2	2.1
Maximum	56.4	49.2
Mean	29.46	21.59
Median	27.4	19.4
SD	7.351	11.29
SE of Mean	1.121	2.061

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1867
Standardized WMW U-Stat	3.083
Mean (U)	645
SD(U) - Adj ties	89.19
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.00102

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 3:19:59 PM
From File	proUCL Input Subsurface Soil Area 2_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_COBALT_SB

Sample 2 Data: BACKGROUND_COBALT

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	43	30
Number of Distinct Observations	32	27
Minimum	8.08	0.11
Maximum	20.8	23.9
Mean	12.24	7.109
Median	11.7	4.75
SD	2.434	6.383
SE of Mean	0.371	1.165

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	2009
Standardized WMW U-Stat	4.676
Mean (U)	645
SD(U) - Adj ties	89.17
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	1.4599E-6

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 3:20:50 PM
From File	proUCL Input Subsurface Soil Area 2_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_IRON_SB

Sample 2 Data: BACKGROUND_IRON

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	43	30
Number of Distinct Observations	37	29
Minimum	16800	392
Maximum	43800	58600
Mean	26019	24006
Median	25000	23150
SD	5462	11631
SE of Mean	832.9	2124

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1696
Standardized WMW U-Stat	1.172
Mean (U)	645
SD(U) - Adj ties	89.18
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	0.121

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 3:21:38 PM
From File	proUCL Input Subsurface Soil Area 2_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_MANGANESE_SB

Sample 2 Data: BACKGROUND_MANGANESE

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	43	30
Number of Distinct Observations	38	30
Minimum	354	27.9
Maximum	1530	1600
Mean	594.7	320.3
Median	544	226.3
SD	220.1	327.6
SE of Mean	33.56	59.81

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	2071
Standardized WMW U-Stat	5.376
Mean (U)	645
SD(U) - Adj ties	89.19
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	3.7994E-8

Conclusion with Alpha = 0.05

Reject H0, Conclude Sample 1 > Sample 2

P-Value < alpha (0.05)

Wilcoxon-Mann-Whitney Sample 1 vs Sample 2 Comparison Test for Uncensor Full Data Sets without NDs

User Selected Options	
Date/Time of Computation	ProUCL 5.19/30/2016 3:22:31 PM
From File	proUCL Input Subsurface Soil Area 2_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Substantial Difference	0.000
Selected Null Hypothesis	Sample 1 Mean/Median <= Sample 2 Mean/Median (Form 1)
Alternative Hypothesis	Sample 1 Mean/Median > Sample 2 Mean/Median

Sample 1 Data: AREA2_VANADIUM_SB

Sample 2 Data: BACKGROUND_VANADIUM

Raw Statistics

	Sample 1	Sample 2
Number of Valid Observations	43	30
Number of Distinct Observations	38	30
Minimum	24.4	6.8
Maximum	64.4	95.2
Mean	36.88	47.18
Median	35.5	46.05
SD	7.978	18.89
SE of Mean	1.217	3.45

Wilcoxon-Mann-Whitney (WMW) Test

H0: Mean/Median of Sample 1 <= Mean/Median of Sample 2

Sample 1 Rank Sum W-Stat	1243
Standardized WMW U-Stat	-3.913
Mean (U)	645
SD(U) - Adj ties	89.19
Approximate U-Stat Critical Value (0.05)	1.645
P-Value (Adjusted for Ties)	1

Conclusion with Alpha = 0.05

Do Not Reject H0, Conclude Sample 1 <= Sample 2

P-Value >= alpha (0.05)

APPENDIX D

HUMAN HEALTH RISK ASSESSMENT

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TABLE OF CONTENTS

FIGURES

TABLES*

* Tables 1 through 10 follow the numbering scheme required by USEPA's Risk Assessment Guidance for Superfund (RAGS) Part D guidance document. Where tables are not required, there may be gaps in table numbers (e.g., Table 8, Table 10.3.CTE, Table 10.4.RME/CTE).

ATTACHMENTS

ACRONYMS AND ABBREVIATIONS

%	percent
µg/L	microgram per liter
ADAF	age-dependent adjustment factor
ADD	average daily dose
bgs	below ground surface
CDC	Center for Disease Control and Prevention
cm	centimeter
cm^2	square centimeter
COC	chemical of concern
COPC	chemical of potential concern
CSF	cancer slope factor
CSM	conceptual site model
CTE	central tendency exposure
Cutler	Cutler, Maine
DDA	drum disposal area
DL	detection limit
ELCR	excess lifetime cancer risk
EPC	exposure point concentration
FTA	Fire Training Area
HHRA	human health risk assessment
HI	hazard index
HQ	hazard quotient
IRIS	Integrated Risk Information System
IUR	inhalation unit risk factor
JE	Johnson and Ettinger
kg	kilogram
K_p	dermal permeability coefficient

LADD	lifetime average daily dose
m^3/kg	cubic meter per kilogram
MCL	maximum contaminant level
MEDEP	Maine Department of Environmental Protection
mg/cm^2-day	milligram per cubic centimeter per day
mg/day	milligram per day
mg/kg	milligram per kilogram
mg/kg-day	milligram of chemical per kilogram of body weight per day
NCTAMS LANT Det	Naval Computer and Telecommunications Area Master Station Atlantic Detachment
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PEF	particulate emission factor
PFAS	poly- and perfluoroalkyl substance
PFOA	perfluorooctanoic acid
PFOS	perfluorooctanesulfonic acid (perfluorooctane sulfonate)
PRG	preliminary remediation goal
RAGS	Risk Assessment Guidance for Superfund
RfC	reference concentration
RfD	reference dose
RI	Remedial Investigation
RME	reasonable maximum exposure
RSL	regional screening level
SVOC	semivolatile organic compound
SYA	Salvage Yard Area
TPH	total petroleum hydrocarbons
UCL	upper confidence limit
U.S.	United States
USEPA	United States Environmental Protection Agency

VISL	Vapor Intrusion Screening Level
VLF	Very Low Frequency
VOC	volatile organic compound

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1.0 INTRODUCTION

This appendix presents a human health risk assessment (HHRA) conducted for the Fire Training Area (FTA) (site) located at the Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det) in Cutler, Maine (Cutler) (**Figure 1**). This HHRA addresses the potential for human health risks associated with historical site activities at the FTA.

The FTA (Site 1) consists of a former borrow pit that was used by the Navy for firefighting training exercises from the early 1960s to the 1980s and a drum disposal area (DDA) (Site 5) located on the southern edge of the FTA. Since the DDA was physically located within the boundaries of the FTA, the DDA and former borrow pit were combined into a single site in 2012 and all environmental issues were addressed as Site 1. The chemicals associated with these activities, and therefore potentially present at the site, include volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons, poly- and perfluoroalkyl substances (PFASs), and metals. The site history and a site description are presented in detail in the Remedial Investigation (RI) main report text. The FTA encompasses 10.27 acres, of which 3.26 acres in the central portion of the site is wetlands (including the Sand Wedge restored wetland [0.44 acres] and the enhanced wetlands [2.84 acres]).

1.1 Objectives

The primary objective of the HHRA is to evaluate whether exposure to chemicals of potential concern (COPCs) attributable to past operations at the FTA may pose a risk to human health above United States (U.S.) Environmental Protection Agency (USEPA) or Maine Department of Environmental Protection (MEDEP) target levels. The evaluation focuses on quantitative estimation of current and potential future risks and hazards to current and potential future human receptors that may be exposed to site-related chemicals in soil, groundwater, air, sediment, and surface water at the FTA.

1.2 HHRA Approach

The HHRA was performed in accordance with Navy, USEPA, MEDEP, and Maine Center for Disease Control and Prevention (CDC) risk assessment guidance and other related guidance. Guidance documentation includes, but is not limited to, the following:

- *Navy Policy for Conducting Human Health Risk Assessments Under the Environmental Restoration Program* (DON 2001)
- *Navy Policy on the Use of Background Chemical Levels* (DON 2004)
- *Department of the Navy Environmental Restoration Program Manual* (DON 2006)
- *U.S. Navy Human Health Risk Assessment Guidance* (DON 2008)

- *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual* (Parts A, B, D, E, and F) (USEPA 1989; 1991; 2001; 2004a; 2009)
- *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites* (USEPA 2002a)
- *Human Health Toxicity Values in Superfund Risk Assessments* (USEPA 2003)
- *Exposure Factors Handbook* (USEPA 2011)
- *Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors* (USEPA 2014a)
- *Guidance For Human Health Risk Assessments For Hazardous Substance Sites in Maine* (MEDEP/CDC 2011)
- *Standard Default Exposure Assumptions for Maine Risk Assessments (Table 1)* (MEDEP/CDC 2013)

The HHRA approach used in this document generally follows the approach used for evaluation of the Site 4/Very Low Frequency (VLF) Peninsula risk assessment (Resolution 2016a) and the Salvage Yard Area (SYA) risk assessment (Resolution 2016b) to provide consistency in the HHRA approach between multiple sites within the NCTAMS LANT Det Cutler.

Pursuant to the *Navy Policy for Conducting Human Health Risk Assessments Under the Environmental Restoration Program* (DON 2001), the determination of human health risk at a site is clearly prescribed to ensure sufficient resources are allocated for the protection of human health. The Navy Policy for conducting HHRAs identifies a three-tiered approach that may be implemented in its entirety depending on the level and magnitude of incremental risk or hazard that is determined in prior tiers. The following sections describe the tiers followed for this HHRA.

1.2.1 Tier IA – Human Health Risk-Based Screening Evaluation

The Tier IA human health risk-based screening evaluation includes the following:

- Identify and summarize relevant datasets.
- Refine the conceptual site model (CSM) for potentially complete exposure pathways for both current and future land uses.
- Identify COPCs for further quantitative evaluation in the site-specific risk assessment (Tier II).

The Tier IB, Site-Specific Risk-Based Screening Evaluation, is an optional tier that allows for development of and comparison to site-specific risk-based screening levels. This tier of evaluation was not conducted for this HHRA.

1.2.2 Tier II – Baseline Human Health Risk Assessment

The Tier II baseline HHRA includes the following:

- *Data Evaluation and Reduction:* Conducted in Tier IA.
- *Exposure Assessment:* Includes reevaluation of the CSM, if appropriate and necessary, and identification of potential receptors, pathways, and intake factors for both current and future land uses.
- *Toxicity Assessment:* Includes the hazard identification and dose-response assessment processes in which it is determined whether exposure to a chemical can cause an adverse health effect in humans; and identification of toxicity values and chemical-specific values for carcinogenic and noncarcinogenic COPCs.
- *Risk Characterization:* Integrates the toxicity and exposure assessments to estimate the potential risk associated with COPCs at the site and identifies risk drivers/risk-based chemicals of concern (COCs) above target risk/hazard levels.
- *Uncertainty Analysis:* Discusses the uncertainty associated with all aspects of the HHRA or limitations that may have a significant impact on the outcome of the HHRA due to an underestimation or overestimation of risk.

Section 2.0 presents the data evaluation; **Section 3.0** presents the Tier IA human health risk-based screening evaluation; and **Section 4.0** presents the Tier II baseline HHRA. Tables and figures are presented at the end of the text. Tables are numbered based on the Risk Assessment Guidance for Superfund (RAGS) Part D (USEPA 2001) numbering system, as noted in the following table. Informational tables embedded within the text of the HHRA are not numbered.

Table #	RAGS Part D Table Title	Report Location
Table 1	Selection of Exposure Pathways (HHRA)	Tables section
Table 2	Occurrence, Distribution, and Selection of Chemicals of Potential Concern	Tables section
Table 3	Exposure Point Concentration Selection	Tables section
Table 4	Values Used for Daily Intake Calculations	Tables section
Table 5	Non-Cancer Toxicity Data	Tables section
Table 6	Cancer Toxicity Data	Tables section
Table 7	Calculation of Chemical Cancer Risks and Non-Cancer Hazards	Attachment E
Table 9	Summary of Receptor Risks and Hazards for COPCs	Attachment F
Table 10	Risk Summary	Tables section

Note: RAGS Part D Table 8 (Calculation of Radiation Cancer Risks) is not applicable to this HHRA.

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2.0 DATA EVALUATION

Section 2.0 summarizes the available environmental data for each media quantitatively evaluated in the HHRA. Environmental data used in this HHRA include soil, groundwater, surface water, and sediment collected on behalf of the Navy. Soil data included in the HHRA were collected between 2002 and 2014, and surface water and sediment data included in the HHRA were collected between 2012 and 2014. Groundwater data from permanent monitoring wells collected between 2012 and 2016 were included in the HHRA.

Sections 1.0 and 2.0 of the RI report provides detailed discussions of the sampling events performed as part of the site investigations conducted at the FTA. Section 4.0 of the RI report discusses the nature and extent of the primary chemicals detected in site media.

2.1 Data Used in the HHRA and Identification of Exposure Areas

The following sections summarize the environmental data for each of the media quantitatively evaluated in the HHRA. **Attachment A** includes tables summarizing the samples used in the HHRA. **Attachment A** also presents individual analytical sample results. **Figures 2** and **3** identify the surface soil, subsurface soil, groundwater, sediment, and surface water sampling locations.

2.1.1 Soil

Soil samples were collected during multiple sampling events conducted between 2002 and 2016 from various depth intervals between the ground surface and 10 feet (ft) below ground surface (bgs). Soil samples were analyzed for inorganics, PCBs, pesticides, semivolatile organic compounds (SVOCs), VOCs, and total petroleum hydrocarbons (TPH). Surface soil samples collected in November 2016 were analyzed for both total and hexavalent chromium. The sample locations for chromium analysis were selected from undisturbed areas with the highest concentrations of chromium in previous sampling. Samples locations were selected in conjunction with MEDEP.

For the purposes of the HHRA, and for consistency with the VLF Peninsula/SYA HHRAs (Resolution 2016a,b) surface soil is defined as soil collected within the 0–2 ft depth interval and subsurface soil is defined as soil collected within the depth interval ranging from > 2 to 15 ft bgs. One soil sample (FTA-SS-23) was collected from 1–3 ft bgs, which overlaps both the surface and subsurface soil depth intervals. The soil sample collected from 1–3 ft bgs was treated as subsurface soil in the HHRA because the 1–3 ft bgs interval does not include the most surficial soils. The sample was analyzed for VOCs only and, consistent with other subsurface soil samples, contains low or non-detect concentrations of VOCs.

Samples identified as removed during excavations were not included in the HHRA. Potential impacts due to petroleum products are assessed using the relevant VOCs (i.e., benzene, toluene, ethylbenzene, xylene) and PAH data. Therefore, soil results for TPH were not evaluated in the HHRA.

Soil exposure areas (i.e., the area of the FTA not including the wetlands) were defined based on a review of analytical data and the spatial distribution of key COPCs, primarily Total PCBs (referred to as Total Aroclors in the **Attachment A** data tables) and secondarily PAHs. Figure 4-3 of the RI report spatially depicts concentrations of PCB Aroclor-1260. Significant remediation was conducted on the northern portion of the FTA, historically used for firefighting training. Chemical concentrations are generally lower than in the more southern portion of the site, historically used for drum disposal. Within the northern portion, metals concentrations appear similar to background, and concentrations of PCBs, PAHs, and other organics are low to non-detect. There are no localized areas within the northern portion with higher chemical concentrations. Therefore, the more northern area is treated as one exposure area, referred to as Soil Exposure Area 1, encompassing 5.56 acres, and includes all the soil within the FTA boundaries outside of Soil Exposure Area 2, described as follows.

While concentrations of metals in the southern area are similar to those in the northern area, concentrations of PCBs, PAHs, and other organics in the southern area are higher and more widespread. No discernable pattern was identified for elevated PCB concentrations within the southern area, with three surface soil samples exhibiting relatively high concentrations of Total PCBs (PCBAREA1-011, 013, and 014 at 240 milligrams per kilogram [mg/kg], 610 mg/kg, and 140 mg/kg, respectively). However, the samples surrounding these locations showed much lower PCB concentrations. Therefore, these locations were not treated separately and the southern area was treated as one exposure area, referred to as Soil Exposure Area 2, and is 1.45 acres in size. Note that a small portion of land below Soil Exposure Area 2 is included in Soil Exposure Area 1, which includes location FTA-SB-208. The soil exposure areas do not include the wetlands, which are treated as one exposure area for sediment and surface water.

Figure 2 depicts the locations of Soil Exposure Area 1, Soil Exposure Area 2, and the wetlands, as well as sample locations for soil, sediment, surface water, and groundwater. Due to the large number of samples located in Soil Exposure Area 2, **Figure 3** provides a magnification of Soil Exposure Area 2. A list of soil samples and a summary of the analytical soil data evaluated in the HHRA are presented in **Attachment A**, Tables A-1a and A-1b, respectively. The list of soil samples also indicates whether the sample is located in Soil Exposure Area 1 or Soil Exposure Area 2.

2.1.2 Groundwater

Groundwater samples were collected during multiple sampling events conducted between 1999 and 2016. Groundwater samples were analyzed for total and dissolved phase inorganics, PCBs, pesticides, SVOCs, VOCs, TPH, and PFASs (perfluorooctanesulfonic acid [PFOS] and perfluorooctanoic acid [PFOA]). Note that the acid name for PFOS is used for consistency with the analytical method. USEPA's health advisory (USEPA 2016e) uses the anion name, perfluorooctane sulfonate. For the purposes of this report, the acid and anion forms of the name refer to the same

substance. Potential impacts due to petroleum products are assessed using the relevant VOCs (i.e., benzene, toluene, ethylbenzene, xylene) and PAH data. Therefore, groundwater results for TPH were not evaluated in the HHRA.

The HHRA utilizes the total (unfiltered) groundwater data for oral exposure pathways, consistent with the recommendation in USEPA (2004a). As discussed in **Section 4.7.5.3**, the use of unfiltered data for the dermal contact pathway is conservative.

USEPA (2014b) recommends that where no seasonal trends are identified, the latest two rounds of data from each well, generally from the past year, be used to develop exposure point concentrations (EPCs) for groundwater. The hydrograph of groundwater elevation data from 2012 to 2015 (Figure 3-4 of the RI report) reveals no discernable patterns in seasonal groundwater flow. Therefore, the use of multiple rounds of data from the same well is appropriate for this HHRA.

The guidance also recommends a minimum of 10 data points per chemical. The latest two rounds of sampling include June 2014 and June 2015 (with one additional round included at FTA-MW-206 in September 2013 for PCBs, pesticides, SVOCs, and VOCs, and one additional round included at FTA-MW-208 in November 2016 for total and hexavalent chromium only). However, because the 2014 and 2015 rounds had slightly varying analyte lists for SVOCs and VOCs, the November 2012 round was included to ensure adequate data points per chemical and well. Groundwater data collected before 2012 were not used in the HHRA, as the more recent data are more reflective of current conditions.

As indicated in USEPA (2014b), groundwater data from monitoring wells are preferred over data collected from soil borings and/or temporary well locations, as results for temporary wells may not be reproducible. Permanent groundwater wells located in the FTA are as follows:

- FTA-MW-1
- FTA-MW-5
- FTA-MW-9
- FTA-MW-10
- FTA-MW-11
- FTA-MW-12
- FTA-MW-14
- FTA-MW-203
- FTA-MW-206

- FTA-MW-208
- FTA-MW-210
- FTA-MW-218
- DP-35

Based on September 2015 monitoring well gauging data, the direction of shallow groundwater flow, in the surficial materials, is generally to the north toward the wetland area. FTA-MW-203, FTA-MW-208, and FTA-MW-218 are located hydraulically upgradient from the wetland area and distant from any site-related activities. With the exception of a very low level detection of PFOA in FTA-MW-218, only inorganics were detected in these wells, suggesting the wells are not site impacted and are more consistent with upgradient conditions. The PFOA detection is an estimated concentration at or near the detection limit (DL) and below the screening level, and likely represents a sampling artifact rather than a site-related condition. Therefore, these three upgradient wells were not included in the HHRA.

USEPA guidance indicates that groundwater EPCs should be derived based on monitoring wells within the center or core of the plume (USEPA 2014b). Based on a review of the analytical data, there does not appear to be a dominant plume area. While some wells exhibit higher concentrations of certain chemicals, no discernable pattern was identified. Therefore, with the exception of the three upgradient wells, the permanent wells listed previously were included in the HHRA.

A list of groundwater samples and a summary of the analytical groundwater data evaluated in the HHRA are presented in **Attachment A**, Tables A-2a and A-2b, respectively.

2.1.3 Wetlands

The total acreage of the Sand Wedge restored wetland (0.44 acres) and the enhanced wetland (2.84 acres) within the FTA is 3.26 acres. Both the restored wetland and enhanced wetland were evaluated as one exposure area for both surface water and sediment, referred to in the remainder of this report as the wetland area.

2.1.3.1 Wetland Surface Water

Surface water samples were collected from the wetland area in November 2012 and June 2014. Surface water samples were analyzed for total and dissolved phase inorganics, PCBs, SVOCs, VOCs, and TPH. The HHRA utilizes only the total (unfiltered) inorganic surface water data. As discussed in **Section 4.7.5.3**, the use of unfiltered data for the dermal contact pathway is conservative. Potential impacts due to petroleum products are assessed using the relevant VOCs (i.e., benzene, toluene, ethylbenzene, xylene) and PAH data. Therefore, surface water results for TPH were not evaluated in the HHRA. A list of surface water samples and a summary of the analytical surface

water data evaluated in the HHRA are presented in **Attachment A**, Tables A-3a and A-3b, respectively.

2.1.3.2 Wetland Sediment

Sediment samples were collected from the wetland area in November 2012, June 2014, and November 2016 (one sample) from the ground surface to 0.5 ft bgs. The 2012 and 2014 sediment samples were analyzed for inorganics, PCBs, pesticides, SVOCs, VOCs, and TPH. The sediment sample collected in November 2016 (FTA-SED-07) was analyzed for total and hexavalent chromium only. Location FTA-SED-07 was selected for chromium speciation because it had the highest chromium concentration previously detected. Potential impacts due to petroleum products are assessed using the relevant VOCs (i.e., benzene, toluene, ethylbenzene, xylene) and PAH data. Therefore, sediment results for TPH were not evaluated in the HHRA. A list of sediment samples and a summary of the analytical sediment data evaluated in the HHRA are presented in **Attachment A**, Tables A-4a and A-4b, respectively.

2.2 Background

Background data are available for soils, sediments, and surface water. The *Background Study for Remedial Investigations for Installation Restoration Sites at NCTAMS LANT Det in Cutler, Maine* (Battelle 2005) described the collection of background surface soil samples (0–1 ft bgs). Samples collected from 15 locations in each of the two primary soil types (glacial till and glacio-marine sediments) were considered applicable to the FTA. Three freshwater sediment reference samples collected as part of the SYA RI effort in 2009 are considered to be background samples for the freshwater sediments of the FTA. The data associated with the soil, sediment, and surface water background samples are included in Appendix B of the RI report.

The background evaluation consisted of statistical comparisons of site and background datasets for media/chemicals for which a sufficient background dataset was available. Where requirements for conducting a statistical evaluation were not met, a qualitative/graphical comparison was performed. Appendix C of the RI report includes the background evaluation considered in the HHRA. The conclusions of the background evaluation for COPCs are summarized as follows.

2.2.1 Soil

The statistical analyses and graphical displays indicate that surface soil and subsurface soil concentrations of the following COPCs are less than or similar to concentrations in the background soil dataset as follows:

COPC	Soil Exposure Area 1		Soil Exposure Area 2	
	Surface Soil	Subsurface Soil	Surface Soil	Subsurface Soil
Aluminum	X	X	X	X
Arsenic	X	X	X	
Iron	X	X	X	X
Vanadium	X	X	X	X

Note:
X = Site concentrations less than or similar to background concentrations (see Appendix C of the RI report).

2.2.2 Sediment and Surface Water

Due to the small size of the background surface water and sediment data sets (n=3 or n=2), a robust statistical population comparison against the site data could not be conducted. Appendix C of the RI report includes a tabular summary and a graphical display of the site and background data.

Sediment

COPCs in wetland sediment include PCBs, arsenic, cobalt, iron, and several PAHs. Background data are available for the metals and benzo(a)anthracene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. Benzo(a)pyrene was not detected in the background samples, and PCBs and benzo(b)fluoranthene were not analyzed.

The combined stacked dot/boxplots comparing background and site concentrations in Appendix C of the RI report show that maximum background concentrations fall near the 90th percentile of site concentrations for arsenic and iron, and near the 75th percentile for cobalt. Therefore, site concentrations of arsenic, cobalt, and iron and are considered to be consistent with background in sediment.

The boxplots in Appendix C of the RI report show that the maximum concentrations of benzo(a)anthracene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene in background sediment samples are less than the 25th percentile of site sediment concentrations. Therefore, site sediment concentrations of these COPCs are greater than background concentrations.

Surface Water

COPCs in wetland surface water include arsenic, manganese, thallium, and several organics. Of the COPCs, background data are available only for manganese. Background concentrations of total manganese range from 4,310 micrograms per liter (µg/L) to 12,300 µg/L and are higher than site concentrations, which range from 28.3 µg/L to 1,190 µg/L (see the boxplot included in Appendix C of the RI report).

2.2.3 Background Evaluation Conclusions

The results of the background evaluation indicate that concentrations of aluminum, arsenic, iron, and vanadium in soil are consistent with background concentrations (with the exception of arsenic in Soil Exposure Area 2 subsurface soil). Concentrations of arsenic, cobalt, and iron in wetland sediment are also consistent with background concentrations. Manganese concentrations in wetland surface water are lower than background levels. While chemicals within background levels are not attributed to Navy activities, background levels have not been used for screening purposes but are considered in the Tier II HHRA if necessary following the identification of risk drivers.

2.3 Data Treatment

Analytical data were evaluated, validated, and qualified prior to use in the risk assessment. Data evaluation and validation included a comparison of the site data to corresponding blank (laboratory, field, equipment, and trip) concentration data. As described in the data validation report (Appendix B of the RI report), some results, primarily for SVOCs such as various phenols and caprolactam, were rejected during data validation. The impact of rejecting this small amount of data for chemicals that are unlikely to be site-related is minimal. Data rejected by the evaluation ("R" qualified) were not used in the HHRA. Estimated values ("J" qualified) were used in the HHRA without modification. If the value was flagged with "U" or "UJ," the result was considered a non-detect value.

For each exposure area and medium, the data were compiled into summary statistics presented in **Tables 2.1** through **2.6** and discussed in the following sections. For each chemical detected at least once within an area media, the summary statistics include frequency of detection, range of DLs, range of detected concentrations, and location of maximum detected result. The following guidance documents were used to develop the summary statistics:

- *U.S. Navy Human Health Risk Assessment Guidance* (DON 2008)
- *RAGS: Volume I – Human Health Evaluation Manual, Parts A and D* (USEPA 1989; 2001)

2.3.1 Treatment of Duplicates

For sample locations in which a duplicate sample was also collected, the duplicate sample results for each chemical/medium combination were processed for use in the calculation of summary statistics. Duplicates were resolved in accordance with MEDEP/CDC guidance (2011) as follows: (1) Where both the sample and the duplicate results are not detected, the resulting value is the average of the limits of detection; (2) where both the sample and the duplicate results are detected, the resulting value is the average of the detected results; and (3) where one of the pair is reported as not detected and the other is detected, the detected concentration is used.

2.3.2 Total PCBs

The analytical dataset includes results for PCBs reported as PCB Aroclors. PCB Aroclors consist of mixtures of PCB congeners. Each PCB Aroclor mixture (e.g., PCB Aroclor-1254) is referred to as an individual PCB Aroclor throughout this HHRA report, including the associated tables and attachments). This distinguishes the reported laboratory results for each PCB Aroclor mixture, which provides a measure of a subset of PCB congeners specific to that commercial mixture, from the Total PCB (referred to as Total Aroclors in the **Attachment A** data tables) concentration that is calculated for use in this HHRA by summing the individual PCB Aroclors that were detected in each sample. It is recognized that different PCB Aroclor mixtures may contain overlapping PCB congeners.

Detected concentrations of individual PCB Aroclors in soil, sediment, and surface water were combined to calculate a Total PCB concentration per sample for evaluation in the HHRA. PCB Aroclors were not detected in groundwater. Total PCBs were calculated using two methods to determine the range of potential PCB concentrations as follows:

- *Detects Only Method:* Total PCB concentrations were calculated per sample by summing only the detected individual PCB concentrations. For samples without any detection of individual PCBs, the maximum reporting DL within the sample was used as a non-detect value.
- *Full DL Method:* Total PCB concentrations were calculated per sample by summing the individual PCB concentration for detected results and the full reporting DL for non-detect results.

The Detects Only Method was used in the HHRA calculations presented and discussed throughout the HHRA. The uncertainty assessment (**Section 4.7**) provides a discussion of if/how the potential risk/hazard results and conclusions of the HHRA would change if the Full DL Method were used instead.

2.3.3 Chromium

Chromium is most commonly present in the environment in the trivalent state because typical conditions in the environment favor the reduction of chromium from the hexavalent to the trivalent state. The data collected prior to 2016 were analyzed for total chromium. Therefore, surface soil, sediment, and groundwater samples were collected in November 2016 and were analyzed for total and hexavalent chromium. Total chromium has never been detected in surface water at the FTA and was therefore not included in the November 2016 sampling.

Sampling locations were selected based on historical high total chromium concentrations in areas known to be undisturbed, as approved by Navy and MEDEP.

Soil and Sediment

As discussed in detail in Appendix G of the RI report, multiple lines of reasoning were used to support the weight-of-evidence conclusion that hexavalent chromium is not a site-related contaminant at the FTA. Site history, background concentrations, soil characteristics, and laboratory analysis all support the conclusion that a hexavalent chromium release has not occurred. Therefore, total chromium is evaluated in the HHRA as trivalent chromium, and not hexavalent chromium, in soil and sediment.

Groundwater

Concentrations of total chromium in the permanent wells selected for evaluation in the HHRA range from 1.4 µg/L to 7.6 µg/L. Total chromium was not detected in upgradient well FTA-MW-203, and was detected in one sample from upgradient well FTA-MW-218 at a concentration of 4 µg/L. Upgradient well FTA-MW-208 has exhibited the highest concentrations of total chromium historically (maximum of 26.6 µg/L in November 2012), and was therefore selected for inclusion in the November 2016 sampling event. The November 2016 results for FTA-MW-208 indicated that total chromium was detected at a concentration of 9.97 µg/L and hexavalent chromium was detected at a concentration of 4.8 µg/L. However, given the well's upgradient location, the results are reflective of background conditions rather than site conditions.

The evaluation included in Appendix G of the RI report concludes that hexavalent chromium is not present in soils or sediments in the FTA. Therefore, soils are not a potential source of hexavalent chromium to groundwater, and it is reasonable to conclude that hexavalent chromium is also not present in groundwater in the FTA. The detection of hexavalent chromium in an upgradient well suggests either a non-site related source or that upgradient conditions that vary from the site conditions. Therefore, total chromium is evaluated in the HHRA as trivalent chromium, and not hexavalent chromium, in groundwater.

2.3.4 Analyses via Multiple Methods

Some chemicals (e.g., PAHs) were analyzed using different methods in the same samples (e.g., SVOC and extractable petroleum hydrocarbons methods). In the Tier IA evaluation, results from each of the analytical method groups were evaluated separately for the purposes of identifying COPCs.

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3.0 TIER IA HUMAN HEALTH RISK-BASED SCREENING EVALUATION

Section 3.0 presents the development of the Tier IA human health risk-based screening evaluation.

3.1 Conceptual Site Model

The NCTAMS LANT Det Cutler facility, situated on the 2,300-acre Cutler Peninsula on the coast of eastern Maine (**Figure 1**), was established on June 23, 1961 as a communications facility that provides radio signal transmissions with U.S. ships and submarines operating mainly in the North Atlantic and Arctic Oceans, and the Mediterranean Sea. The FTA is located in the northern portion of the NCTAMS LANT Det. Undeveloped forested land and several freshwater wetlands surround the FTA. Removal actions were conducted in the center of the FTA between 2006 and 2009 and a wetland was developed during restoration activities. The rest of the site is mainly located in an open (cleared) area, with a forested area around the perimeter. The DDA is located on the southern edge of the FTA, immediately to the south of the removal area/created wetland and directly upgradient, based on previous determinations of groundwater flow. Previous removal actions have removed over 30 drums and drum remnants from the DDA.

Currently, the FTA is unused and undeveloped open space. While there are no physical access restrictions to the FTA, human access to the area is prohibited and is restricted to Cutler base personnel performing operation and maintenance. Currently, there is no residential or recreational use, and children are not permitted to access the FTA. Access to the peninsula is restricted by base security and can only be gained through a security checkpoint located in the northern portion of the base along Ridge Road. The entrance to the NCTAMS LANT Det Cutler is accessed via Ridge Road located approximately 1.5 miles west of Route 191 in Cutler, Maine (Tetra Tech 2010). There are currently no future redevelopment plans.

For the purposes of the HHRA, it was conservatively assumed that humans may trespass onto the site and access site soils, in addition to surface water and sediment within the wetland area via a wading exposure scenario. Standing water may be seasonally present within the wetland; however, fish suitable for human consumption are not expected to be present. Maximum water depths during the 2014 wetland sampling effort were approximately 6 inches with no standing water present at some locations, as indicated in the following table:

Location	Sample Date	Inches of Standing Water
FTA-SW-01	6/19/2014	3
FTA-SW-02	6/19/2014	3 to 4
FTA-SW-03	6/19/2014	2
FTA-SW-06	6/19/2014	2 to 3

Location	Sample Date	Inches of Standing Water
FTA-SW-07	6/19/2014	6
FTA-SW-08	6/19/2014	6

Therefore, any recreational activities involving surface water (e.g., wading) are expected to be minimal.

Under the current scenario, trespassing for recreational use is extremely unlikely given the access prohibitions in place. Under the future scenario, recreational use may also be limited due to the lack of fishing or other desirable recreational activities. There are currently no plans for opening the area to recreational activities. However, a current/future recreational user exposure scenario was evaluated in the HHRA to be protective of both a current trespasser exposure scenario and a future recreational-use exposure scenario, conservatively assuming access to the area is unrestricted in the future and becomes accessible for recreational use (e.g., hiking and camping).

Currently, there are no workers at the FTA. The FTA is not regularly maintained and there are no activities occurring in the area. Future land use of the site is likely to remain constant into the future. However, it was conservatively assumed that future receptors may include industrial workers and residents under a hypothetical scenario in which the area is redeveloped for regular commercial/industrial and/or residential use. Future outdoor industrial workers are assumed to contact soil, while future indoor industrial workers may be exposed to volatiles in groundwater via the vapor intrusion pathway. Future industrial workers are not considered to be routinely exposed to groundwater, surface water, or sediment.

While no residential development is planned for the site, hypothetical future residents are assumed to contact soil, groundwater (via ingestion of drinking water, contact while bathing/showering, and the vapor intrusion pathway), and surface water and sediment assuming they may wade into the wetland area. Although it is an unlikely future scenario, evaluation of a hypothetical future residential exposure scenario in the HHRA provides useful information for decision-making purposes (e.g., implementation of land use restrictions or remedial activities).

Finally, it was assumed that construction workers may access the site under a current/future use scenario and may access soil, groundwater, and volatiles in air within an excavation trench originating from groundwater, and surface water and sediment within the wetland area, assuming they may perform activities along the edges of the wetland. For example, a construction worker may perform excavation activities at the FTA similar to those that have occurred in the past, including soil removal and regrading.

The site CSM and potential source areas, migration pathways, and potentially exposed receptors for the site are presented in **Table 1** and illustrated on **Figure 4**.

3.2 Identification of COPCs

The Tier IA evaluation includes identification of COPCs based on a comparison of the maximum detected concentrations of the chemical substances at the site to the screening or regulatory values for each medium discussed as follows. For each medium evaluated, all available and appropriate data from each medium were used to select COPCs. Chemicals detected at concentrations above the screening or regulatory values were identified as COPCs for further review in the Tier II evaluation. Chemicals that were not detected in a particular medium or were detected at concentrations below the screening or regulatory values were eliminated from being COPCs for the associated receptor and were not evaluated further. No chemicals were eliminated due to a low frequency of detection for this evaluation.

Comparisons of maximum concentrations to screening levels discussed in **Section 3.2.1** are presented in the data summary tables for each medium (**Tables 2.1** through **2.5**). For certain analytes lacking a chemical-specific screening level (e.g., Total PCBs), a conservative surrogate chemical was selected (e.g., PCB Aroclor-1254) and its screening level was used for COPC screening. Specific instances where surrogate assignments were made are identified in footnotes in **Tables 2.1** through **2.5**. Due to slightly varying analyte lists between rounds, the frequency of detection may vary between analytes in the same group. For instance, the VOC vinyl chloride and the SVOCs 1,1-biphenyl and hexachlorocyclopentadiene were not included in the September 2015 groundwater analytical list, but were included in November 2012 and June 2014. Similar situations occurred with other media.

3.2.1 COPC Selection

Screening levels and regulatory criteria were used to select COPCs as discussed per media in the following sections.

3.2.2 Soil

Soil COPCs were selected on an exposure area basis, as described in **Section 2.1.1**. For each soil dataset (i.e., surface soil and subsurface soil), the maximum detected concentration of a chemical in soil in each exposure area was compared to the USEPA Regional Screening Level (RSL) for soil (USEPA 2016a) based on a target excess lifetime cancer risk (ELCR) of 10^{-6} and a target hazard quotient (HQ) of 0.1. The RSLs based on a target HQ of 0.1 were used to account for potential cumulative effects of multiple chemicals acting on the same target organ. Residential soil RSLs were used to select COPCs for all scenarios. While residential soil RSLs are not applicable to the industrial and construction worker scenarios, residential RSLs were conservatively used to generate a consistent COPC list for each exposure area. Chemicals with a maximum detected

concentration greater than the associated screening level were selected as COPCs for further evaluation in the HHRA. **Tables 2.1** and **2.2** present the COPC selection for Soil Exposure Area 1 and Soil Exposure Area 2, respectively.

3.2.3 Groundwater

Available groundwater data were reviewed to identify the dataset appropriate for use in the HHRA, as discussed in **Section 2.1.2**. The groundwater dataset was selected to be representative of current conditions while accounting for potential seasonal fluctuations; groundwater was evaluated as one exposure area.

The maximum detected concentration of a chemical in groundwater was compared to the USEPA Maximum Contaminant Level (MCL) (USEPA 2016b) and the USEPA tapwater RSL (USEPA 2016a) based on a target ELCR of 10^{-6} and a target HQ of 0.1 (to account for potential cumulative effects of multiple chemicals acting on the same target organ). MCLs and RSLs were used to identify COPCs for the ingestion, dermal contact, inhalation of shower air, and inhalation of trench air pathways.

The maximum detected concentration of a chemical in groundwater was also compared to the USEPA Vapor Intrusion Screening Level (VISL) for groundwater based on a target ELCR of 10^{-6} and a target HQ of 0.1 (to account for potential cumulative effects of multiple chemicals on the same target organ) (USEPA 2016f). VISLs based on a residential exposure scenario were used for selection of COPCs for both the residential and industrial inhalation of indoor air pathways, conservatively resulting in one COPC list for the vapor intrusion pathway.

For PFOA and PFOS, the groundwater screening levels are equal to the lower of the following:

- USEPA's Lifetime Drinking Water Health Advisory for PFOA and PFOS of 0.07 µg/L as individual constituents, and the combined PFOA and PFOS concentration (USEPA 2016d,e) not to exceed 0.07 µg/L.
- USEPA tap water RSLs calculated using the RSL Calculator (USEPA 2016c) based on a target HQ of 0.1 (to account for potential cumulative effects of multiple chemicals acting on the same target organ). Default exposure assumptions for tapwater RSLs provided by USEPA in the calculator were used, as well as the dose-response values provided in the calculator as of 3/3/17, which include:
  - A reference dose (RfD) of 2×10^{-5} milligram of chemical per kilogram of body weight per day [mg/kg-day] developed for both PFOA and PFOS in the Drinking Water Health Advisory documents (USEPA 2016d,e).
  - A cancer slope factor (CSF) of 0.07 $(mg/kg\text{-}day)^{-1}$ for PFOA developed in the Health Effects Support Document for PFOA (USEPA 2016k).

Table 2.3 presents the COPC selection for groundwater.

3.2.4 Surface Water

The wetlands were treated as one exposure area. The maximum detected concentration of a chemical in wetland surface water was compared to the following:

- USEPA *National Recommended Water Quality Criteria for Priority Pollutants*. Value for Human Health for the consumption of water and organisms (USEPA 2016g).
- MEDEP Surface Water Quality Criteria for human health consumption of water and organisms (MEDEP/CDC 2012).
- Risk-based screening levels for surface water were calculated using the USEPA RSL Calculator (USEPA 2016c) for a recreational adult/child scenario, based on a target ELCR of 10^{-6} and a target HQ of 0.1 (to account for potential cumulative effects of multiple chemicals acting on the same target organ). The following exposure assumptions were utilized for calculation of surface water screening levels based on USEPA's default exposure assumptions (USEPA 2014a) and MEDEP's default recommended exposure assumptions for a recreational exposure scenario (MEDEP/CDC 2013):
  - Exposure frequency (days/year) = 78
  - Exposure duration (years) = Adult – 20, Child – 6
  - Exposure time (hours/day) = 2.6
  - Body weight (kilogram [kg]) = Adult – 80, Child – 15
  - Skin surface area (square centimeter [cm^2] per day) = Adult – 6,032, Child – 2,373
  - Ingestion rate (liter per hour) = Adult – 0.01, Child – 0.05 (recommended surface water intake rate while wading [USEPA 2014c])

Chemicals detected at a maximum concentration in surface water greater than any of the above screening levels were selected as surface water COPCs for further evaluation in the HHRA. **Table 2.4** presents the COPC selection for surface water.

3.2.5 Sediment

The wetlands were treated as one exposure area. Published human health screening levels for sediment are not available. Risk-based screening levels for sediment were calculated using the USEPA RSL Calculator (USEPA 2016c) for a recreational adult/child scenario, based on a target ELCR of 10^{-6} and a target HQ of 0.1 (to account for potential cumulative effects of multiple chemicals acting on the same target organ). The following exposure assumptions were utilized for calculation of sediment screening levels based on USEPA's default exposure assumptions

(USEPA 2014a) and MEDEP's default recommended exposure assumptions for a recreational exposure scenario (MEDEP/CDC 2013):

- Exposure frequency (days/year) = 78
- Exposure duration (years) = Adult – 20, Child – 6
- Exposure time (hour/event) = 0 (used for inhalation pathway only, which is not applicable to sediment exposure)
- Body weight (kg) = Adult – 80, Child – 15
- Skin surface area (cm^2 per day) = Adult – 6,032, Child – 2,373
- Ingestion rate (milligram per day [mg/day]) = Adult – 100, Child – 200

Chemicals with a maximum detected concentration in sediment greater than the screening levels were selected as sediment COPCs for further evaluation in the HHRA. **Table 2.5** presents the COPC selection for sediment.

3.3 COPC Selection Results

Table 2.6 presents the summaries of COPCs by media. COPCs in site media are further evaluated in the Tier II HHRA as discussed in **Section 4.0**.

4.0 TIER II BASELINE HUMAN HEALTH RISK ASSESSMENT

Section 4.0 presents the development of the Tier II baseline HHRA.

4.1 Identification of Exposure Areas

For the receptors and exposure pathways identified in **Table 1**, illustrated on **Figure 4**, and detailed in **Section 4.3**, the Tier II HHRA quantitatively evaluated potential exposure to site media as discussed in the following sections.

4.1.1 Soil

Soil COPCs were selected on an exposure area basis, as discussed in **Section 2.1.1** and summarized in **Table 2.6**. Soil Exposure Area 2 consists of 1.45 acres within the southern portion of the site, characterized by higher concentrations of Total PCBs. Soil Exposure Area 1 consists of the remainder of the FTA with the exception of the wetland area (3.26 acres). Soil Exposure Area 1 is characterized by lower PCB concentrations and is 5.56 acres in size. Within each soil exposure area, concentrations of COPCs generally do not follow a discernable pattern. While concentrations of Total PCBs at two locations in Soil Exposure Area 2 (DDA-NW-6C and DDA-SW-3N) are elevated, these two locations are spatially separated and surrounding locations exhibit lower concentrations. Therefore, no further sub-areas were defined. **Figure 2** presents the exposure areas; Soil Exposure Area 2 is represented outlined and shaded in red, the wetland area is shaded in green, and the remainder of the site represents Soil Exposure Area 1, shaded in light yellow. **Attachment A**, Table A-1b identifies the soil sample locations within each soil exposure area. All receptors were evaluated separately for exposure to surface and subsurface soil within each of the individual exposure areas.

Under a hypothetical future use exposure scenario, the site could be developed for residential use and the site could hypothetically be divided into separate residential lots. The area of a typical residential lot is considered to be a minimum of 0.5 acre, especially given the rural nature of Cutler. Because the COPC concentrations within each soil exposure area are relatively consistent, exposure is expected to be similar regardless of how the areas could be subdivided in the future.

4.1.2 Groundwater

Exposure to groundwater COPCs presented in **Table 2.6** was evaluated on a site-wide basis in the Tier II HHRA. Under a hypothetical future use scenario, it is assumed that a private potable well may be installed for residential use anywhere on site. Similarly, it is assumed that under a hypothetical future use scenario, a residential or commercial/industrial building may be constructed anywhere on site, in which volatiles in groundwater may potentially migrate to overlying indoor air.

In addition, it is assumed that construction/excavation-type activities may be performed anywhere on the site. Based on September 2015 water level data from 26 site monitoring wells, the depth to groundwater ranges from less than 0.5 ft to approximately 13 ft bgs. Given the relatively shallow

groundwater present, it was assumed that a construction worker may contact groundwater during construction/excavation-type activities.

As discussed in **Section 2.1.2**, and consistent with USEPA guidance (2014b), groundwater exposure is evaluated based on monitoring wells within the core or center of the plume area. Since a discernable pattern was not identified, groundwater EPCs were calculated based on the permanent monitoring wells located in the FTA, with the exception of upgradient wells FTA-MW-203, FTA-MW-208, and FTA-MW-218. The wells included in the EPC derivation are as follows:

- FTA-MW-1
- FTA-MW-5
- FTA-MW-9
- FTA-MW-10
- FTA-MW-11
- FTA-MW-12
- FTA-MW-14
- FTA-MW-206
- FTA-MW-210
- DP-35

Data collected between 2012 and 2016 were included.

4.1.3 Surface Water and Sediment

Exposure to surface water and sediment was evaluated for the 3.26-acre wetland area. Receptors are not likely to be exposed to one area of the wetland more than to another. Therefore, the wetland area was evaluated as one exposure area in the HHRA.

4.2 Determination of Exposure Point Concentrations

To evaluate the magnitude of potential human exposures, the concentration of each COPC in each exposure medium/area is estimated. An estimate of this concentration is referred to as an EPC. EPCs for evaluation of the reasonable maximum exposure (RME) and central tendency exposure (CTE) scenarios for each dataset were calculated as described in the following sections.

4.2.1 Soil, Groundwater, Surface Water, and Sediment

For RME and CTE scenarios, soil, groundwater, surface water, and sediment EPCs are equal to the upper confidence limit (UCL) or the maximum concentration, whichever is lower

(USEPA 2002b). USEPA's ProUCL Version 5.1 software (USEPA 2016h) was used to calculate the ProUCL-recommended UCL.

Based on information presented in the ProUCL guidance (USEPA 2015) regarding minimum sample size and frequency detection, UCLs were calculated where at least 10 samples and at least 6 detects are available. **Attachment B** presents the ProUCL input and output sheets.

When the minimum sample size and number of detects were not met for a dataset, or if the UCL was greater than the maximum detected concentration, the maximum detected concentration was used as the EPC for the RME scenario and the arithmetic mean concentration was used as the EPC for the CTE scenario. The EPCs for COPCs in soil, groundwater, surface water, and sediment are presented in **Tables 3.1.RME/CTE** through **3.4.RME/CTE**.

Separate EPCs were developed for surface soil and subsurface soil. Recreational users, outdoor industrial workers, and hypothetical on-site residents are assumed to be exposed to surface soil. Therefore, surface soil EPCs are applicable to the current scenario. However, under future conditions, redevelopment could result in mixing of surface and subsurface soil, or re-grading, potentially exposing subsurface soil as surface soil. Given the uncertainty surrounding hypothetical future mixing and/or grading of site soils, two future scenarios were evaluated, one in which receptors are potentially exposed to current surface soil and one in which receptors are potentially exposed to current subsurface soils. These two scenarios were also evaluated for the current/future construction worker, potentially exposed to both surface and subsurface soil.

Separate CTE EPCs were not derived for surface water. With the exception of indeno(1,2,3-cd)pyrene, EPCs for surface water are UCLs or represent the only detected concentration (**Table 3.3.RME/CTE**). The maximum and arithmetic mean concentrations for indeno(1,2,3-cd)pyrene are very similar and the maximum detected concentration was therefore used as the EPC for both the RME and the CTE scenarios. Separate CTE EPCs were not necessary for sediment as UCLs were used for all COPCs (**Table 3.4.RME/CTE**).

4.2.2 Air

EPCs for COPCs in fugitive dust (outdoor air), trench air, shower air, and indoor air via the vapor intrusion pathway were estimated based on soil or groundwater EPCs as discussed in the following sections. Supplemental tables and models for the air pathway are presented in **Attachment D**.

4.2.2.1 Fugitive Dust

EPCs for COPCs in fugitive dust (outdoor air) were predicted by combining soil EPCs (calculated as discussed in **Section 4.2.1**) with particulate emission factors (PEFs) calculated in accordance with USEPA guidance (2002a). PEFs were conservatively calculated based on the total size of the FTA (10.27 acres).

The PEF of 6.5×10^8 cubic meters per kilogram (m^3/kg) for recreational users, outdoor workers, and hypothetical future residential receptors was calculated in accordance with USEPA guidance (2002a) in **Attachment D**, Table D-1 based on default inputs for a wind-driven/non-excavation scenario and climate inputs representative of Portland, Maine (USEPA 2002a, Exhibit 5-2).

The PEF of 9.4×10^5 m^3/kg for construction workers was calculated in **Attachment D**, Table D-2, based on default inputs for an unpaved road traffic scenario and climate inputs representative of Portland, Maine (USEPA 2002a, Exhibit 5-2).

Fugitive dust EPCs are not presented separately, as the PEF is applied to the soil EPC in the risk calculations (**Attachment E**, RAGS Part D Table 7s).

4.2.2.2 Trench Air

Excavation trench air concentrations of COPCs resulting from volatilization from groundwater infiltrating an excavation trench were modeled by the use of the method recommended by USEPA (1994) for predicting volatilization from standing water. The trench air concentrations were used for evaluation of the current/future construction worker receptor. The trench model used to estimate trench air EPCs is discussed in **Attachment D**, and the calculations are presented in **Attachment D**, Table D-3. Trench air EPCs are presented in **Table 3.5.RME/CTE**.

4.2.2.3 Shower Air

For evaluation of the bathing/showering pathway, concentrations of volatiles in the shower were modeled using the Foster and Chrostowski (1987) shower model. The shower model was used to estimate the concentrations in shower air resulting from groundwater EPCs. The shower model used to estimate shower air EPCs is discussed in **Attachment D**, and the calculations are presented in **Attachment D**, Table D-4. Shower air EPCs are presented in **Table 3.6.RME/CTE**.

4.2.2.4 Indoor Air

Indoor air EPCs were estimated based on the groundwater EPCs using the USEPA Johnson and Ettinger (JE) Model Spreadsheets and User's Guide (USEPA 2004b,c). RME groundwater EPCs were used as they are the same for hexachlorocyclopentadiene and vinyl chloride, and similar for trichloroethene (10 µg/L RME vs. 8.2 µg/L CTE).

Project-specific information was used in the JE model where available. Where site-specific information was not available, default model inputs were used. Key inputs used in the model are as follows:

- An average soil/groundwater temperature of 7 degrees Celsius was used in the model. This is the default value recommended for Maine on Figure 8 of the USEPA JE Model Guidance (USEPA 2004c). Default soil properties for loamy sand provided in the JE model were used.
- The loamy sand soil type was chosen for use in the JE models, based on shallow site soils, which consist of a mixture of silt, sand, and gravel.
- A depth to water of 2.4 ft was used in the JE models based on the lowest average depth to water measurements obtained from sampling events in Fall 2012, June 2015, and September 2015 for wells included in the HHRA. The average depth to groundwater for each well is listed as follows:

Well Identification	**Average Depth to Groundwater in feet (Fall 2012, June 2015, September 2015)**
DP-35	7.5
MW-1	6.9
MW-5	8.5
MW-9	3.4
MW-10	2.9
MW-11	2.8
MW-12	4.4
MW-14	3.3
MW-206	2.4
MW-210	3.0

- It was assumed that buildings constructed under a hypothetical future use scenario would have a basement, typically assumed to be the model default of 200 centimeters (cm). However, the model requires that the depth to water table (74 cm) minus capillary fringe thickness (18.75 cm) must be greater than the depth to bottom of floor. Due to the shallow depth to water, the default of 200 cm was adjusted to 55 cm to meet the model requirement (74 cm – 18.75 cm = 55.25 cm).
  - The model's default indoor air exchange rate of 0.25 exchanges per hour was used for a residential building scenario. An indoor air exchange rate of 1 exchange per hour was used for an industrial building scenario (CalEPA 2011).
  - The default average vapor flow rate into a building recommended in the model (5 liters per minute) was conservatively used for both a residential and industrial building scenario.

The JE model spreadsheets are presented in **Attachment D**. Indoor air EPCs are presented in **Table 3.7.RME/CTE** (hypothetical future residential scenario) and **Table 3.8.RME/CTE** (future industrial scenario). The only difference between the residential and industrial indoor air modeling is the air exchange rate (as discussed previously). Therefore, the industrial indoor air EPCs were derived by dividing the residential indoor air EPCs by four (0.25/1).

4.3 Exposure Assessment

The purpose of the exposure assessment is the quantification of the extent, frequency, and duration of actual or potential exposure to chemicals by pathways relevant to the site and activities of the potential receptors. As part of the exposure assessment, current and potential future exposure pathways were determined through the identified populations, which may potentially be exposed to COPCs at the site.

An exposure pathway describes the course a chemical follows while moving through environmental media to the receptor. An exposure pathway may consist of a mechanism of release of chemicals to an environmental medium (e.g., soil), an exposure route (e.g., ingestion), and a receptor (e.g., construction worker). An exposure pathway is considered complete when contact by a receptor with impacted media may occur under current site conditions or in the future. USEPA guidance (1989, 1991) requires that plausible exposures under both current and future land use scenarios be evaluated in an HHRA. **Table 1** presents a summary of the current and potential future exposure routes quantitatively evaluated in the HHRA and the human receptors.

The receptors and exposure pathways evaluated in the HHRA based on current and potential future land use are discussed as follows. These exposure pathways are based on the site-specific CSM discussed in **Section 3.1**. Exposure pathways were also identified to be consistent with those assessed for VLF Peninsula/SYA, as applicable. For future land-use scenarios, it is assumed that there would be some level of construction to convert the area to the desired use. Therefore, it is assumed that current subsurface soils may be brought to the surface and become available for exposure by future receptors.

The quantitative exposure assumptions used for evaluation in the HHRA were developed based on professional judgement and the recommended default exposure assumptions by MEDEP/CDC (2013) and USEPA (2014a). Exposure assumptions in the HHRA were also developed to be consistent with those used in the Site 4/VLF Peninsula risk assessment and the SYA HHRA (Resolution 2016a,b), unless site-specific conditions warrant use of alternate exposure assumptions for evaluation of potential exposures at the FTA. The exposure assumptions used in the HHRA are presented in **Tables 4.1.RME/CTE** through **4.16.RME/CTE**.

4.3.1 Current/Future Construction Worker

A construction worker exposure scenario was evaluated in the HHRA assuming that construction or maintenance activities may occur at the FTA as described in **Section 3.1**. The exposure pathways evaluated for a construction worker are as follows:

- Exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air.
- Exposure to groundwater in an excavation trench through incidental ingestion, dermal contact, and inhalation of air within the trench.
- Exposure to surface water and sediment through incidental ingestion and dermal contact. Inhalation of airborne particles in outdoor air is not considered complete/significant for the sediment exposure pathway due to the relatively high percent moisture content of sediment.

The construction worker exposure factors used in the HHRA for the RME and CTE scenarios are presented in **Tables 4.1.RME/CTE** through **4.5.RME/CTE**. A summary of key exposure factors used for evaluation of the RME scenario are discussed as follows.

The construction worker exposure scenario evaluated in this HHRA is conservatively based on recommended exposure assumptions provided by MEDEP/CDC and professional judgement. Therefore, it is likely that use of these recommended exposure assumptions may overestimate potential risk to current/future construction workers. It was conservatively assumed that construction workers may be working on site and potentially exposed to soil for 250 days per year (5 days per week for a 1-year project) for 8 hours per day; and groundwater in an excavation trench for 26 days per year (1 day per week for 26 weeks per year) for 4 hours per day (MEDEP/CDC 2013). It was also conservatively assumed that a construction worker at the FTA may contact surface water and sediment in the wetland area for 30 days per year for 2.6 hours per day, assuming he/she may be performing excavation/regrading activities along the wetland for 5 days per week for 6 weeks. Consistent with MEDEP/CDC (2013) an averaging time of 6 months was used for the construction worker. The exposure assumptions for surface water and sediment were determined based on professional judgment consistent with the VLF Peninsula/SYA HHRAs (Resolution 2016a,b) and assuming MEDEP/CDC's recommended exposure time for a surface water/sediment wading scenario. Given how shallow surface water is in the wetland (maximum depth of 6 inches, as discussed in **Section 3.1**), the wading exposure assumptions are overly conservative. The fraction of soil and sediment ingested from the site was assumed to be 100 percent (%). USEPA's recommended soil ingestion rate for a construction worker of 330 mg/day (USEPA 2002a) was conservatively used for both soil and sediment (note that ½ of the RME rate was assumed for CTE). Workers were conservatively assumed to contact soil,

groundwater, surface water, and sediment with 3,527 cm^2 of body surface area (USEPA 2014a), which represents contact with the head, hands, and forearms. A soil-to-skin adherence factor of 0.3 milligram per cubic centimeter per day (mg/cm^2-day) was used (MEDEP/CDC 2013; USEPA 2002a) for both soil and sediment evaluations. This value is a 95th percentile weighted soil adherence factor for construction workers. In accordance with MEDEP's recommended exposure assumptions (MEDEP/CDC 2013), the adherence factor for sediment was assumed equal to that for soil. The assumption of 100% fraction ingested, and the use of soil intake factors for sediment are very conservative and are used only in the absence of more specific information regarding potential future excavation activities. Furthermore, as noted previously, the use of unfiltered groundwater and surface water data for the dermal contact pathway is conservative.

Inhalation of soil-derived particulates was evaluated for the soil fugitive dust inhalation pathway using the PEF for an unpaved road traffic scenario and climate inputs representative of Portland, Maine (USEPA 2002a, Exhibit 5-2) as described in **Section 4.2.2.1**.

The combination of several conservative exposure assumptions for the construction worker likely leads to an exposure estimate greater than the RME. These conservative assumptions are used only in the absence of more specific information regarding potential future excavation activities.

4.3.2 Current/Future On-Site Recreational User/Trespasser

For the purposes of the HHRA, it was conservatively assumed that humans may trespass onto the site and access soil at the site, in addition to surface water and sediment in the wetland area in a wading exposure scenario. Therefore, a current/future recreational user exposure scenario was evaluated in the HHRA to be protective of both a current trespasser exposure scenario and a future recreational use exposure scenario, assuming access to the area is unrestricted in the future and becomes accessible for recreational use. However, as noted previously, trespassing under the currently scenario is extremely unlikely given the level of security at the station, and there are no plans to open the site for future recreational use.

Under a current scenario, trespassers/recreational users are assumed to be exposed to surface soil, and not subsurface soil. However, exposure to subsurface soil was evaluated in the HHRA assuming subsurface soils may be brought to the surface and become available for exposure under a future-use scenario.

The HHRA evaluated a current/future on-site recreational adult/child user/trespasser for the following pathways:

- Exposure to surface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air (current/future use scenario).
- Exposure to subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air (future use scenario).
- Exposure to surface water and sediment through incidental ingestion and dermal contact. As noted previously, inhalation of airborne particles in outdoor air is not considered complete/significant for the sediment exposure pathway due to the relatively high percent moisture content of sediment.

The on-site recreational user/trespasser exposure factors used in the HHRA for the RME and CTE scenarios are presented in **Tables 4.6.RME/CTE** through **4.8.RME/CTE**. A summary of key exposure factors used for evaluation of the RME scenario is discussed as follows.

It was conservatively assumed that adult and child recreational users may engage in activities resulting in soil exposure for 90 days per year (3 days per week for 30 weeks [April through October] of the year) for 2 hours per day, based on MEDEP's recommended default exposure scenario for a park user (MEDEP/CDC 2013). It was also conservatively assumed that adult and child recreational users may contact surface water and sediment in the wetland area for 26 days per year (1 day per week for 26 weeks [the warmer 6 months] of the year), based on professional judgment. Contact with surface water and sediment is assumed to occur for 2.6 hours per day, consistent with MEDEP's recommended default exposure time for a wading scenario (MEDEP/CDC 2013). However, as noted in **Section 3.1**, water depth in the wetland is very shallow, with a maximum of 6 inches measured in 2014. Therefore, contact with surface water is likely to be minimal and the assumption of surface water contact is very conservative.

The ingestion rate for soil and sediment of 100 mg/day for an adult and 200 mg/day for a child (MEDEP/CDC 2013) were used for the RME scenario (note that ½ of the RME rate was assumed for CTE). The fraction of soil and sediment ingested from the site was assumed to be 100%. MEDEP/CDC's recommended exposure assumptions (2013) assume the ingestion rates for sediment are equal to those for soil. Because the default soil ingestion rates represent the total daily intake of soil integrated over a variety of activities and sources, both indoors and outdoors, the assumption of 100% fraction ingested for both soil and sediment is very conservative. The combination of these assumptions results in a combined soil and sediment ingestion rate twice the default daily soil ingestion rate for each receptor. For the inhalation pathway, recreational users were assumed to be involved in outdoor activities resulting in the inhalation of particulates from soil for 2 hours per day (MEDEP/CDC 2013). Inhalation of soil-derived particulates was evaluated for the adult and child recreational user using the PEF for a wind-driven/non-excavation scenario and

climate inputs representative of Portland, Maine (USEPA 2002a, Exhibit 5-2), as described in **Section 4.2.2.1**.

The adult and child recreational users were conservatively assumed to contact soil, surface water, and sediment with 6,032 cm^2 of body surface area and 2,373 cm^2, respectively (USEPA 2014a). Adherence factors of 0.07 mg/cm^2-day for the adult and 0.2 mg/cm^2-day for the child were used for soil and sediment exposures (MEDEP/CDC 2013). MEDEP/CDC's recommended exposure assumptions (2013) assume the adherence factors for sediment are equal to those of soil. The surface area and adherence factor assume exposures to the head, hands, forearms, lower legs, and feet (exposure to the feet was assumed for the child only, assuming a child may walk barefoot). This scenario assumes that an adult would likely be wearing shoes but may contact sediment while kneeling at the edge of the wetland area, for example. As noted previously, the use of unfiltered surface water data for the dermal contact pathway is conservative.

4.3.3 Future Outdoor Industrial Worker

Currently, there are no workers at the FTA. Future land use of the site is likely to remain constant into the future. However, it was conservatively assumed that future receptors may include outdoor industrial workers under a hypothetical scenario in which the area is redeveloped for regular commercial/industrial use. Future outdoor workers are assumed to be exposed to surface soil only. However, exposure to surface soil and subsurface soil was evaluated in the HHRA assuming there would be some level of construction to convert the area to the desired use and subsurface soils may be brought to the surface and become available for exposure. Therefore, the following exposure scenarios were evaluated in the HHRA for a future outdoor industrial worker:

- Exposure to surface or subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air.

The future outdoor industrial worker exposure factors used in the HHRA for the RME and CTE scenarios are presented in **Table 4.9.RME/CTE**. A summary of key exposure factors used for evaluation of the RME scenario are discussed as follows.

It was assumed that a future outdoor industrial worker may be exposed to soil at the site for 150 days per year (assuming exposure occurs 5 days per week for 30 weeks of the year during the seven warmest months of the year [April through October] when the soil is not frozen or covered by snow/ice) for a duration of 25 years (MEDEP/CDC 2013). The fraction of soil ingested from the site was assumed to be 100%. The default worker soil ingestion rate of 100 mg/kg (USEPA 2014a) was used (note that ½ of the RME rate was assumed for CTE). For the soil fugitive dust inhalation pathway, a worker was assumed to be involved in activities resulting in the inhalation of particulates from soil (i.e., fugitive dust) for 8 hours per day (USEPA 2002a). Inhalation of soil-derived particulates was evaluated for an outdoor industrial worker using the PEF for a

wind-driven/non-excavation scenario and climate inputs representative of Portland, Maine (USEPA 2002a, Exhibit 5-2) as described in **Section 4.2.2.1**.

An outdoor industrial worker was assumed to contact soil with 3,527 cm^2 of body surface area (USEPA 2014a), which represents contact with the head, hands, and forearms. A default worker adherence factor of 0.12 mg/cm^2-day was used (USEPA 2014a) based on contact with soil by hands, forearms, and face.

4.3.4 Future Indoor Industrial Worker

Currently, there are no workers at the FTA. Future land use of the site is likely to remain constant into the future. However, it was conservatively assumed that future receptors may include indoor industrial workers under a hypothetical scenario in which the area is redeveloped for regular commercial/industrial use and buildings are constructed and occupied on a full-time basis. Therefore, future indoor industrial workers were evaluated in the HHRA assuming they may be exposed to volatiles in groundwater that may migrate to the indoor air of overlying buildings via the vapor intrusion pathway.

The future indoor industrial worker exposure factors used in the HHRA for the RME and CTE scenarios are presented in **Table 4.10.RME/CTE**. For the RME scenario, it was assumed that a future indoor industrial worker may be exposed to indoor air within buildings at the site for 8 hours per day, 250 days per year (assuming exposure occurs 5 days per week for 50 weeks of the year), for a duration of 25 years (MEDEP/CDC 2013).

The vapor intrusion pathway evaluation conducted in this HHRA is considered to be a conservative/preliminary evaluation, as further discussed in the uncertainty assessment (**Section 4.7**). Following the results of the HHRA for this exposure pathway, additional recommendations may be made for further evaluation of this potential pathway.

4.3.5 Hypothetical Future On-Site Resident

There are currently no residential receptors on the site, and the site is not zoned for residential use and is not likely to be in the future. However, a residential adult/child exposure scenario was evaluated in the HHRA as a conservative measure of hypothetical future site use to provide information for decision-making purposes. It is assumed that there would be some level of construction to convert the area to the desired use, therefore, subsurface soils may be brought to the surface and become available for exposure under a hypothetical future land use scenario. Therefore, the following exposure scenarios were evaluated in the HHRA for a hypothetical future resident:

- Exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air.
- Exposure to groundwater through ingestion of drinking water and dermal contact, and inhalation during bathing.
- Exposure to indoor air via volatilization from groundwater (i.e., vapor intrusion).
- Exposure to surface water and sediment through incidental ingestion and dermal contact. As noted previously, inhalation of airborne particles in outdoor air is not considered complete/significant for the sediment exposure pathway due to the relatively high percent moisture content of sediment.

The hypothetical future on-site resident exposure factors used in the HHRA for the RME and CTE scenarios are presented in **Tables 4.11.RME/CTE** through **4.16.RME/CTE**. A summary of key exposure factors used for evaluation of the RME scenario are discussed as follows.

Total residential exposure duration is assumed to be 26 years, assuming 6 years as a young child and 20 years as an adult (USEPA 2014a). It was assumed that the child and adult resident may engage in activities resulting in soil exposures 150 days per year (assuming exposure occurs 5 days per week for 30 weeks of the year during the seven warmest months of the year [April through October] when the soil is not frozen or covered by snow/ice) (MEDEP/CDC 2013). This does not imply that people are not outdoors on these days; rather that soils are not available for direct contact on these days. The fraction of soil ingested from the site was assumed to be 100%. The child ingestion rate for soil of 200 mg/day (USEPA 2014a; MEDEP/CDC 2013) was used. The adult ingestion rate for soil of 100 mg/day (USEPA 2014a; MEDEP/CDC 2013) was used for the RME scenario and 50 mg/day was used for the CTE scenario. Note that ½ of the RME rates were assumed for CTE scenario. As noted in **Section 4.3.2**, the combination of the assumptions of 100% fraction ingested from both soil and sediment results in a combined soil and sediment ingestion rate twice the daily assumed soil ingestion rate for each receptor. For the soil inhalation pathway, the child and adult resident were conservatively assumed to be involved in outdoor activities resulting in the inhalation of particulates from soil for 24 hours per day (USEPA 2014a), assuming inhalation of particulates may occur while indoors. Inhalation of soil-derived particulates was evaluated for the adult and child resident using the PEF for a wind-driven/non-excavation scenario and climate inputs representative of Portland, Maine (USEPA 2002a, Exhibit 5-2), as described in **Section 4.2.2.1**.

It was conservatively assumed that the child and adult resident engage in activities resulting in surface water and sediment exposures in the wetland area for 26 days per year (1 day per week for 26 weeks [the warmer 6 months] of the year), based on professional judgment. Contact with surface water and sediment is assumed to occur for 2.6 hours per day, consistent with MEDEP's

recommended default exposure time for a wading scenario (MEDEP/CDC 2013). The fraction of sediment ingested from the site was assumed to be 100%. Sediment ingestion rates of 200 mg/day and 100 mg/day were assumed for the child and adult, respectively (MEDEP/CDC 2013). MEDEP/CDC's recommended exposure assumptions (2013) assume the ingestion rates for sediment are equal to those for soil, which is a very conservative assumption.

The child resident was assumed to contact soil and sediment during outdoor activities with 2,373 cm^2 of body surface area (USEPA 2014a). An adherence factor of 0.2 mg/cm^2-day was used for soil and sediment for the child resident (USEPA 2014a). The adult resident was assumed to contact soil and sediment during outdoor activities with 6,032 cm^2 of body surface area (USEPA 2014a). A soil adherence factor of 0.07 mg/cm^2-day is used for soil and sediment for the adult resident (USEPA 2014a). The child and adult resident surface areas and adherence factors assume exposures to the head, forearms, hands, lower legs, and feet (exposure to the feet was assumed for the child only, assuming a child may walk barefoot). In accordance with MEDEP's recommended exposure assumptions (MEDEP/CDC 2013), the adherence factors for sediment were assumed equal to those for soil.

It was assumed that the child and adult resident engage in activities resulting in groundwater ingestion and bathing/showering exposures 350 days per year (USEPA 2014a, MEDEP/CDC 2013). The drinking water ingestion rate for the child resident was assumed to be 0.78 liters per day (USEPA 2014a) and the drinking water ingestion rate for the adult resident was assumed to be 2.5 liters per day (USEPA 2014a). A showering/bathing exposure time of 0.54 hours per day and a skin surface area of 6,365 cm^2 were assumed for the child resident (USEPA 2014a). A showering/bathing exposure time of 0.71 hours per day and a skin surface area of 19,562 cm^2 were assumed for the adult resident (USEPA 2014a). As noted previously, the use of unfiltered groundwater and surface water data for the dermal contact pathway is conservative.

It was conservatively assumed that the child and adult resident may be exposed to indoor air within their residence for 24 hours per day, 350 days per year (USEPA 2014a, MEDEP/CDC 2013). The vapor intrusion pathway evaluation conducted in this HHRA is considered to be a conservative/preliminary evaluation, as further discussed in the uncertainty assessment (**Section 4.7**). Following the results of the HHRA for this exposure pathway, additional recommendations may be made for further evaluation of this potential pathway.

4.4 Calculation of Dose

The purpose of the exposure assessment is to identify exposure equations to be used in the risk assessment and to document assumptions made for each parameter used in these equations. USEPA guidance documents used in this exposure assessment include RAGS Part A (USEPA 1989); Exposure Factors Handbook (USEPA 2011); Supplemental Guidance for Developing

Soil Screening Levels for Superfund Sites (USEPA 2002a); RAGS Part E (Supplemental Guidance for Dermal Risk Assessment) (USEPA 2004a); RAGS Part F (Supplemental Guidance for Inhalation Risk Assessment) (USEPA 2009) and Supplemental Guidance: Update of Standard Default Exposure Factors (USEPA 2014a).

Equations are presented for the calculation of chronic daily intake values for the ingestion, dermal contact, and inhalation exposure pathways. The equations are used for calculating a lifetime average daily dose (LADD) relevant to cancer risk (i.e., cancer intake) or for calculating an average daily dose (ADD) relevant to noncancer hazard (i.e., noncancer intake). The medium-specific equations used for the calculation of carcinogenic and noncarcinogenic intakes of the COPCs are presented in **Tables 4.1.RME/CTE** through **4.16.RME/CTE**. Absorption factors for soil and sediment are presented in **Attachment C**, Table C-1, and parameters used in the calculation of dermal dose for groundwater and surface water are presented in **Attachment C**, Table C-2. Dermal doses were not calculated for PAHs, PCBs, PFOS, and PFOA. The dermal contact pathway associated with these COPCs in water is considered negligible, as further discussed in **Section 4.7.5**, and was therefore not quantitatively evaluated in the HHRA.

The exposure parameters used for each receptor evaluated in the HHRA are presented in **Tables 4.1.RME/CTE** through **4.16.RME/CTE**, as discussed in **Section 4.3**.

4.5 Toxicity Assessment

The toxicity assessment was conducted in accordance with USEPA guidance and considers chronic (long-term) and subchronic [fewer than 7 years (USEPA 1989)] exposures for carcinogenic and noncarcinogenic COPCs. The USEPA's guidance regarding the hierarchy of sources of human health dose-response values in risk assessment was followed (USEPA 2003) and is presented as follows:

- *Tier 1:* USEPA's Integrated Risk Information System (IRIS) (USEPA 2016i).
- *Tier 2:* Provisional Peer-Reviewed Toxicity Values obtained from USEPA via the USEPA National Center for Environmental Assessment in Cincinnati, Ohio (USEPA 2016j).
- *Tier 3:* Other sources of dose-response values including, but not limited to, California Environmental Protection Agency's Office of Environmental Health and Hazard Assessment Toxicity Criteria Database (CalEPA 2016), minimal risk levels published by the Agency for Toxic Substances and Disease Registry (ATSDR 2016), and the Health Effects Assessment Summary Tables (USEPA 1997).

Where published dose-response values were not available for a chemical, dose-response values based on surrogate chemicals (i.e., chemicals with structural similarities) were identified. The chosen surrogate is referenced in the summary table(s) of dose-response values (**Tables 5.1**, **5.2**, **6.1**, and **6.2**).

4.5.1 Total PCBs

Cancer toxicity values for Total PCBs (high risk and persistence) recommended in USEPA's IRIS database (2016i) were used for evaluation of Total PCBs. For the RME scenario, the upper-bound slope factor was used, and for the CTE scenario, the central tendency estimate slope factor was used. The oral RfD for PCB Aroclor-1254 (USEPA 2016i) was used to evaluate noncarcinogenic oral/dermal pathways. **Section 4.7.4** provides a discussion of the uncertainty associated with the use of the RfD for PCB Aroclor-1254.

4.5.2 Toxicity Information for Noncarcinogenic Effects

Systemic toxic effects other than cancer can be associated with exposures to chemicals. RfDs for oral exposures, and reference concentrations (RfCs) for inhalation exposures, are the toxicity values that are used to evaluate the potential of developing noncarcinogenic effects because of exposure to potentially toxic chemicals. RfDs and RfCs were developed on the premise that there are protective mechanisms that must be overcome before an appreciable risk of adverse health effects is manifested during a defined exposure period. It is assumed that there is a threshold dose that must be exceeded before adverse effects can occur.

Chemicals classified as carcinogens may also produce other systemic effects. These chemicals were also evaluated for potential noncarcinogenic toxic effects and were included in the determination of chronic toxicity HQs, which characterize noncancer hazards. Carcinogenic effects, however, are usually manifested at levels that are significantly lower than those associated with systemic toxic effects; thus, cancer is usually the predominant adverse effect for chemicals that may elicit carcinogenic and noncarcinogenic responses.

Table 5.1 summarizes the oral noncarcinogenic toxicity values (i.e., RfDs) and the corresponding critical effects for the COPCs at the site. This table contains both chronic and subchronic toxicity values. Subchronic toxicity values are applicable to the construction worker scenario where exposures are expected to occur over a brief (e.g., 1-year) duration. Chronic toxicity values are applicable to all other receptors whose exposures are expected to occur over a longer interval of time. Subchronic toxicity values are not generally found in IRIS. Instead, subchronic toxicity values were obtained from chronic toxicity values or from Tier II or Tier III sources. According to USEPA guidance (1989), if a chronic toxicity value was developed based on subchronic data, a subchronic toxicity value may be obtained by removal of the uncertainty factor used to extrapolate from subchronic to chronic exposures (typically a factor of 10). If subchronic data are not available and the chronic toxicity value is derived from chronic data, the chronic toxicity value is adopted as the subchronic toxicity value. **Table 5.2** summarizes the inhalation noncarcinogenic toxicity values (i.e., RfCs) and the corresponding critical effects for COPCs at the site.

4.5.3 Toxicity Information for Carcinogenic Effects

The potential for human carcinogenic effects is evaluated based on the chemical-specific CSFs and unit risk factors (IUR) values along with the weight-of-evidence classification (categories A through E) of the USEPA. The CSF and IUR values are the toxicity values that quantitatively define the dose-response relationship of a known or suspected carcinogen. The CSF and IUR values are a mathematical extrapolation of the slope of the dose-response curve from high doses administered to animals (or the exposures observed in epidemiological studies) to the low doses commonly experienced in the environment. The USEPA has developed CSFs and IURs for chemicals classified as carcinogens based on the premise that there is no threshold (i.e., there is no level of exposure below which there is no risk of a carcinogenic effect).

USEPA's *Guidelines for Carcinogen Risk Assessment* (USEPA 2005a) classifies human carcinogenic potential as "known/likely," "cannot be determined," and "not likely" to replace the weight of evidence categories A through E. The guidelines also acknowledge that the mode of action of a carcinogen may involve both threshold and non-threshold mechanisms.

Table 6.1 summarizes the oral CSFs and the corresponding weight-of-evidence classifications. **Table 6.2** summarizes IUR values.

The quantitative evaluation of potential risks for carcinogenic COPCs with a mutagenic mode of action followed the USEPA guidance titled *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens* (USEPA 2005b). Specifically, the quantification of cancer risks for child receptors involves the use of age-dependent adjustment factors (ADAFs). An ADAF of 10 was used for exposures occurring less than 2 years of age, an ADAF of 3 was used for exposures occurring between 2 and less than 16 years of age, and an ADAF of 1 was used for exposures occurring after 16 years of age (USEPA 2005b). These ADAFs were used to quantify potential cancer risks for the recreational (adult/child) user and resident (adult/child) for all exposure pathways (i.e., ingestion, dermal contact, and inhalation). The worker receptors are assumed to be over 16 years of age; therefore, adjustment factors were not used for the industrial worker and construction worker. COPCs evaluated in this HHRA that are considered to be mutagenic (USEPA 2016i) are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, trichloroethene, and vinyl chloride. Cancer toxicity values for vinyl chloride account for mutagenic action, such that ADAFs are not applied to the cancer risks for vinyl chloride.

4.5.4 Adjustment of Toxicity Factors

No RfDs or CSFs are available for evaluating dermal exposure. Therefore, carcinogenic risks and noncarcinogenic hazards associated with dermal exposure may be evaluated using an oral CSF or RfD adjusted such that the toxicity value is appropriate for the dermal pathway. As detailed by

USEPA (2004a), for purposes of evaluating dermal exposure, it is generally necessary to adjust an oral toxicity factor (i.e., RfD or CSF) from an administered (i.e., applied) dose to an absorbed (i.e., internal) dose. Because the toxicity values for the COPCs at the site are expressed as orally administered doses (i.e., applied or intake-based), it is necessary to adjust both the RfDs and CSFs for these substances in estimating exposure on an absorbed-dose basis when assessing dermal exposure.

The oral RfDs and oral CSFs for each COPC were modified according to the following equations (USEPA 2004a) for use in assessing dermal exposure:

$$RfD_{ABS} = RfD_o \times ABS_{GI}$$

$$SF_{ABS} = SF_o / ABS_{GI}$$

Where:

RfD_{ABS} = Absorbed RfD (i.e., adjusted dermal RfD) (mg/kg-day)

RfD_o = Oral RfD (mg/kg-day)

ABS_{GI} = Fraction of contaminant absorbed in gastrointestinal tract (dimensionless) in critical toxicity study. Absolute oral bioavailability factor for each chemical (i.e., oral to dermal adjustment factor)

SF_{ABS} = Absorbed slope factor (i.e., adjusted dermal slope factor)

SF_o = Oral slope factor $(mg/kg\text{-}day)^{-1}$

Tables 5.1 and **6.1** present the oral to dermal adjustment factors used to adjust the oral toxicity criteria for the COPCs evaluated in the dermal exposure pathways. Oral bioavailability values used were obtained from USEPA guidance (2004a).

4.6 Risk Characterization

Risk characterization combines estimates of exposure with toxicity data to develop estimates of the probability that an adverse effect will occur under the specified conditions of exposure. The risk characterization was divided into three phases: (1) risk estimation, (2) risk description, and (3) uncertainty analysis.

Risk estimation is undertaken by combining the toxicity factors and exposure assessment equations to calculate estimates of risks. Noncarcinogenic hazards are reported as pathway-specific Hazard Indices (HIs), which are the sum of individual COPC HQs for that pathway. A total HI is calculated, as well as HQs from COPCs that affect the same target organ. Estimates of carcinogenic risks are reported as ELCRs. Current practice considers carcinogenic risks to be additive when assessing exposure to a mixture of hazardous substances. Risk description entails several discussions,

including the relative contributions of individual exposure pathways to the total potential risk for each medium. The significance of the risk estimates are relative to risk management criteria set forth in USEPA policy. The uncertainty analysis describes and quantifies, where possible, the impact of data uncertainty and variability, exposure assumptions, and toxicity values on estimates of potential risk.

4.6.1 Estimation of Potential Risk

Noncancer hazard is estimated by means of a HQ. To calculate noncarcinogenic HQs, the ADDs, calculated as described in **Section 4.4**, were divided by the RfDs as follows:

$$HQ = ADD / RfD$$

The sum of this ratio for all chemicals within an exposure point and pathway that have the same target organ or type of toxicity is termed the pathway HI. The HI is useful as a reference point for gauging potential effects of environmental exposures to complex mixtures. In general, HIs that are less than 1 are not of regulatory concern; however, a HI of greater than 1 does not automatically indicate that an adverse effect will occur and should not automatically be interpreted as posing an unacceptable risk to the exposed population. The magnitude of the HQ cannot be directly equated to a probability or effect level.

The total pathway HI for each exposure point was calculated by summing the HQs for all COPCs. Total HIs for each receptor by medium were calculated by summing the total HIs across pathways within the media (e.g., summing dermal and ingestion soil risk estimates). As a first approximation, all COPCs are assumed to have additive effects. Total HIs, assuming additivity of effects, are presented per media and exposure pathway in **Attachment E** (RAGS Part D Table 7s). Additionally, HIs were calculated separately for COPCs that have similar systemic effects (i.e., target organs) for each pathway and medium. Receptor-specific HIs per target organ are presented in **Attachment F** (RAGS Part D Table 9.TEs).

Both USEPA and MEDEP use a target HI per target organ of 1 (USEPA 1991; MEDEP/CDC 2011).

The potential cancer risk for each receptor is estimated for each medium by means of an ELCR. USEPA (1991) states that where the cumulative incremental current or future potential ELCR to an individual is less than 10^{-4}, action generally is not warranted unless there are adverse environmental impacts. MEDEP uses a target ELCR of 10^{-5} (MEDEP/CDC 2011).

To calculate the ELCR, the chemical- and pathway-specific LADDs calculated as described in **Section 4.4** were multiplied by CSFs as follows:

$$ELCR = CSF \times LADD \times ADAF \text{ (where applicable)}$$

The resulting value represents the incremental upper-bound probability that an individual could develop cancer over his or her lifetime due to exposure to potential carcinogens under the conditions specified in the exposure scenario. For example, carcinogenic risk levels of 10^{-6} and 10^{-4} represent an incremental chance of one-in-one-million and one-in-ten-thousand, respectively, that an individual could contract cancer over a lifetime.

The potential cancer risk for each pathway (e.g., the soil ingestion pathway) was calculated by summing the potential risks from each COPC at each exposure point within the pathway, while receptor risks for each medium were calculated by summing ELCRs for each pathway within the medium (e.g., the soil incidental ingestion and dermal contact pathways). Pathway ELCRs are calculated in RAGS Part D Table 7s and are presented in **Attachment E** (Table 7.1.RME/CTE through 7.5.RME/CTE). Total potential ELCRs are calculated per media and exposure pathway in RAGS Part D Table 9s, presented in **Attachment F** (Tables 9.1.RME/CTE through 9.5.RME/CTE).

For each associated exposure scenario (i.e., RME/CTE/receptor/medium) with a potential risk/HI above MEDEP target levels (i.e., total ELCR > 10^{-5}, and total HI > 1 per target endpoint), risk drivers were defined as COPCs with an individual ELCR > 10^{-6} or target organ HI > 1, at one significant figure. Tables showing the total receptor ELCRs and HIs for risk drivers only are presented in **Tables 10.1.RME/CTE** through **10.5.RME/CTE**).

Tables 11.1.RME/CTE through **11.5.RME/CTE** provide summaries of potential ELCRs and noncarcinogenic HIs for each of the receptors evaluated. Potential ELCRs and HIs above MEDEP or USEPA target levels are identified separately to facilitate risk management decisions. **Tables 11.1.RME/CTE** through **11.5.RME/CTE** also list the chemicals identified as risk drivers for each exposure scenario in which the total potential ELCR or total potential HI are above MEDEP target levels (i.e., total ELCR > 10^{-5}, and total HI > 1 per target endpoint), as requested by MEDEP (Tetra Tech 2014).

These risk drivers were further evaluated in conjunction with the results of the background evaluation (included as Appendix C of the RI report and described in **Section 2.2**) to determine if they are site-related or non-site-related (i.e., identified as being consistent with background based on a comparison of concentrations in site and background datasets). **Tables 10.1.RME/CTE** through **10.5.RME/CTE** and **Tables 11.1.RME/CTE** through **11.5.RME/CTE** indicate where a risk driver was identified as consistent with background.

4.6.2 Risk Description

Section 4.6.2 summarizes the human health risks potentially associated with exposures to media associated with the FTA. Individual chemical-specific potential carcinogenic risks are expressed as probabilities of developing cancer (i.e., ELCRs), while noncarcinogenic hazards are expressed as HIs.

Total potential ELCRs and HIs were calculated per receptor by summing the ELCR/HI associated with soil exposure within each of the soil exposure areas, the maximum ELCR/HI associated with exposure to groundwater, and the ELCR/HI associated with surface water and sediment within the wetland area.

4.6.2.1 Description of HI Estimates

HI estimates represent the potential for health effects other than cancer from exposure to chemicals at the site. Total HIs and HIs segregated by target organ were calculated, and evaluated as to whether target organ-specific HIs exceed risk management criteria. **Tables 11.1.RME/CTE** through **11.5.RME/CTE** provide comprehensive summaries of the noncarcinogenic hazards and risk drivers by receptor and media; **Attachment E** and **Attachment F** provide the detailed calculations (RAGS Part D Table 7s and Table 9s).

For the recreational user/trespasser and residential exposure scenarios, the child is the most sensitive receptor for the estimation of noncarcinogenic hazard. Therefore, the child receptor HIs were presented in the risk/hazard summary tables as being protective of the recreational user/trespasser and residential exposure scenarios. However, both the child and adult receptor HIs are presented in **Attachment E** and **Attachment F** (RAGS Part D Table 7s and 9s) for informational purposes and to aid in decision-making.

Current/Future Construction Worker

The total potential HIs for the current/future construction worker based on exposure to soil, groundwater, surface water, and sediment are presented in **Table 11.1.RME/CTE.** The total potential HIs were calculated for surface soil and subsurface soil, groundwater, surface water, and sediment in **Attachment E**, RAGS Part D Table 7.1 RME/CTE and Attachment F, Table 9.1 RME/CTE. Target organ HIs were calculated in **Attachment E**, Table 7.1.TE.RME/CTE. The total potential HI results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil, groundwater, surface water, and sediment are as follows:

Media	Total HI [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	Total: 30 **Target organ: 30**	8 **Target organ: 4**
Subsurface soil Groundwater Wetland surface water and sediment	Total: 6 **Target organ: 5**	5 **Target organ: 4**

Notes:
Bolded where greater than USEPA and MEDEP's target HI of 1 (per target organ).
[a] Sum of HI estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

As indicated in **Table 10.1.RME**, total potential HIs (per target organ) are above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 1:* Manganese in surface and subsurface soil
- *Soil Exposure Area 2:* Manganese in surface and subsurface soil, Total PCBs in surface soil

CTE Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil, groundwater, surface water, and sediment are as follows:

Media	Total HI [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	Total: 10 **Target organ: 10**	Total: 3 **Target organ: 2**
Subsurface soil Groundwater Wetland surface water and sediment	Total: 3 **Target organ: 2**	Total: 2 **Target organ:2**

Notes:
Bolded where greater than USEPA and MEDEP's target HI of 1 (per target organ).
[a] Sum of HI estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

As indicated in **Table 10.1.CTE**, total potential HIs (per target organ) are above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 1:* Manganese in surface and subsurface soil
- *Soil Exposure Area 2:* Manganese in subsurface soil

Current/Future On-Site Recreational User/Trespasser

The total potential HIs for the current/future on-site recreational user/trespasser based on exposure to soil, surface water, and sediment are presented in **Table 11.2.RME/CTE**. The total potential HIs were calculated for surface soil and subsurface soil, surface water, and sediment in **Attachment E**, RAGS Part D Table 7.2 RME/CTE and **Attachment F**, Table 9.2 RME/CTE. Target organ HIs were calculated in **Attachment E**, Table 7.2.TE.RME/CTE. The total potential HI results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil, surface water, and sediment are as follows:

	Total HI [a]	
Media	**Soil Exposure Area 1**	**Soil Exposure Area 2**
Surface soil Wetland surface water and sediment	Total: 1 Target organ: 0.8	Total: 10 **Target organ: 10**
Subsurface soil Wetland surface water and sediment	Total: 0.7 Target organ: 0.2	Total: 2 **Target organ: 2**

Notes:
Bolded where greater than USEPA and MEDEP's target HI of 1 (per target organ).
[a] Sum of HI estimates for applicable soil exposure area and wetland surface water and sediment.

As indicated in **Table 10.2.RME**, total potential HIs (per target organ) are above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 2:* Total PCBs in surface soil

CTE Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil, surface water, and sediment are as follows:

	Total HI [a]	
Media	**Soil Exposure Area 1**	**Soil Exposure Area 2**
Surface soil Wetland surface water and sediment	Total: 0.4 Target organ: 0.2	Total: 3 **Target organ: 2**
Subsurface soil Wetland surface water and sediment	Total: 0.2 Target organ: 0.05	Total: 0.5 Target organ: 0.3

Notes:
Bolded where greater than USEPA and MEDEP's target HI of 1 (per target organ).
[a] Sum of HI estimates for applicable soil exposure area and wetland surface water and sediment.

As indicated in **Table 10.2.CTE**, total potential HIs (per target organ) are above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 2:* Total PCBs in surface soil

Future Outdoor Industrial Worker

The total potential HIs for the future outdoor industrial worker based on exposure to soil are presented in **Table 11.3.RME/CTE**. The total potential HIs were calculated for surface soil and subsurface soil in **Attachment E**, RAGS Part D Table 7.3.RME/CTE and **Attachment F,** Table 9.3.RME/CTE. Target organ HIs were calculated in **Attachment E**, Table 7.3.TE.RME/CTE. The total potential HI results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil are as follows:

	Total HI [a]	
Media	**Soil Exposure Area 1**	**Soil Exposure Area 2**
Surface soil	Total: 0.2 Target organ: 0.1	Total: 2 **Target organ: 2**
Subsurface soil	Total: 0.09 Target organ: 0.03	Total: 0.4 Target organ: 0.3

Notes:
Bolded where greater than USEPA and MEDEP's target HI of 1 (per target organ).
[a] Sum of HI estimates for applicable soil exposure area.

As indicated in **Table 10.3.RME**, total potential HIs (per target organ) are above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 2:* Total PCBs in surface soil

CTE Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil are as follows:

Media	Total HI [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil	Total: 0.1 Target organ: 0.08	Total: 0.8 Target organ: 0.8
Subsurface soil	Total: 0.05 Target organ: 0.02	Total: 0.2 Target organ: 0.1

Note:
[a] Sum of HI estimates for applicable soil exposure area.

Total potential HIs are below USEPA/MEDEP's target HI of 1.

Future Indoor Industrial Worker

The total potential HIs for the future indoor industrial worker based on exposure to volatiles in groundwater via the vapor intrusion pathway are presented in **Table 11.4.RME/CTE.** The associated total potential HIs and target organ HIs were calculated in **Attachment E**, RAGS Part D Tables 7.4.RME/CTE and **Attachment F**, Tables 9.4.RME/CTE. The total potential HI results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential HI (based on all target organs combined) associated with exposure to volatiles in groundwater via the vapor intrusion pathway is 0.03, less than USEPA/MEDEP's target HI of 1.

CTE Scenario

The total potential HI (based on all target organs combined) associated with exposure to volatiles in groundwater via the vapor intrusion pathway is 0.01, less than USEPA/MEDEP's target HI of 1.

Hypothetical Future On-Site Resident

The total potential HIs for the hypothetical future resident based on exposure to soil, groundwater, surface water, and sediment are presented in **Table 11.5.RME/CTE**. The total potential HIs were calculated for surface soil and subsurface soil, surface water, and sediment in **Attachment E**, RAGS Part D Tables 7.5 RME/CTE and **Attachment F**, Tables 9.5 RME/CTE. Target organ HIs were calculated in **Attachment E**, Tables 7.5.TE.RME/CTE. The total potential HI results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil, groundwater, surface water, and sediment are as follows:

Media	Total HI [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	Total: 10 **Target organ: 5**	Total: 30 **Target organ: 20**
Subsurface soil Groundwater Wetland surface water and sediment	Total: 10 **Target organ: 4**	Total: 10 **Target organ: 4**

Notes:
Bolded where greater than USEPA and MEDEP's target HI of 1 (per target organ).
[a] Sum of HI estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

As indicated in **Table 10.5.RME**, total potential HIs (per target organ) are above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 2:* Total PCBs in surface and subsurface soil
- *Groundwater:* Manganese in groundwater

CTE Scenario

The total potential HIs (based on all target organs combined) and the maximum target organ-specific HIs associated with exposure to soil, groundwater, surface water, and sediment are as follows:

Media	Total HI [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	Total: 5 **Target organ: 2**	Total: 9 **Target organ: 4**
Subsurface soil Groundwater Wetland surface water and sediment	Total: 5 **Target organ: 2**	Total: 6 **Target organ: 2**

Notes:
Bolded where greater than USEPA and MEDEP's target HI of 1 (per target organ).
[a] Sum of HI estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

As indicated in **Table 10.5.CTE**, total potential HIs (per target organ) are above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 2:* Total PCBs in surface soil
- *Groundwater:* Manganese

4.6.2.2 Description of ELCR Estimates

Estimates of ELCR represent the potential risk of cancer from exposure to chemicals at the site. For each receptor, pathway- and medium-specific potential ELCRs for COPCs are summed and presented as total receptor risks. The potential ELCRs for the child and adult recreational user and child and adult resident were summed to present the total potential cancer risk for the current/future recreational user/trespasser and hypothetical future resident, respectively. **Tables 11.1.RME/CTE** through **11.5.RME/CTE** provide comprehensive summaries of the potential carcinogenic risks and risk drivers by receptor and media; **Attachment E** and **Attachment F** provide the detailed calculations (RAGS Part D Table 7s and Table 9s).

Current/Future Construction Worker

The total potential ELCRs for the current/future construction worker based on exposure to soil, groundwater, surface water, and sediment are presented in **Table 11.1.RME/CTE**. The total potential ELCRs were calculated for surface soil and subsurface soil, groundwater, surface water, and sediment in **Attachment E**, Tables 7.1.RME/CTE and **Attachment F**, Tables 9.1.RME/CTE. The total potential ELCR results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential ELCR associated with exposure to soil, groundwater, surface water, and sediment are as follows:

	Total Potential ELCR [a]	
Media	**Soil Exposure Area 1**	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	1×10^{-6}	4×10^{-6}
Subsurface soil Groundwater Wetland surface water and sediment	1×10^{-6}	1×10^{-6}

Note:
[a] Sum of ELCR estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

All total ELCRs for the RME current/future construction worker are within USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers were selected for this receptor/exposure area based on potential carcinogenic risk.

CTE Scenario

The total potential ELCR associated with exposure to soil, groundwater, surface water, and sediment are as follows:

Media	Total Potential ELCR [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	3×10^{-7}	7×10^{-7}
Subsurface soil Groundwater Wetland surface water and sediment	3×10^{-7}	4×10^{-7}

Note:
[a] Sum of ELCR estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

All total ELCRs for the CTE current/future construction worker are within USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers were selected for this receptor/exposure area based on potential carcinogenic risk.

Current/Future On-Site Recreational User/Trespasser

The total potential ELCRs for the current/future on-site recreational user/trespasser based on exposure to soil, surface water, and sediment are presented in **Table 11.2.RME/CTE**. The total potential ELCRs were calculated for surface soil and subsurface soil, surface water, and sediment in **Attachment E**, RAGS Part D Tables 7.2.RME/CTE and **Attachment F**, Tables 9.2.RME/CTE. The total potential ELCR results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential ELCR associated with exposure to soil, surface water, and sediment are as follows:

Media	Total Potential ELCR [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Wetland surface water and sediment	6×10^{-6}	**6×10^{-5}**
Subsurface soil Wetland surface water and sediment	6×10^{-6}	1×10^{-5}

Notes:
Bolded where greater than USEPA and MEDEP's target ELCR of 10^{-5}.
[a] Sum of ELCR estimates for applicable soil exposure area and wetland surface water and sediment.

The total ELCRs for the RME current/future recreational user/trespasser are within USEPA's target ELCR range of 10^{-6} to 10^{-4} for all areas. Therefore, no risk drivers are identified based on potential carcinogenic risk for these exposure areas utilizing USEPA guidance. As indicted in

Table 10.2.RME, total ELCRs are above MEDEP's target ELCR of 10^{-5} within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 2:* Total PCBs, benzo(a)pyrene, and arsenic in surface soil

CTE Scenario

The total potential ELCR associated with exposure to soil, surface water, and sediment are as follows:

Media	Total Potential ELCR [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Wetland surface water and sediment	4×10^{-7}	3×10^{-6}
Subsurface soil Wetland surface water and sediment	5×10^{-7}	8×10^{-7}

Note:
[a] Sum of ELCR estimates for applicable soil exposure area and wetland surface water and sediment.

All total ELCRs for the CTE current/future recreational user/trespasser are within USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers are identified for this receptor in these exposure areas based on potential carcinogenic risk.

Future Outdoor Industrial Worker

The total potential ELCRs for the future outdoor industrial worker based on exposure to soil are presented in **Table 11.3.RME/CTE**. The total potential ELCRs were calculated for surface soil and subsurface soil in **Attachment E**, RAGS Part D Tables 7.3.RME/CTE and **Attachment F**, RAGS Part D Tables 9.3.RME/CTE. The total potential ELCR results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential ELCR associated with exposure to soil are as follows:

Media	Total Potential ELCR [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil	2×10^{-6}	**3×10^{-5}**
Subsurface soil	2×10^{-6}	6×10^{-6}

Notes:
Bolded where greater than USEPA and MEDEP's target ELCR of 10^{-5}.
[a] Sum of ELCR estimates for applicable soil exposure area.

The total ELCRs for the RME future outdoor industrial worker are within USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target of 10^{-5} for Soil Exposure Area 1. Therefore, no risk drivers are identified based on potential carcinogenic risk for this exposure area. As indicted in **Table 10.3.RME**, total ELCRs are above MEDEP's target ELCR of 10^{-5} in Soil Exposure Area 2 surface soil for following chemicals:

- *Soil Exposure Area 2:* Total PCBs arsenic in surface soil

CTE Scenario

The total potential ELCR associated with exposure to soil are as follows:

	Total Potential ELCR [a]	
Media	**Soil Exposure Area 1**	**Soil Exposure Area 2**
Surface soil	3×10^{-7}	2×10^{-6}
Subsurface soil	3×10^{-7}	7×10^{-7}

Note:
[a] Sum of ELCR estimates for applicable soil exposure area.

All total ELCRs for the CTE future outdoor industrial worker are below USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers are identified based on potential carcinogenic risk for these exposure areas.

Future Indoor Industrial Worker

The total potential ELCRs for the future indoor industrial worker based on exposure to volatiles in groundwater via the vapor intrusion pathway are presented in **Table 11.4.RME/CTE.** The associated total potential ELCRs were calculated in **Attachment E**, RAGS Part D Tables 7.4.RME/CTE and **Attachment F**, RAGS Part D Tables 9.4.RME/CTE. The total potential ELCR results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential ELCR for the RME future indoor industrial worker of 1×10^{-7} is below USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers are identified based on potential carcinogenic risk for vapor intrusion.

CTE Scenario

The total potential ELCR for the RME future indoor industrial worker of 5×10^{-8} is below USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers are identified based on potential carcinogenic risk for vapor intrusion.

Hypothetical Future On-Site Resident

The total potential ELCRs for the hypothetical future on-site resident based on exposure to soil, groundwater, surface water, and sediment are presented in **Table 11.5.RME/CTE.** The total potential ELCRs were calculated for surface soil and subsurface soil, groundwater surface water, and sediment in **Attachment E**, RAGS Part D Tables 7.5.RME/CTE (adult), Table 7.5.RME/CTE (child), and **Attachment F**, RAGS Part D Table 9.5.RME/CTE. The total potential ELCR results are summarized by the exposure scenario in the following sections.

RME Scenario

The total potential ELCR associated with exposure to soil, groundwater, surface water, and sediment are as follows:

	Total Potential ELCR [a]	
Media	**Soil Exposure Area 1**	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	**2×10^{-4}**	**3×10^{-4}**
Subsurface soil Groundwater Wetland surface water and sediment	**2×10^{-4}**	**2×10^{-4}**

Notes:
Bolded where greater than MEDEP's target ELCR of 10^{-5} and greater than USEPA's target ELCR range of 10^{-6} to 10^{-4}.
[a] Sum of ELCR estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

As indicated in **Table 10.5.RME**, total ELCRs are within or above USEPA's target ELCR range of 10^{-6} to 10^{-4} and are above MEDEP's target ELCR of 10^{-5} within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 1:* Arsenic in surface and subsurface soil
- *Soil Exposure Area 2:* Total PCBs and arsenic in surface and subsurface soil. Benzo(a)pyrene in surface soil
- *Groundwater:* Trichloroethene, vinyl chloride, and arsenic

CTE Scenario

The total potential ELCR associated with exposure to soil, groundwater, surface water, and sediment are as follows:

Media	Total Potential ELCR [a]	
	Soil Exposure Area 1	**Soil Exposure Area 2**
Surface soil Groundwater Wetland surface water and sediment	**3×10^{-5}**	**3×10^{-5}**
Subsurface soil Groundwater Wetland surface water and sediment	**3×10^{-5}**	**3×10^{-5}**

Notes:
Bolded where greater than MEDEP's target ELCR of 10^{-5}.
[a] Sum of ELCR estimates for applicable soil exposure area, groundwater, and wetland surface water and sediment.

Total ELCRs are below USEPA's target ELCR range of 10^{-6} to 10^{-4}. As indicated in **Table 10.5.CTE**, total ELCRs are above MEDEP's target ELCR of 10^{-5} within the following exposure areas and media based on the following chemicals:

- *Soil Exposure Area 2:* Total PCBs in surface soil
- *Groundwater:* Trichloroethene and arsenic

4.6.2.3 Background Evaluation

The HHRA results discussed in **Section 4.6.2.1** identified the following risk drivers for one or more receptors/exposure areas:

- *Soil Exposure Area 1:* Arsenic and manganese in surface and subsurface soil
- *Soil Exposure Area 2:* Total PCBs, arsenic, manganese in surface and subsurface soil, and benzo(a)pyrene in surface soil
- *Groundwater:* Trichloroethene, vinyl chloride, arsenic, and manganese

Tables 10.1.RME/CTE to **10.5.RME/CTE** present the potential risk and HI estimates for the risk drivers. Table 10 is only presented for receptor scenarios where receptor scenarios where risk drivers were identified. Therefore, there are gaps in the numbering (e.g., there are no risk drivers for the indoor worker, and therefore, no Table 10.4 is presented).

The risk drivers were further evaluated in conjunction with the results of the background evaluation (included as Appendix C of the RI report and described in **Section 2.2**) to determine if they are site-related or non-site-related (i.e., identified as being consistent with background based on a comparison of concentrations in site and background datasets).

The following risk drivers identified based on the HHRA results were found to have concentrations in site media less than or consistent with concentrations in background and are therefore not considered site-related COCs for the FTA:

- *Soil Exposure Area 1 Surface Soil:* Arsenic
- *Soil Exposure Area 1 Subsurface Soil:* Arsenic
- *Soil Exposure Area 2 Surface Soil:* Arsenic

4.7 Description of Uncertainties

Estimation of potential risks to human health that may result from exposure to chemicals in the environment is a complex process that often requires the combined efforts of multiple disciplines. Each assumption, whether regarding the toxicity value to use for a particular chemical or the value of a parameter in an exposure equation, has a degree of variability and uncertainty associated with it. In each step of the risk assessment process, beginning with the data collection and analysis and continuing through the toxicity assessment, exposure assessment, and risk characterization, conservative assumptions are made that are intended to be protective of human health and to ensure that risks are not underestimated. There is a probability of overestimating health risks or hazards for a number of reasons. The following subsections provide a discussion of the key uncertainties that may affect the final estimates of human health risk in this HHRA. Uncertainties are arranged by topic.

4.7.1 Environmental Sampling and Analysis

The process of environmental sampling and analysis results in uncertainties from several sources, including errors inherent in sampling procedures or analytical methods. One area of uncertainty is sampling procedures. Since it is not possible to sample the entire area of interest at a given site, several samples are taken from each medium within a site, and the results are considered representative of the chemicals present throughout the site. This assumption may overestimate or underestimate risk.

Analytical methods also involved uncertainties. Due to uncertainty of quantification, individual chemicals were sometimes listed as detected but with the value qualified as estimated by laboratory qualification or validation procedures. The estimated value was used in the HHRA. This uncertainty may either overestimate or underestimate risk depending on how close the estimated value is to the true value.

All available data were reviewed to identify the dataset appropriate for use in the HHRA, as discussed in **Section 2.1**.

Soil data from all available sampling events were included in the HHRA. Although some of the data are over 10 years old, many of the chemicals within these analyte groups are known to be persistent in the environment. Therefore, all soil data in areas that have not been excavated were evaluated in the HHRA. This assumption may result in an over-estimate of potential risk associated with exposure to soil given that it is likely that concentrations of certain chemicals may have decreased over time.

Surface water and sediment data from both 2012 and 2014 were included in the HHRA. The use of both rounds provides two samples per location and a sufficient number of data points for UCL derivation.

Groundwater data collected between 1999 and 2016 are available from both permanent and temporary wells. Consistent with USEPA (2014b), only data from permanent wells were included in the HHRA. USEPA (2014b) recommends that where seasonal trends are absent, the latest two rounds of data from each well, generally from the past year, be used in the HHRA. The hydrograph of groundwater elevation data from 2012 to 2015 (Figure 3-4 of the RI report) reveals no discernable patterns in seasonal groundwater flow patterns. Therefore, the use of multiple rounds of data from the same well was deemed appropriate for this HHRA.

The groundwater dataset used in the HHRA includes data collected from permanent wells between 2012 and 2016 and was selected to be representative of current conditions. Groundwater data collected prior to 2012 were not used in the HHRA as they may not be representative of current conditions. The latest two monitoring rounds at the FTA (June 2014 and June 2015) had slightly varying analyte lists for SVOCs and VOCs; therefore, the November 2012 round was included to ensure adequate data points per chemical and well. The November 2012 data may not be as reflective off current conditions as the more recent rounds.

The HHRA utilizes the total (unfiltered) groundwater and surface water data for oral exposure pathways, consistent with the recommendation in USEPA (2004a). However, as indicated in USEPA (2014a):

> "….particulate-bound chemicals in an aqueous medium (e.g., suspended sediment particles) would be considered to be much less bioavailable for dermal absorption, due to inefficient adsorption of suspended particles onto the skin surface and a slower rate of absorption into the skin. The uncertainty in the estimation of the dermal dose from a water sample with high turbidity is directly proportional to the magnitude of the difference in the concentration between an unfiltered and filtered sample. The actual bioavailable concentration is likely to lie somewhere between the unfiltered and filtered sample concentrations."

Therefore, the use of the unfiltered groundwater and surface water data for the dermal contact pathway is conservative.

4.7.2 Calculation of Total PCBs

PCBs were evaluated in the HHRA as Total PCBs rather than by individual PCB Aroclors, as discussed in **Section 2.3.2**. This approach is commonly used to assess potential risk associated with exposure to PCB concentrations when only PCB Aroclor data are available and is a reasonable approach given the availability of toxicity values for Total PCBs and the similar toxic mechanisms for the class of chemicals. The Total PCB concentrations used in the HHRA are based on the sum of the individual PCB Aroclors detected in each sample. To assess the uncertainties associated with this approach and the potential to underestimate risks due to the presence of elevated DLs in site data, at the request of MEDEP, Total PCB concentrations were also calculated assuming that the non-detect results reported for PCB Aroclors were present at a concentration equal to the associated reporting DL, referred to in this section as the Full DL method. The Full DL method (which was not used in the HHRA calculations presented in prior sections of this report) is considered to overestimate potential risk/hazard since the assumption for all samples is that all individual PCB Aroclors analyzed are present at the reporting DL. However, further evaluation was performed, as discussed by media in the following paragraphs, to determine whether the conclusions of the HHRA would change if the Full DL method was used.

Attachment G presents the associated table referred to in this section. Table G-1 presents a summary of the Total PCB concentrations for each media/sample based on use of the Detects Only versus Full DL methods. The absolute difference in concentrations between the methods is also presented. Table G-1 presents a summary of the comparison of the two methods, discussed in the following paragraphs, for soil, groundwater, surface water, and sediment.

As indicated in **Attachment G**, the maximum concentration of Total PCBs in surface soil (sample PCBAREA1-013) is 610 mg/kg under the Detects Only method and 621.7 m/kg under the Full DL method. This sample also exhibits the maximum difference between the two methods of 11.7 mg/kg. The average difference between the methods for surface soil is less than 1 mg/kg. Given the range of the Total PCB concentrations in surface soil, the calculation methodology does not significantly alter the findings of the HHRA that Total PCBs are a risk driver in Soil Exposure Area 2 surface soil.

As indicated in **Attachment G**, the maximum concentration of Total PCBs in subsurface soil (sample PCBAREA1-202) is 83 mg/kg under the Detects Only method and 88.1 m/kg under the Full DL method. This sample also exhibits the maximum difference between the two methods of 5.1 mg/kg. The average difference between the methods for surface soil is less than 0.5 mg/kg. Given the range of the Total PCB concentrations in subsurface soil, the calculation methodology

does not significantly alter the findings of the HHRA that Total PCBs are a risk driver in Soil Exposure Area 2 subsurface soil.

PCBs were not detected in groundwater. Therefore, the calculation method makes no difference in the results of the HHRA. PCBs were detected in one surface water sample, FTA-SW-06, collected in 2014. The Total PCB concentration under the Full DL method of 0.76 µg/L is greater than the Total PCB concentration of 0.38 µg/L under the Detects Only method. However, given the low risks identified in surface water, the difference in calculation methodology does not significantly alter the findings of the HHRA that Total PCBs are not a risk driver in surface water.

The differences in the Total PCB concentrations in sediment are small (maximum difference of 0.262 mg/kg in a sample from location FTA-SED-06 from 2012) and do not change the findings of the HHRA that Total PCBs are not a risk driver in sediment.

In summary, while using the Full DL method increases the Total PCB concentrations for some samples (i.e., those with non-detect PCB Aroclors), the increase is minimal and does not affect the conclusions of the HHRA.

4.7.3 COPC Selection

A comparison of maximum detected chemical concentrations to USEPA RSLs and other screening values was conducted as part of the COPC selection process. RSLs are conservative risk-based values that are used when selecting COPCs so as not to omit a chemical that might contribute significantly to risk. Chemicals whose maximum concentrations were below their respective screening value were not identified as COPCs or carried through the Tier II HHRA. It is unlikely that this risk-based screening excluded chemicals that would be of concern, based on the conservative exposure assumptions and conservatively derived toxicity criteria that are the basis of the screening level. Although following this methodology does not provide a quantitative risk estimate for all chemicals, it focuses the assessment on the chemicals accounting for the greatest risks (i.e., chemicals whose maximum concentrations exceeded their respective screening level). Although the overall potential risk estimates are uncertain, it is not expected that actual risks will be significantly greater than estimated risks given that a reasonable effort was made to characterize current and future potential health risks given current knowledge.

4.7.4 Toxicological Data

Uncertainty is associated with the toxicity values and toxicity information available to assess potential adverse effects.

One of the major contributors to uncertainty is the accuracy of the toxicity values used. A cancer potency value is a mathematical extrapolation of the slope of the dose-response curve from high doses administered to animals (or the exposures observed in epidemiological studies) to the low

doses commonly experienced in the environment. The USEPA has developed potency values for chemicals classified as carcinogens, based on the premise that there is no threshold (i.e., there is no level of exposure below which there is no risk of a carcinogenic effect). USEPA's *Guidelines for Carcinogen Risk Assessment* (USEPA 2005a) acknowledges that the mode of action of a carcinogen may involve both threshold and non-threshold mechanisms. To the extent that the approach used to develop the potency estimate is incorrect, the extrapolated risks may be overestimations or underestimations. However, in the derivation of toxicity values, conservative assumptions are employed. Therefore, toxicity values tend to be biased toward overestimating potential risk.

For dermal exposure pathways, the absence of dermal toxicity criteria necessitated the use of oral toxicity data. To calculate potential risk estimates for the dermal pathway, absolute oral bioavailability factors that reflect the toxicity study conditions were used to modify the oral toxicity criteria. For the chemicals with oral absorption exceeding 50%, a default oral absorption factor of 100% was used. The potential risk estimates for the dermal pathways may be overestimated or underestimated depending on how closely these values reflect the difference between the oral and dermal routes. Dermal absorption fractions (USEPA 2004a), which estimate the penetration of soil-associated chemicals through the skin, are used to assess dermal exposures for soil. These estimates are uncertain and may result in either an overestimation or underestimation of risk.

Chronic toxicity values, developed based on continuous lifetime exposures, were used for the evaluation of discontinuous, less-than-lifetime exposures (e.g., recreational user). Therefore, total receptor risk estimates may be overestimated with the degree of overestimation dependent on the degree of deviation from a continuous lifetime exposure scenario.

Total PCBs

Cancer toxicity values for Total PCBs (high risk and persistence) recommended in USEPA's IRIS database (2016i) were used for evaluation of Total PCBs. A published noncancer toxicity value (RfD) is not available for Total PCBs. Therefore, the oral RfD for PCB Aroclor-1254 (USEPA 2016i) was used to evaluate noncarcinogenic oral/dermal pathways associated with exposure to Total PCBs. PCB Aroclor-1254 was detected in site media. However, there are uncertainties associated with using PCB Aroclor-1254 as a surrogate for Total PCBs. Since the PCB composition at a site may differ from the PCB composition for which the noncancer RfD for PCB Aroclor-1254 is based, producing different toxicological responses, uncertainty is introduced by using this as a surrogate RfD. During the Feasibility Study, the uncertainties associated with using the noncancer RfD for PCB Aroclor-1254 as a surrogate for Total PCBs to develop the preliminary remediation goal (PRG) based on a noncancer endpoint will be considered, in order to select an appropriate PRG for use at the site as part of a risk management decision.

4.7.5 Exposure Assessment

The primary areas of uncertainty affecting exposure parameter estimation involve the assumptions regarding exposure pathways, the estimation of EPCs, and the parameters used to estimate chemical doses. The uncertainties associated with these various sources are discussed in the following sections.

4.7.5.1 EPCs

With respect to determining EPCs for this evaluation, one assumption was that the concentrations of chemicals in the medium evaluated would remain constant over the exposure time. Depending on the properties of the chemical and the medium in which it was detected, this assumption may overestimate risks, depending on the degree of chemical degradation to less toxic species or transport to other media. Conversely, environmental bioactivation of chemicals to more toxic chemicals was also not considered. Therefore, this assumption may underestimate risk if bioactivation mechanisms are significant.

EPCs for soil, sediment, and surface water were calculated based on available data in each exposure area. Groundwater EPCs were calculated following USEPA guidance (2014b) and were based groundwater data collected since 2014 from permanent monitoring wells. EPCs are expected to be conservative because in reality, samples were not collected based on random sampling but rather based on knowledge of historical practices and locations where the highest concentrations were expected. Therefore, EPCs are likely to be biased high.

Future development could result in mixing of surface soil and subsurface soil, or removal of surface soil, resulting in subsurface soil being exposed as surface soil. It is also possible that grading activities would add soil or other fill to the surface, such that current surface soils would be covered. Given the uncertainties involved with anticipating future conditions, separate EPCs were derived for surface soil and subsurface soil. This approach could over-or underestimate future EPCs depending on redevelopment activities, but allows for risk management decisions based on current conditions.

EPCs for shower air, indoor air via the vapor intrusion pathway, and excavation trench air were estimated through use of modeling, which introduces some level of uncertainty, as discussed in the following paragraphs.

There are uncertainties associated with estimating shower air EPCs from groundwater using the Foster and Chrostowski (1987) shower model. Activity parameters that have uncertainty associated with them include shower durations and time spent in the room after a shower. Measurement uncertainty is associated with some input parameters used in the model (e.g., droplet size) and the experimental data used to validate the model. Although the main source of VOCs in shower air is expected to be the shower spray itself, the conceptualization of the model as falling droplets only

may result in an underestimation of modeled indoor concentrations (Foster and Chrostowski 2003). The model also makes several conservative assumptions such as assuming exposure time equals duration of shower use and not accounting for the actual decrease in concentration after the water is turned off. Therefore, when all of the exposure and modeling assumptions are combined, it is much more likely that potential risks are significantly overestimated rather than underestimated.

Indoor air EPCs were estimated via indoor air modeling using the USEPA JE model spreadsheets (USEPA 2004b; 2004c). The use of modeling to estimate indoor air concentrations for hypothetical buildings contributes uncertainty to the HHRA. In addition, the vapor intrusion evaluation performed as part of this HHRA based on the use of measured groundwater data does not account for potential sources of volatiles in the unsaturated zone (i.e., in soils above the water table). Therefore, if future development of the site is planned, further evaluation of the potential vapor intrusion pathway may be considered in the area of proposed buildings.

4.7.5.2 Exposure Assumptions

The parameter values used to describe the extent, frequency, and duration of exposure are associated with some uncertainty. Actual risks for some individuals within an exposed population may vary from those predicted depending on the actual exposure durations, intake rates (e.g., soil ingestion rates), or body weights.

The FTA is currently an unused and undeveloped open space, and this use is expected to continue for the foreseeable future. Therefore, under the current scenario, only potential trespassers and construction workers are evaluated. While there are no plans for future site use, several future scenarios are evaluated in order to aid in risk-management decisions, including recreational use, industrial use, and hypothetical residential use. Because most of the exposure scenarios are hypothetical, several conservative exposure assumptions were used in the HHRA consistent with MEDEP's recommended default exposure assumptions (MEDEP/CDC 2013), as discussed further here.

The construction worker exposure scenario evaluated in the HHRA was conservatively based on recommended exposure assumptions provided MEDEP/CDC. This scenario conservatively assumed that construction workers may be working full time for a 1 year period on site and are potentially exposed to soil for 250 days per year (5 days per week for a 1-year project). However, a more typical exposure scenario for a construction worker is likely to be less than what was assumed. It was also conservatively assumed that a construction worker at the FTA may contact groundwater in an excavation trench and surface water and sediment in the wetland area, assuming he/she may be performing excavation/regrading activities along the wetland. These are also conservative assumptions given that construction workers are likely to be wearing protective clothing to reduce

their contact with site media. Therefore, it is likely that use of these default exposure assumptions may overestimate potential risk to current/future construction workers at the FTA.

Consistent with MEDEP's recommended exposure assumptions (MEDEP/CDC 2013), it was conservatively assumed that the adult and child recreational users engage in activities resulting in soil exposure 90 days per year (3 days per week for 30 weeks [the 7 warmer months] of the year). However, it is unlikely that recreational users would spend 3 days per week for 6 to 7 months of the year at the site, and therefore, use of MEDEP's recommended exposure assumptions are likely to overestimate potential risk associated with a typical recreational exposure scenario.

In addition, consistent with MEDEP's recommended exposure assumptions (MEDEP/CDC 2013), ingestion rates and adherence factors for soil were used for evaluation of sediment exposure. There is some uncertainty associated with this since actual contact with each media may be different (e.g., using the soil adherence factor to evaluate sediment exposure when actual adherence may differ depending on percent moisture content). The fraction of soil and sediment ingested from the site were each assumed to be 100%. MEDEP/CDC's recommended exposure assumptions (2013) assume the ingestion rates for sediment are equal to those for soil. Because the default soil ingestion rates represent the total daily intake of soil integrated over a variety of activities and sources, both indoors and outdoors, the assumption of 100% fraction ingested for both soil and sediment is very conservative. The combination of these assumptions results in a combined soil and sediment ingestion rate twice the daily assumed soil ingestion rate for each receptor assumed to be exposed to both soil and sediment (current/future construction worker, current/future recreational user, hypothetical future on-site resident).

The exposure assumptions were generally selected to produce a reasonable upper-bound estimate of exposure in accordance with USEPA guidelines, although in some cases the combination of the various assumptions may lead to greater than an upper bound estimate. Therefore, exposures and estimated potential risks for the evaluated receptors are likely to be representative of reasonable upper-bound exposures, but in some cases may exceed reasonable upper-bound exposures.

Geological material at FTA is dominated by local fill material consisting of cobbles, gravel, course sand, and silt over most of the site. The default soil contact assumptions used in the HHRA (e.g., soil adherence factors) are considered to overestimate exposure for contact with cobbles and gravel.

4.7.5.3 Dermal Absorption from Groundwater and Surface Water

Potential noncancer hazards for PAHs, PCBs, PFOS, and PFOA were estimated based on ingestion of groundwater and incidental ingestion of surface water as applicable for the receptors evaluated. The dermal contact pathway associated with these COPCs in water is considered to be negligible,

as further discussed in the following paragraphs, and was therefore not quantitatively evaluated in the HHRA.

In dermal exposure assessment (USEPA 2007), the potential dermal dose is the amount of a chemical which could be deposited on the skin during a given activity. The absorbed dermal dose is the amount of a chemical that is absorbed into the body through the skin. Passive diffusion is considered to be the main processes of dermal penetration of chemicals through the stratum corneum, the outermost layer of the skin. After a chemical has absorbed into the stratum corneum it can pass through it into the viable epidermis (the next skin layer) and then into the dermis where it can be transported systemically by the dermal blood supply. To get into and through the skin, the chemical must dissolve into the stratum corneum, a stabilized lipid barrier. Hence, lipid solubility is required initially, followed by water solubility, to pass through the water-based gel portion of the skin and the human body, which is water-based. The dermal permeability coefficient (K_p) indicates the rate of migration of a chemical through skin and may be a predicted or experimentally derived value (USEPA 2004a). USEPA uses the K_p value (in units of centimeters per hour) to evaluate dermal exposure to chemicals in water, such as surface water.

The quantification of potential noncancer hazards and cancer risks associated with the surface water pathway followed Exhibit 1-2 in the USEPA RAGS Part E guidance (2004a). Specifically, if dermal assessment was not recommended in USEPA RAGS Part E (2004a), no further evaluation of the dermal pathway was conducted for that COPC. Dermal assessment is not recommended for chemicals with a very large or very small octanol-water partition coefficient value. These chemicals are considered to be outside of the "Effective Prediction Domain," which means that an appropriate K_p value cannot be predicted by the statistical model (USEPA 2004a).

Specifically for PFOA and PFOS, evidence of dermal absorption of was documented in experimental studies; however, the findings of two key dermal exposure studies suggest that the ionization state of PFOA is critical in understanding its dermal absorption and permeability potential. At normal stratum corneum pH, PFOA is largely ionized and very little penetration of human skin would be expected to occur (Franko et al. 2012). Franko et al. (2012) also notes that most real-world PFOA exposures, particularly very low-level environmental exposures, would be to the ionized form and not the unionized form, suggesting dermal absorption through human skin under typical environmental exposures would be likely negligible relative to the oral exposure route.

Considering the pH-dependent dermal permeability data for PFOA, exclusion of the evaluation of the dermal route for PFOS and PFOA in water in a HHRA is not likely to result in significant underestimation of the overall human health risk to PFOS and PFOA at a site. Similarly, significant underestimation of human health risk is not expected if the evaluation of the dermal route for

PFOS and PFOA in sediments is excluded from an HHRA because exposure via the oral route is considered to drive overall potential health risk.

The HHRA utilizes the total (unfiltered) groundwater data for oral exposure pathways, consistent with the recommendation in USEPA (2004a). However, as indicated in USEPA (2004a):

> "…particulate-bound chemicals in an aqueous medium (e.g., suspended sediment particles) would be considered to be much less bioavailable for dermal absorption, due to inefficient adsorption of suspended particles onto the skin surface and a slower rate of absorption into the skin….The actual bioavailable concentration is likely to lie somewhere between the unfiltered and filtered sample concentrations."

Therefore, the use of the unfiltered data for the dermal contact pathway is conservative.

Based on currently available scientific data and information and consistent with USEPA guidance (2004a), quantitative estimation of dermal risk was not included in this HHRA for PFOS, PFOA, PCBs, and PAHs. While this process removes evaluation of analytes which contribute minimally to the dermal pathway, inclusion of quantitative estimates of potential risk associated with the dermal exposure route is not considered to change the conclusions of this HHRA.

4.8 Summary and Conclusions

An overall summary of potential ELCR and HI results for the receptors evaluated at the FTA is presented in **Tables 11.1.RME/CTE** through **11.5.RME/CTE**. A summary of the HHRA conclusions, including a summary of the risk drivers not attributable to background media, is presented as follows by receptor.

4.8.1 Current/Future Construction Worker

A current/future construction worker was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air; groundwater through incidental ingestion, dermal contact and inhalation of volatiles in an excavation trench; and exposure to surface water and sediment in the wetland area through incidental ingestion and dermal contact. Potential soil exposure scenarios were evaluated on an exposure area basis. Potential groundwater exposure scenarios were evaluated based on EPCs developed for wells with the highest concentrations. The wetland was evaluated as one exposure area for both surface water and sediment.

All total ELCRs for the RME and CTE current/future construction worker are within USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Therefore, no risk drivers are identified based on potential carcinogenic risk utilizing USEPA guidance or MEDEP guidance.

Target organ HIs are greater than MEDEP's and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- Soil Exposure Area 1
  - *Surface Soil:* Manganese (RME and CTE)
  - *Subsurface Soil:* Manganese (RME and CTE)
- Soil Exposure Area 2
  - *Surface Soil:* Manganese (RME), Total PCBs (RME only)
  - *Subsurface Soil:* Manganese (RME and CTE)

Figure 4-3 of the RI report presents PCB Aroclor-1260 concentrations in soil, and Figure 4-4 of the RI report presents manganese concentrations in soil.

4.8.2 Current/Future On-Site Recreational User/Trespasser

A current/future on-site recreational user (adult/child) was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air; and exposure to surface water and sediment in the wetland area through incidental ingestion and dermal contact. Potential soil exposure was evaluated on an exposure area basis.

The total ELCRs for the RME and CTE current/future recreational user/trespasser are within USEPA's target ELCR range of 10^{-6} to 10^{-4}. Therefore, no risk drivers are identified based on potential carcinogenic risk utilizing USEPA guidance.

Total ELCRs/HIs are above MEDEP's target ELCR of 10^{-5} and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following risk drivers:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME and CTE) and benzo(a)pyrene (RME only)

Figure 4-3 of the RI report presents PCB Aroclor-1260 concentrations in soil.

4.8.3 Future Outdoor Industrial Worker

A future outdoor industrial worker was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air on an exposure area basis.

The total ELCRs for the RME and CTE future outdoor industrial worker are below or within USEPA's target ELCR range of 10^{-6} to 10^{-4}. Therefore, no risk drivers are identified based on potential carcinogenic risk utilizing USEPA guidance.

Total ELCRs/HIs are above MEDEP's target ELCR of 10^{-5} and/or USEPA and MEDEP's target HI of 1 within the following exposure areas and media based on the following risk drivers:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME only)

Figure 4-3 of the RI report presents PCB Aroclor-1260 concentrations in soil.

4.8.4 Future Indoor Industrial Worker

A future indoor industrial worker was evaluated for exposure to volatiles in groundwater via the vapor intrusion pathway. Potential exposure for this scenario was evaluated assuming a commercial/industrial building may be constructed anywhere on site under a hypothetical future use scenario.

The total potential ELCRs for the RME and CTE future indoor industrial worker are below USEPA's target ELCR range of 10^{-6} to 10^{-4} and below MEDEP's target ELCR of 10^{-5}. Total potential HIs are below USEPA/MEDEP's target HI of 1. Therefore, no risk drivers are identified for the future indoor industrial worker.

4.8.5 Hypothetical Future On-Site Resident

A hypothetical future on-site resident was evaluated for exposure to surface soil and subsurface soil through incidental ingestion, dermal contact, and inhalation of airborne particles (i.e., fugitive dust) in outdoor air; exposure to volatiles in groundwater via showering or bathing and in indoor air via the vapor intrusion pathway; and exposure to surface water and sediment in the wetland area through incidental ingestion and dermal contact. Potential soil exposure scenarios were evaluated on an exposure area basis. Potential groundwater exposure scenarios were evaluated based on EPCs developed for wells with the highest concentrations. The wetland was evaluated as one exposure area for both surface water and sediment. It is assumed that a residence may be constructed anywhere on site and/or a private potable well may be installed for residential use anywhere on site under a hypothetical future use scenario.

Total ELCRs are above MEDEP's target ELCR of 10^{-5} and/or above USEPA/MEDEP's target HI of 1 within the following exposure areas and media based on the following chemicals:

- Soil Exposure Area 2
  - *Surface Soil:* Total PCBs (RME and CTE), benzo(a)pyrene (RME only)
  - *Subsurface Soil:* Total PCBs and arsenic (RME only)
- Groundwater
  - Trichloroethene, arsenic, and manganese (RME and CTE); vinyl chloride (RME only)

Figure 4-3 of the RI report presents PCB Aroclor-1260 concentrations in soil.

4.8.6 Risk Driver Summary

Based on the evaluation for each receptor and the results of the background evaluation, the following have been identified as a risk driver not attributable to background for one or more receptor scenarios:

- Total PCBs
  - Soil Exposure Area 2 surface soil
  - Soil Exposure Area 2 subsurface soil
- Benzo(a)pyrene
  - Soil Exposure Area 2 surface soil
- Arsenic
  - Soil Exposure Area 2 subsurface soil only
  - Groundwater
- Manganese:
  - Soil Exposure Area 1 surface soil
  - Soil Exposure Area 1 subsurface soil
  - Soil Exposure Area 2 surface soil
  - Soil Exposure Area 2 subsurface soil
  - Groundwater
- Trichloroethene
  - Groundwater
- Vinyl Chloride
  - Groundwater

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FIGURES

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Map Location

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Feet

1 in = 1,800 ft

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FIGURE 1

Fire Training Area (FTA) Location
FTA HHRA
NCTAMS LANT DET
Cutler, Maine

Legend

Sampled Media

- Groundwater/Soil Boring
- Sediment/Surface Water
- Groundwater
- Soil Boring
- Approximate Soil Confirmation Samples (AGVIQ, 2015)
- Removal Areas (AGVIQ, 2015)
- Approximate Extent Of 2009 Drum Disposal Area Excavation (Shaw, 2010)
- Soil Exposure Area 2
- Soil Exposure Area 1
- September 2004 Approximate Extent of Sand Wedge Excavation (aka Enhaced Wetland Area)
- Approximate Extent of 2006-2009 Excavation (aka Created Wetland Area) (UNITEC, 2008/TtEC, 2009/Shaw, 2010)

AOC/Site Boundary

FTA-SB-303 FTA-SB-200
FTA-MW-11
FTA-MW-14
FTA-SED-08 FTA-SW-08
FTA-MW-12
FTA-MW-9
FTA-SB-201
FTA-SB-302
FTA-SB-219 FTA-SB-301
FTA-SED-07 FTA-SW-07
FTA-SW-06
FTA-MW-10
FTA-MW-5
FTA-SB-202 FTA-SB-305
FTA-MW-218 FTA-SB-218
FTA-SED-05 FTA-SW-05
FTA-SB-304
FTA-SB-203
FTA-SB-217 FTA-SB-300
FTA-SED-04 FTA-SW-04
FTA-SED-03 FTA-SW-03
FTA-SB-216
FTA-SS-23
FTA-SED-01 FTA-SW-01
FTA-SW-02
FTA-SS-25
FTA-SB-204
FTA-SS-13
DDA-NE-13I
FTA-SS-19
FTA-AREAA-01
FTA-AREAA-02
FTA-SB-215
DDA-NW-10Q
DDA-NW-10G
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FTA-SB-205
DP-35
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FTA-SB-209
DDA-NW-9B
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DDA-NW-8R
DDA-NW-8I
DDA-NW-6R
FTA-AREAI-01
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FTA-AREAG-01
DDA-NW-6F
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FTA-AREAC-01
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DDA-NW-4F
A31-SB04
FTA-SB-214
FTA-SB-210
FTA-MW-206
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DDA-NE-2I
DDA-NW-3R
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FTA-SB-211
DDA-NW-2P
A31-SB03
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See Figure 4-2
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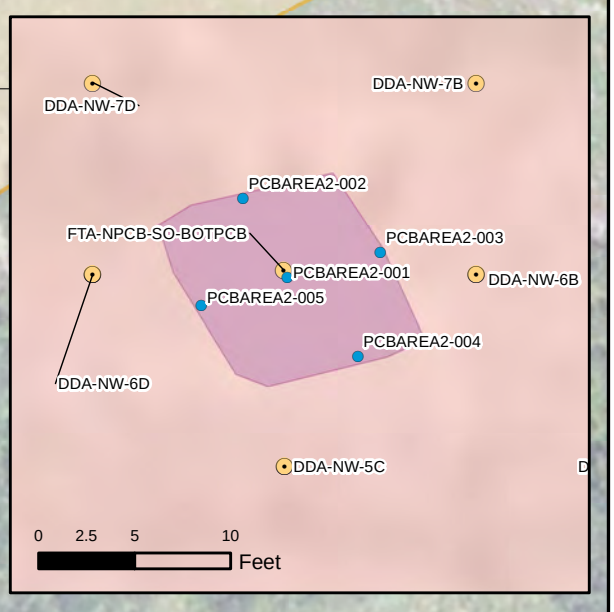

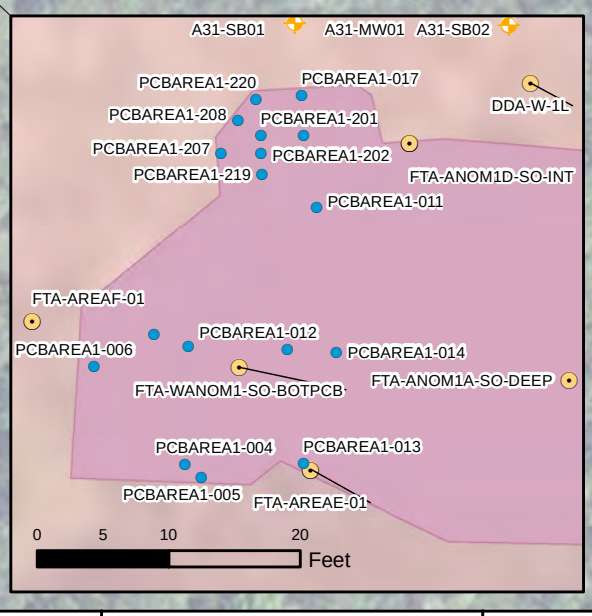

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FIGURE 2

FTA Sample Locations
FTA HHRA
NCTAMS LANT DET
Cutler, Maine

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Legend

- Approximate Soil Confirmation Samples (AGVIQ, 2015)

Sampled Media

- Groundwater/Soil Boring
- Sediment/Surface Water
- Groundwater
- Soil Boring
- Removal Areas (AGVIQ, 2015)
- Soil Exposure Area 2
- Soil Exposure Area 1
- Approximate Extent of 2006-2009 Excavation (aka Enhanced Wetland Area) (UNITEC, 2008/TtEC, 2009/Shaw, 2010)

FTA-MW-218
FTA-SB-217
FTA-SW-03
FTA-SED-03
FTA-SB-216
FTA-SED-01
FTA-SW-01
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DDA-NE-13I
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FTA-ANOM2-SO-INT
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FTA-AREAF-01
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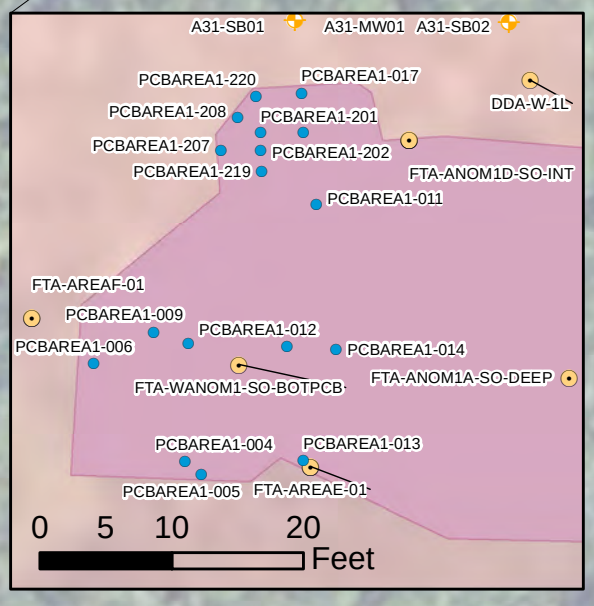
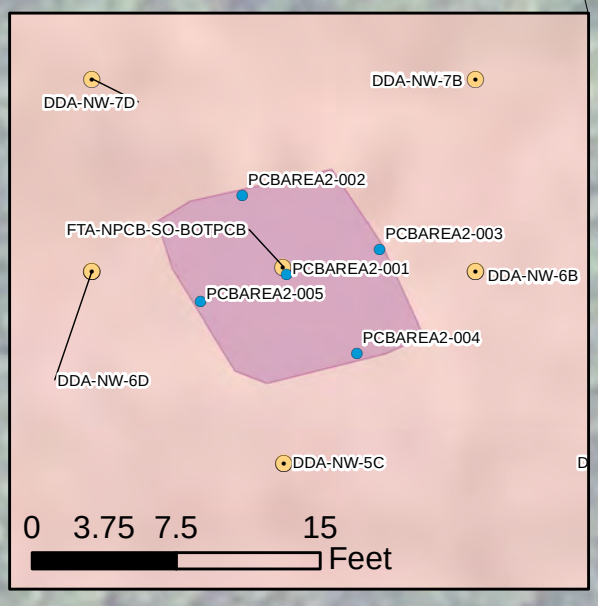
FTA-SB-208





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Map Location

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Feet

FIGURE 3

FTA Sample Location - Soil Exposure Area 2
FTA HHRA
NCTAMS LANT DET
Cutler, Maine

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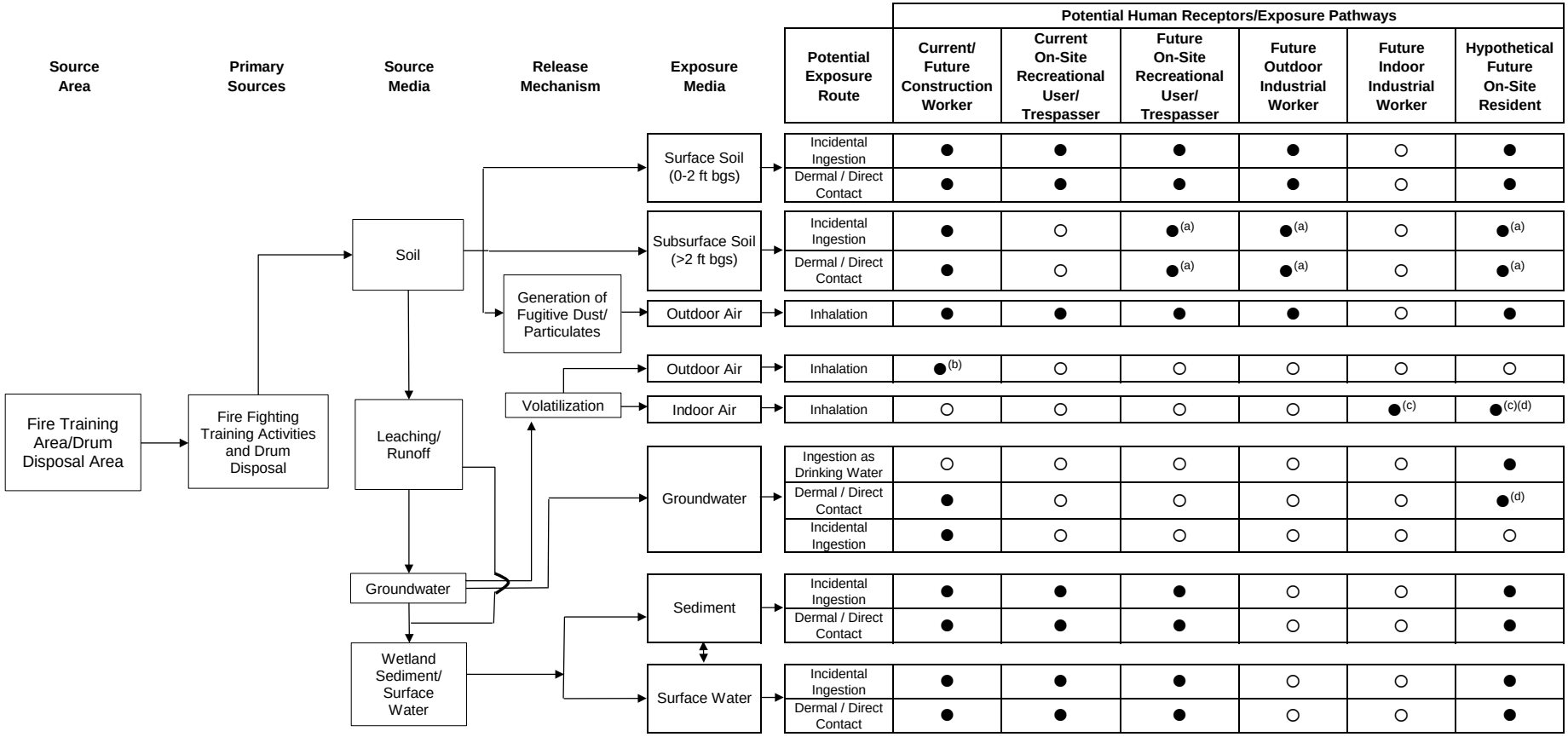
FIGURE 4
Conceptual Site Model
Human Health Risk Assessment
Fire Training Area
NCTAMS LANT DET
Cutler, Maine



Notes:
● Potentially complete pathway.
○ Pathway considered to be incomplete or insignificant.
ft bgs - feet below ground surface.
(a) It is assumed that future development may bring subsurface soils to the surface, making it available for contact by these receptors.
(b) Represents exposure to air within an open excavation trench containing standing water (i.e., trench air).
(c) Asssumes potential inhalation exposure to volatiles may occur via the vapor intrusion pathway.
(d) Assumes potential exposure may occur while showering/bathing.

TABLES

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TABLE 1

SUMMARY OF RECEPTORS, EXPOSURE POINTS, MEDIA, AND EXPOSURE PATHWAYS FOR EVALUATION

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/ Future	Soil	Surface Soil/ Subsurface Soil	FTA (a)	Construction Worker	Adult	Dermal	Quant	Assumes construction activites occur currently or may occur in the future.
						Inhalation	Quant	Assumes construction activites occur currently or may occur in the future.
						Ingestion	Quant	Assumes construction activites occur currently or may occur in the future.
		Surface Soil	FTA (a)	Recreational User/ Trespasser	Adult	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to surface soil.
						Inhalation	Quant	Recreational Users/trespassers may access the site and be exposed to surface soil as fugitive dust.
						Ingestion	Quant	Recreational Users/trespassers may access the site and be exposed to surface soil.
					Child	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to surface soil.
						Inhalation	Quant	Recreational Users/trespassers may access the site and be exposed to surface soil as fugitive dust.
						Ingestion	Quant	Recreational Users/trespassers may access the site and be exposed to surface soil.
	Groundwater	Groundwater	FTA (b)	Construction Worker	Adult	Dermal	Quant	Assumes construction activites occur currently or may occur in the future; Contact with shallow groundwater during excavation may occur.
						Ingestion	Quant	Assumes construction activites occur currently or may occur in the future; Incidental ingestion of shallow groundwater may occur during excavation activites.
		Trench Air	FTA	Construction Worker	Adult	Inhalation	Quant	Assumes construction activites occur currently or may occur in the future; Inhalation of volatile compounds originating from groundwater may occur while working in an excavation trench.
	Sediment	Sediment	FTA	Construction Worker	Adult	Dermal	Quant	Assumes construction activites occur currently or may occur in the future.
						Ingestion	Quant	Assumes construction activites occur currently or may occur in the future.
				Recreational User/ Trespasser	Adult	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to sediment.
						Ingestion	Quant	Recreational Users/trespassers may access the site and be exposed to sediment.
					Child	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to sediment.
						Ingestion	Quant	Recreational Users/trespassers may access the site and be exposed to sediment.
	Surface Water	Surface Water	FTA	Construction Worker	Adult	Dermal	Quant	Assumes construction activites occur currently or may occur in the future.
						Ingestion	Quant	Assumes construction activites occur currently or may occur in the future.
				Recreational User/ Trespasser	Adult	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to surface water.
						Ingestion	Quant	Recreational Users/trespassers may access the site and be exposed to surface water.
					Child	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to surface water.
						Ingestion	Quant	Recreational Users/trespassers may access the site and be exposed to surface water.

TABLE 1

SUMMARY OF RECEPTORS, EXPOSURE POINTS, MEDIA, AND EXPOSURE PATHWAYS FOR EVALUATION

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Soil	Subsurface Soil	FTA (a)	Recreational User/ Trespasser	Adult	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to subsurface soils under a hypothetical future scenario in which subsurface soils are brought to the surface.
						Inhalation	Quant	Recreational Users/trespassers may access the site and be exposed to subsurface soil as fugitive dust under a hypothetical future scenario in which subsurface soils are brought to the surface.
						Ingestion	Quant	Recreational Users/trespassers may access the site and be exposed to subsurface soils under a hypothetical future scenario in which subsurface soils are brought to the surface.
					Child	Dermal	Quant	Recreational Users/trespassers may access the site and be exposed to subsurface soils under a hypothetical future scenario in which subsurface soils are brought to the surface.
						Inhalation	Quant	Recreational Users may access the site and be exposed to subsurface soil as fugitive dust under a hypothetical future scenario in which subsurface soils are brought to the surface.
						Ingestion	Quant	Recreational Users may access the site and be exposed to subsurface soils under a hypothetical future scenario in which subsurface soils are brought to the surface.
		Surface Soil/ Subsurface Soil	FTA (a)	Outdoor Industrial Worker	Adult	Dermal	Quant	Future development of site could include commercial/industrial development, leading to potential exposure to surface/subsurface soil.
						Inhalation	Quant	Future development of site could include commercial/industrial development, leading to potential exposure to surface/subsurface soil as fugitive dust.
						Ingestion	Quant	Future development of site could include commercial/industrial development, leading to potential exposure to surface/subsurface soil.
				Hypothetical On-site Resident	Adult	Dermal	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to surface/subsurface soil.
						Inhalation	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to surface/subsurface soil as fugitive dust.
						Ingestion	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to surface/subsurface soil.
					Child	Dermal	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to surface/subsurface soil.
						Inhalation	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to surface/subsurface soil as fugitive dust.
						Ingestion	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to surface/subsurface soil.

TABLE 1

SUMMARY OF RECEPTORS, EXPOSURE POINTS, MEDIA, AND EXPOSURE PATHWAYS FOR EVALUATION

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Groundwater	Groundwater	FTA	Hypothetical On-site Resident	Adult	Dermal	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to groundwater during bathing/showering activities.
						Inhalation	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to volatiles in groundwater during bathing/showering activities.
						Ingestion	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to groundwater as drinking water.
					Child	Dermal	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to groundwater during bathing/showering activities.
						Inhalation	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to volatiles in groundwater during bathing/showering activities.
						Ingestion	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to groundwater as drinking water.
		Indoor Air	FTA	Indoor Industrial Worker	Adult	Inhalation	Quant	Future development of site could include commercial/industrial development, leading to potential exposure to volatiles in indoor air via migration from groundwater (vapor intrusion pathway).
				Hypothetical On-site Resident	Adult	Inhalation	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to volatiles in indoor air via migration from groundwater (vapor intrusion pathway).
					Child	Inhalation	Quant	Assumes future on-site residence may be constructed, leading to potential exposure to volatiles in indoor air via migration from groundwater (vapor intrusion pathway).
	Sediment	Sediment	FTA	Hypothetical On-site Resident	Adult	Dermal	Quant	Assumes future on-site residence may be constructed and that exposure to sediment may occur.
						Ingestion	Quant	Assumes future on-site residence may be constructed and that exposure to sediment may occur.
					Child	Dermal	Quant	Assumes future on-site residence may be constructed and that exposure to sediment may occur.
						Ingestion	Quant	Assumes future on-site residence may be constructed and that exposure to sediment may occur.
	Surface Water	Surface Water	FTA	Hypothetical On-site Resident	Adult	Dermal	Quant	Assumes future on-site residence may be constructed and that exposure to sediment may occur.
						Ingestion	Quant	Assumes future on-site residence may be constructed and that exposure to sediment may occur.
					Child	Dermal	Quant	Assumes future on-site residence may be constructed and that exposure to surface water may occur.
						Ingestion	Quant	Assumes future on-site residence may be constructed and that exposure to surface water may occur.

Notes:

HHRA - Human Health Risk Assessment.

FTA - Fire Training Area.

Surface soils are defined as soils collected between 0 and 2 feet below ground surface (ft bgs); Subsurface soils are defined as soils collected deeper than 2 ft bgs, to a maximum depth of 15 ft bgs. One soil sample collected from 1 to 3 ft bgs was included in the subsurface soil dataset.

(a) Evaluated for the following exposure areas: Area 1, Area 2. These areas are described in the HHRA report text.

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 1
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 1		**Metals**													
Surface Soil	7429-90-5	ALUMINUM	4.32E+03 J	1.70E+04	mg/kg	FTA-SB-208 (0 - 2 ft)	10 / 10	-	1.70E+04	N/A	7.70E+03 NC	N/A	N/A	Y	ASL
	7440-36-0	ANTIMONY	6.00E-02 J	7.20E-01 J	mg/kg	FTA-SB-201 (0 - 2 ft)	10 / 10	-	7.20E-01	N/A	3.10E+00 NC	N/A	N/A	N	BSL
	7440-38-2	ARSENIC	3.60E+00 J	1.20E+01 J	mg/kg	FTA-SB-205 (0 - 2 ft)	10 / 10	-	1.20E+01	N/A	6.80E-01 C	N/A	N/A	Y	ASL
	7440-39-3	BARIUM	1.17E+01	1.14E+02 J	mg/kg	FTA-SB-200 (0 - 2 ft)	10 / 10	-	1.14E+02	N/A	1.50E+03 NC	N/A	N/A	N	BSL
	7440-41-7	BERYLLIUM	2.60E-01 J	8.90E-01 J	mg/kg	FTA-SB-201 (0 - 2 ft)	10 / 10	-	8.90E-01	N/A	1.60E+01 NC	N/A	N/A	N	BSL
	7440-43-9	CADMIUM	4.00E-02 J	1.30E+00 J	mg/kg	FTA-SB-201 (0 - 2 ft)	10 / 10	-	1.30E+00	N/A	7.10E+00 NC	N/A	N/A	N	BSL
	7440-70-2	CALCIUM	1.47E+03	2.27E+04 J	mg/kg	FTA-SB-201 (0 - 2 ft)	10 / 10	-	2.27E+04	N/A	EN	N/A	N/A	N	NUT
	7440-47-3	CHROMIUM, TOTAL	1.39E+01 J	3.73E+01 J	mg/kg	FTA-SB-203 (0 - 2 ft)	14 / 15	10.6 - 10.6	3.73E+01	N/A	1.20E+04 NC	N/A	N/A	N	BSL
	7440-48-4	COBALT	6.80E+00	2.42E+01 J	mg/kg	FTA-SB-201 (0 - 2 ft)	10 / 10	-	2.42E+01	N/A	2.30E+00 NC	N/A	N/A	Y	ASL
	7440-50-8	COPPER	6.30E+00	2.90E+01 J	mg/kg	FTA-SB-201 (0 - 2 ft)	10 / 10	-	2.90E+01	N/A	3.10E+02 NC	N/A	N/A	N	BSL
	7439-89-6	IRON	6.84E+03 J	2.48E+04 J	mg/kg	FTA-SB-205 (0 - 2 ft)	10 / 10	-	2.48E+04	N/A	5.50E+03 NC	N/A	N/A	Y	ASL
	7439-92-1	LEAD	5.20E+00 J	1.68E+01 J	mg/kg	FTA-SB-200 (0 - 2 ft)	10 / 10	-	1.68E+01	N/A	4.00E+02 L	N/A	N/A	N	BSL
	7439-95-4	MAGNESIUM	2.76E+03 J	8.14E+03	mg/kg	FTA-SB-203 (0 - 2 ft)	10 / 10	-	8.14E+03	N/A	EN	N/A	N/A	N	NUT
	7439-96-5	MANGANESE	3.42E+02	8.60E+03 J	mg/kg	FTA-SB-201 (0 - 2 ft)	10 / 10	-	8.60E+03	N/A	1.80E+02 NC	N/A	N/A	Y	ASL
	7439-97-6	MERCURY	1.00E-02 J	2.10E-01 J	mg/kg	FTA-SB-200 (0 - 2 ft)	10 / 10	-	2.10E-01	N/A	2.30E+00 NC	N/A	N/A	N	BSL
	7440-02-0	NICKEL	7.10E+00	2.91E+01	mg/kg	FTA-SB-203 (0 - 2 ft)	9 / 10	8.9 - 8.9	2.91E+01	N/A	1.50E+02 NC	N/A	N/A	N	BSL
	7440-09-7	POTASSIUM	4.36E+02 J	1.69E+03 J	mg/kg	FTA-SB-205 (0 - 2 ft)	9 / 10	536 - 536	1.69E+03	N/A	EN	N/A	N/A	N	NUT
	7782-49-2	SELENIUM	8.00E-01 J	6.40E+00 J	mg/kg	FTA-SB-201 (0 - 2 ft)	3 / 10	0.26 - 4	6.40E+00	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-22-4	SILVER	3.00E-02 J	1.20E-01 J	mg/kg	FTA-SB-200 (0 - 2 ft)	10 / 10	-	1.20E-01	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-23-5	SODIUM	1.03E+02 J	2.08E+02 J	mg/kg	FTA-SB-204 (0 - 2 ft)	5 / 10	61.2 - 167	2.08E+02	N/A	EN	N/A	N/A	N	NUT
	7440-28-0	THALLIUM	5.00E-02 J	1.00E-01 J	mg/kg	FTA-SB-219 (0 - 2 ft)	10 / 10	-	1.00E-01	N/A	7.80E-02 NC	N/A	N/A	Y	ASL
	7440-62-2	VANADIUM	1.78E+01 J	4.27E+01	mg/kg	FTA-SB-208 (0 - 2 ft)	10 / 10	-	4.27E+01	N/A	3.90E+01 NC	N/A	N/A	Y	ASL
	7440-66-6	ZINC	3.45E+01	5.62E+01 J	mg/kg	FTA-SB-204 (0 - 2 ft)	10 / 10	-	5.62E+01	N/A	2.30E+03 NC	N/A	N/A	N	BSL
		Pesticides													
	53494-70-5	ENDRIN KETONE	1.50E-03 J	1.40E-02 J	mg/kg	FTA-SB-204 (0 - 2 ft)	3 / 3	-	1.40E-02	N/A	1.90E+00 NC	N/A	N/A	N	BSL
		PCBs													
	RATotAroclors	TOTAL AROCLORS	1.50E-02	8.70E-01	mg/kg	FTA-SB-201 (0 - 2 ft)	6 / 10	0.0097 - 0.012	8.70E-01	N/A	1.20E-01 NC	N/A	N/A	Y	ASL
		SVOCs													
	92-52-4	1,1-BIPHENYL	1.80E-03 J	6.40E-01	mg/kg	FTA-SB-203 (0 - 2 ft)	4 / 10	0.01 - 0.056	6.40E-01	N/A	4.70E+00 NC	N/A	N/A	N	BSL
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	4.10E-03 J	4.10E-03 J	mg/kg	FTA-SB-218 (0 - 2 ft)	1 / 10	0.045 - 0.33	4.10E-03	N/A	1.90E+02 NC	N/A	N/A	N	BSL
	91-57-6	2-METHYLNAPHTHALENE	2.10E+00	2.10E+00	mg/kg	FTA-SB-203 (0 - 2 ft)	1 / 10	0.25 - 1.6	2.10E+00	N/A	2.40E+01 NC	N/A	N/A	N	BSL
	83-32-9	ACENAPHTHENE	4.70E-01	4.70E-01	mg/kg	FTA-SB-203 (0 - 2 ft)	1 / 10	0.25 - 1.6	4.70E-01	N/A	3.60E+02 NC	N/A	N/A	N	BSL
	1912-24-9	ATRAZINE	1.90E-03 J	1.90E-03 J	mg/kg	FTA-SB-218 (0 - 2 ft)	1 / 10	0.0089 - 0.066	1.90E-03	N/A	2.40E+00 C	N/A	N/A	N	BSL
	56-55-3	BENZO[A]ANTHRACENE	2.70E-03 J	6.90E-02	mg/kg	FTA-SB-203 (0 - 2 ft)	7 / 10	0.011 - 0.066	6.90E-02	N/A	1.60E-01 C	N/A	N/A	N	BSL
	50-32-8	BENZO[A]PYRENE	5.30E-03 J	3.70E-02	mg/kg	FTA-SB-203 (0 - 2 ft)	3 / 10	0.01 - 0.066	3.70E-02	N/A	1.60E-02 C	N/A	N/A	Y	ASL
	205-99-2	BENZO[B]FLUORANTHENE	3.00E-03 J	3.80E-02	mg/kg	FTA-SB-203 (0 - 2 ft)	5 / 10	0.012 - 0.066	3.80E-02	N/A	1.60E-01 C	N/A	N/A	N	BSL
	85-68-7	BUTYLBENZYLPHTHALATE	3.10E-02 J	3.10E-02 J	mg/kg	FTA-SB-201 (0 - 2 ft)	1 / 10	0.045 - 0.33	3.10E-02	N/A	2.90E+02 C	N/A	N/A	N	BSL

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 1
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 1	218-01-9	CHRYSENE	1.70E-01 J	1.70E-01 J	mg/kg	FTA-SB-203 (0 - 2 ft)	1 / 10	0.25 - 1.6	1.70E-01	N/A	1.60E+01 C	N/A	N/A	N	BSL
Surface Soil	53-70-3	DIBENZ[A,H]ANTHRACENE	3.10E-03 J	6.20E-03 J	mg/kg	FTA-SB-202 (0 - 2 ft)	3 / 10	0.0089 - 0.066	6.20E-03	N/A	1.60E-02 C	N/A	N/A	N	BSL
	206-44-0	FLUORANTHENE	1.00E-01 J	1.00E-01 J	mg/kg	FTA-SB-203 (0 - 2 ft)	1 / 10	0.25 - 1.6	1.00E-01	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	86-73-7	FLUORENE	7.70E-01	7.70E-01	mg/kg	FTA-SB-203 (0 - 2 ft)	1 / 10	0.25 - 1.6	7.70E-01	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	193-39-5	INDENO[1,2,3-CD]PYRENE	5.50E-03 J	8.20E-02 J	mg/kg	FTA-SB-200 (0 - 2 ft)	9 / 10	0.012 - 0.012	8.20E-02	N/A	1.60E-01 C	N/A	N/A	N	BSL
	91-20-3	NAPHTHALENE	4.30E-02 J	1.20E-01	mg/kg	FTA-SB-203 (0 - 2 ft)	2 / 10	0.01 - 0.066	1.20E-01	N/A	3.80E+00 C	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	1.60E+00	1.60E+00	mg/kg	FTA-SB-203 (0 - 2 ft)	1 / 10	0.25 - 1.6	1.60E+00	N/A	1.80E+03 NC	N/A	N/A	N	BSL
	129-00-0	PYRENE	1.70E-01 J	4.20E-01	mg/kg	FTA-SB-203 (0 - 2 ft)	2 / 10	0.25 - 1.6	4.20E-01	N/A	1.80E+02 NC	N/A	N/A	N	BSL
		VOCs													
	67-64-1	ACETONE	5.30E-02	2.00E+00 J	mg/kg	FTA-SB-201 (0 - 2 ft)	8 / 10	0.051 - 0.11	2.00E+00	N/A	6.10E+03 NC	N/A	N/A	N	BSL
	71-43-2	BENZENE	1.40E-03 J	1.40E-03 J	mg/kg	FTA-SB-204 (0 - 2 ft)	1 / 10	0.002 - 0.028	1.40E-03	N/A	1.20E+00 C	N/A	N/A	N	BSL
	156-59-2	CIS-1,2-DICHLOROETHENE	1.40E-02 J	1.40E-02 J	mg/kg	FTA-SB-201 (0 - 2 ft)	1 / 10	0.002 - 0.028	1.40E-02	N/A	1.60E+01 NC	N/A	N/A	N	BSL
	100-41-4	ETHYLBENZENE	8.00E-03 J	8.00E-03 J	mg/kg	FTA-SB-204 (0 - 2 ft)	1 / 10	0.002 - 0.028	8.00E-03	N/A	5.80E+00 C	N/A	N/A	N	BSL
	98-82-8	ISOPROPYLBENZENE	1.10E-02 J	1.10E-02 J	mg/kg	FTA-SB-219 (0 - 2 ft)	1 / 10	0.002 - 0.028	1.17E+01	N/A	1.90E+02 NC	N/A	N/A	N	BSL
	108-88-3	TOLUENE	4.80E-03 J	1.60E-02 J	mg/kg	FTA-SB-204 (0 - 2 ft)	2 / 10	0.002 - 0.028	1.60E-02	N/A	4.90E+02 NC	N/A	N/A	N	BSL
Fire Training Area 1		**Metals**													
Subsurface Soil	7429-90-5	ALUMINUM	3.55E+03 J	1.91E+04	mg/kg	FTA-SB-218 (6 - 10 ft)	11 / 11	-	1.91E+04	N/A	7.70E+03 NC	N/A	N/A	Y	ASL
	7440-36-0	ANTIMONY	4.00E-02 J	3.90E-01 J	mg/kg	FTA-SB-200 (2 - 6 ft)	11 / 11	-	3.90E-01	N/A	3.10E+00 NC	N/A	N/A	N	BSL
	7440-38-2	ARSENIC	3.40E+00 J	1.29E+01 J	mg/kg	FTA-SB-205 (2 - 6 ft)	11 / 11	-	1.29E+01	N/A	6.80E-01 C	N/A	N/A	Y	ASL
	7440-39-3	BARIUM	1.92E+01 J	7.72E+01	mg/kg	FTA-SB-202 (2 - 6 ft)	11 / 11	-	7.72E+01	N/A	1.50E+03 NC	N/A	N/A	N	BSL
	7440-41-7	BERYLLIUM	2.60E-01 J	7.50E-01	mg/kg	FTA-SB-204 (6 - 10 ft)	11 / 11	-	7.50E-01	N/A	1.60E+01 NC	N/A	N/A	N	BSL
	7440-43-9	CADMIUM	6.00E-02 J	6.70E-01 J	mg/kg	FTA-SB-200 (2 - 6 ft)	11 / 11	-	6.70E-01	N/A	7.10E+00 NC	N/A	N/A	N	BSL
	7440-70-2	CALCIUM	1.60E+03	1.66E+04 J	mg/kg	FTA-SB-200 (2 - 6 ft)	11 / 11	-	1.66E+04	N/A	EN	N/A	N/A	N	NUT
	7440-47-3	CHROMIUM, TOTAL	2.06E+01 J	3.81E+01 J	mg/kg	FTA-SB-208 (6 - 10 ft)	10 / 11	18.9 - 18.9	3.81E+01	N/A	1.20E+04 NC	N/A	N/A	N	BSL
	7440-48-4	COBALT	2.20E+00 J	1.58E+01	mg/kg	FTA-SB-205 (2 - 6 ft)	11 / 11	-	1.58E+01	N/A	2.30E+00 NC	N/A	N/A	Y	ASL
	7440-50-8	COPPER	1.78E+01 J	3.59E+01 J	mg/kg	FTA-SB-201 (2 - 6 ft)	11 / 11	-	3.59E+01	N/A	3.10E+02 NC	N/A	N/A	N	BSL
	7439-89-6	IRON	2.49E+03 J	3.47E+04 J	mg/kg	FTA-SB-205 (2 - 6 ft)	11 / 11	-	3.47E+04	N/A	5.50E+03 NC	N/A	N/A	Y	ASL
	7439-92-1	LEAD	5.70E+00 J	1.48E+01 J	mg/kg	FTA-SB-205 (2 - 6 ft)	10 / 11	2.5 - 2.5	1.48E+01	N/A	4.00E+02 L	N/A	N/A	N	BSL
	7439-95-4	MAGNESIUM	2.27E+03 J	8.94E+03 J	mg/kg	FTA-SB-205 (2 - 6 ft)	11 / 11	-	8.94E+03	N/A	EN	N/A	N/A	N	NUT
	7439-96-5	MANGANESE	2.49E+02 J	1.46E+03 J	mg/kg	FTA-SB-201 (2 - 6 ft)	11 / 11	-	1.46E+03	N/A	1.80E+02 NC	N/A	N/A	Y	ASL
	7439-97-6	MERCURY	7.00E-03 J	1.30E-01 J	mg/kg	FTA-SB-201 (2 - 6 ft)	9 / 11	0.016 - 0.018	1.30E-01	N/A	2.30E+00 NC	N/A	N/A	N	BSL
	7440-02-0	NICKEL	1.41E+01 J	3.68E+01	mg/kg	FTA-SB-205 (2 - 6 ft)	10 / 11	6.2 - 6.2	3.68E+01	N/A	1.50E+02 NC	N/A	N/A	N	BSL
	7440-09-7	POTASSIUM	5.85E+02 J	3.30E+03 J	mg/kg	FTA-SB-204 (6 - 10 ft)	10 / 11	232 - 232	3.30E+03	N/A	EN	N/A	N/A	N	NUT
	7782-49-2	SELENIUM	2.20E-01 J	5.70E+00 J	mg/kg	FTA-SB-201 (2 - 6 ft)	2 / 11	0.25 - 5.6	5.70E+00	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-22-4	SILVER	2.00E-02 J	8.00E-02 J	mg/kg	FTA-SB-200 (2 - 6 ft)	11 / 11	-	8.00E-02	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-23-5	SODIUM	9.18E+01 J	2.57E+02 J	mg/kg	FTA-SB-204 (6 - 10 ft)	7 / 11	101 - 205	2.57E+02	N/A	EN	N/A	N/A	N	NUT

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CUTLER, MAINE

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 1	7440-28-0	THALLIUM	5.00E-02 J	1.50E-01	mg/kg	FTA-SB-204 (6 - 10 ft)	10 / 11	0.05 - 0.05	1.50E-01	N/A	7.80E-02 NC	N/A	N/A	Y	ASL
Subsurface Soil	7440-62-2	VANADIUM	1.16E+01 J	4.24E+01	mg/kg	FTA-SB-218 (6 - 10 ft)	11 / 11	-	4.24E+01	N/A	3.90E+01 NC	N/A	N/A	Y	ASL
	7440-66-6	ZINC	1.12E+01 J	7.30E+01 J	mg/kg	FTA-SB-205 (2 - 6 ft)	11 / 11	-	7.30E+01	N/A	2.30E+03 NC	N/A	N/A	N	BSL
		Pesticides													
	53494-70-5	ENDRIN KETONE	2.10E-03 J	2.10E-03 J	mg/kg	FTA-SB-204 (6 - 10 ft)	1 / 3	0.0017 - 0.0018	2.10E-03	N/A	1.90E+00 NC	N/A	N/A	N	BSL
		PCBs													
	RATotAroclors	TOTAL AROCLORS	1.80E-02	1.80E-02	mg/kg	FTA-SB-204 (6 - 10 ft)	1 / 10	0.0092 - 0.074	1.80E-02	N/A	1.20E-01 NC	N/A	N/A	N	BSL
		SVOCs													
	92-52-4	1,1-BIPHENYL	1.40E-03 J	2.00E-01	mg/kg	FTA-SB-203 (2 - 6 ft)	3 / 11	0.0092 - 0.077	2.00E-01	N/A	4.70E+00 NC	N/A	N/A	N	BSL
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	3.30E-03 J	1.60E-02 J	mg/kg	FTA-SB-204 (6 - 10 ft)	2 / 11	0.046 - 0.38	1.60E-02	N/A	1.90E+02 NC	N/A	N/A	N	BSL
	88-06-2	2,4,6-TRICHLOROPHENOL	6.60E-03 J	6.60E-03 J	mg/kg	FTA-SB-204 (6 - 10 ft)	1 / 11	0.046 - 0.38	6.60E-03	N/A	6.30E+00 NC	N/A	N/A	N	BSL
	91-57-6	2-METHYLNAPHTHALENE	7.00E-01	7.00E-01	mg/kg	FTA-SB-203 (2 - 6 ft)	1 / 11	0.23 - 1.9	7.00E-01	N/A	2.40E+01 NC	N/A	N/A	N	BSL
	83-32-9	ACENAPHTHENE	1.70E-01 J	1.70E-01 J	mg/kg	FTA-SB-203 (2 - 6 ft)	1 / 11	0.23 - 1.9	1.70E-01	N/A	3.60E+02 NC	N/A	N/A	N	BSL
	1912-24-9	ATRAZINE	1.80E-03 J	3.70E-03 J	mg/kg	FTA-SB-204 (6 - 10 ft)	2 / 11	0.0092 - 0.077	3.70E-03	N/A	2.40E+00 C	N/A	N/A	N	BSL
	100-52-7	BENZALDEHYDE	9.30E-01 J	9.30E-01 J	mg/kg	FTA-SB-200 (2 - 6 ft)	1 / 11	0.23 - 1.2	9.30E-01	N/A	1.70E+02 C	N/A	N/A	N	BSL
	56-55-3	BENZO[A]ANTHRACENE	2.20E-03 J	3.40E-02	mg/kg	FTA-SB-203 (2 - 6 ft)	6 / 11	0.0096 - 0.077	3.40E-02	N/A	1.60E-01 C	N/A	N/A	N	BSL
	50-32-8	BENZO[A]PYRENE	4.60E-03 J	1.60E-02 J	mg/kg	FTA-SB-203 (2 - 6 ft)	3 / 11	0.0096 - 0.077	1.60E-02	N/A	1.60E-02 C	N/A	N/A	N	BSL
	205-99-2	BENZO[B]FLUORANTHENE	3.30E-03 J	6.10E-03 J	mg/kg	FTA-SB-204 (6 - 10 ft)	2 / 11	0.0092 - 0.077	6.10E-03	N/A	1.60E-01 C	N/A	N/A	N	BSL
	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1.60E-01 J	5.80E-01	mg/kg	FTA-SB-219 (2 - 6 ft)	2 / 11	0.23 - 1.9	5.80E-01	N/A	3.90E+01 C	N/A	N/A	N	BSL
	85-68-7	BUTYLBENZYLPHTHALATE	4.90E-03 J	5.90E-03 J	mg/kg	FTA-SB-219 (2 - 6 ft)	2 / 11	0.046 - 0.38	5.90E-03	N/A	2.90E+02 C	N/A	N/A	N	BSL
	53-70-3	DIBENZ[A,H]ANTHRACENE	3.10E-03 J	1.60E-02 J	mg/kg	FTA-SB-200 (2 - 6 ft)	4 / 11	0.0092 - 0.05	1.60E-02	N/A	1.60E-02 C	N/A	N/A	N	BSL
	132-64-9	DIBENZOFURAN	8.60E-02 J	8.60E-02 J	mg/kg	FTA-SB-203 (2 - 6 ft)	1 / 11	0.23 - 1.9	8.60E-02	N/A	7.30E+00 NC	N/A	N/A	N	BSL
	86-73-7	FLUORENE	3.00E-01 J	3.00E-01 J	mg/kg	FTA-SB-203 (2 - 6 ft)	1 / 11	0.23 - 1.9	3.00E-01	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	193-39-5	INDENO[1,2,3-CD]PYRENE	4.70E-03 J	4.80E-02 J	mg/kg	FTA-SB-200 (2 - 6 ft)	9 / 11	0.0096 - 0.011	4.80E-02	N/A	1.60E-01 C	N/A	N/A	N	BSL
	91-20-3	NAPHTHALENE	4.10E-02	4.10E-02	mg/kg	FTA-SB-203 (2 - 6 ft)	1 / 11	0.0092 - 0.077	4.10E-02	N/A	3.80E+00 C	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	7.00E-01	7.00E-01	mg/kg	FTA-SB-203 (2 - 6 ft)	1 / 11	0.23 - 1.9	7.00E-01	N/A	1.80E+03 NC	N/A	N/A	N	BSL
	129-00-0	PYRENE	1.70E-01 J	1.70E-01 J	mg/kg	FTA-SB-203 (2 - 6 ft)	1 / 11	0.23 - 1.9	1.70E-01	N/A	1.80E+02 NC	N/A	N/A	N	BSL
		VOCs													
	67-64-1	ACETONE	2.20E-02	2.40E+00 J	mg/kg	FTA-SB-201 (4 - 6 ft)	8 / 13	0.036 - 0.067	2.40E+00	N/A	6.10E+03 NC	N/A	N/A	N	BSL
	75-25-2	BROMOFORM	2.00E-03 JB	2.00E-03 JB	mg/kg	FTA-SS-23 (1 - 3 ft)	1 / 2	0.005 - 0.005	2.00E-03	N/A	1.90E+01 C	N/A	N/A	N	BSL
	67-66-3	CHLOROFORM	6.00E-04 JB	6.00E-04 JB	mg/kg	FTA-SS-23 (1 - 3 ft) FTA-SS-25 (3 - 5 ft)	2 / 13	0.002 - 0.028	6.00E-04	N/A	3.20E-01 C	N/A	N/A	N	BSL
	74-87-3	CHLOROMETHANE	4.00E-03 JB	4.00E-03 JB	mg/kg	FTA-SS-23 (1 - 3 ft) FTA-SS-25 (3 - 5 ft)	2 / 13	0.0041 - 0.055	4.00E-03	N/A	1.10E+01 NC	N/A	N/A	N	BSL
	156-59-2	CIS-1,2-DICHLOROETHENE	4.90E-02 J	4.90E-02 J	mg/kg	FTA-SB-201 (4 - 6 ft)	1 / 11	0.002 - 0.028	4.90E-02	N/A	1.60E+01 NC	N/A	N/A	N	BSL
	98-82-8	ISOPROPYLBENZENE	1.10E-02 J	1.10E-02 J	mg/kg	FTA-SB-201 (4 - 6 ft)	1 / 11	0.002 - 0.028	1.10E-02	N/A	1.90E+02 NC	N/A	N/A	N	BSL
	108-88-3	TOLUENE	1.50E-03 J	2.20E-02 J	mg/kg	FTA-SB-201 (4 - 6 ft)	2 / 13	0.002 - 0.028	2.20E-02	N/A	4.90E+02 NC	N/A	N/A	N	BSL
	156-60-5	TRANS-1,2-DICHLOROETHENE	7.50E-03 J	7.50E-03 J	mg/kg	FTA-SB-201 (4 - 6 ft)	1 / 11	0.002 - 0.028	7.50E-03	N/A	1.60E+02 NC	N/A	N/A	N	BSL
	75-01-4	VINYL CHLORIDE	8.30E-02 J	8.30E-02 J	mg/kg	FTA-SB-201 (4 - 6 ft)	1 / 13	0.0041 - 0.055	8.30E-02	N/A	5.90E-02 C	N/A	N/A	Y	ASL

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 1
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)

Notes:

Refer to Attachment A for samples included in data set.

Surface soil is defined as soil samples collected from 0 to 2 ft bgs.

Subsurface soil is defined as soil samples collected at depths greater than 2 ft bgs, to a maximum depth of 15 ft bgs. One sample collected from 1 to 3 ft bgs is included as subsurface soil.

Totals for use in risk assessment are calculated as discussed in the report text and have a CAS number beginning with "RA-".

ARAR/TBC = Applicable or Relevant and Appropriate Requirements/To be Considered.

C = Cancer. Screening value is based on the screening level protective of carcinogenic effects.

CAS = Chemical Abstracts Service.

COPC = Chemical of Potential Concern.

ft bgs - feet below ground surface.

L = Lead screening level developed by USEPA using blood-lead modeling based on target blood lead concentrations (USEPA Regional Screening Level (RSL) Table User's Guide.

mg/kg - milligrams per kilogram.

N/A = Not Applicable or Not Available.

NC = Noncancer. Screening value is based on the screening level protective of noncarcinogenic effects.

PCBs = Polychlorinated biphenyls.

SVOCs = Semivolatile organic compounds.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds.

(1) Minimum/maximum detected concentration and associated data flags.

B = For organics, the analyte was found in the associated blank at a significant level relative to the sample result.

J = The chemical was positively identified; however, the associated numerical value is an estimated concentration.

(2) Lab Reporting Detection Limits (RDLs) are shown where the frequency of detection is less than 100%.

(3) Maximum detected concentration used for screening, except for lead for which the mean detected concentration is used.

(4) Background values were not used for COPC screening purposes, although applicable background values may be considered in the risk characterization portion of the risk assessment, if available.

(5) Screening levels are equal to the USEPA Regional Screening Level (RSL) for residential soil based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens (May 2016).

The following surrogates were used for chemicals without available screening levels or with multiple forms:

The value for cadmium in the diet was used for cadmium.

The value for endrin was used for endrin ketone.

The value for trivalent chromium was used for total chromium.

The value for Aroclor 1254 was used for Total Aroclors.

The value for manganese non-diet was used for manganese.

The value for anthracene was used for phenanthrene.

The value for mercuric chloride was used for mercury.

(6) Rationale Codes:

Selection Reason: Above Screening Level (ASL)

Deletion Reason: Below Screening Level (BSL); Essential Nutrient (NUT)

TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 2

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 2		**Metals**													
Surface Soil	7429-90-5	ALUMINUM	8.97E+03	1.97E+04	mg/kg	FTA-ANOM1E-SO-SURF (0 - 2 ft)	27 / 27	-	1.97E+04	N/A	7.70E+03 NC	N/A	N/A	Y	ASL
	7440-36-0	ANTIMONY	5.20E-02 J	1.70E-01 J	mg/kg	FTA-ANOM1C-SO-SURF (0 - 2 ft)	26 / 27	0.046 - 0.046	1.70E-01	N/A	3.10E+00 NC	N/A	N/A	N	BSL
	7440-38-2	ARSENIC	4.60E+00 J	1.13E+01 J	mg/kg	FTA-ANOM1C-SO-SURF (0 - 2 ft) FTA-ANOM1E-SO-SURF (0 - 2 ft)	27 / 27	-	1.13E+01	N/A	6.80E-01 C	N/A	N/A	Y	ASL
	7440-39-3	BARIUM	1.51E+01	5.27E+01	mg/kg	FTA-ANOM1E-SO-SURF (0 - 2 ft)	27 / 27	-	5.27E+01	N/A	1.50E+03 NC	N/A	N/A	N	BSL
	7440-41-7	BERYLLIUM	2.80E-01 J	8.70E-01	mg/kg	FTA-ANOM1E-SO-SURF (0 - 2 ft)	27 / 27	-	8.70E-01	N/A	1.60E+01 NC	N/A	N/A	N	BSL
	7440-43-9	CADMIUM	5.00E-02 J	1.90E-01	mg/kg	FTA-SB-212 (0 - 2 ft)	27 / 27	-	1.90E-01	N/A	7.10E+00 NC	N/A	N/A	N	BSL
	7440-70-2	CALCIUM	1.68E+03	5.84E+03	mg/kg	FTA-SB-216 (0 - 2 ft)	27 / 27	-	5.84E+03	N/A	EN	N/A	N/A	N	NUT
	7440-47-3	CHROMIUM, TOTAL	1.84E+01 J	4.23E+01 J	mg/kg	FTA-AREAA-02 (0 - 2 ft)	33 / 33	-	4.23E+01	N/A	1.20E+04 NC	N/A	N/A	N	BSL
	7440-48-4	COBALT	7.80E+00	1.52E+01	mg/kg	FTA-SB-210 (0 - 2 ft)	27 / 27	-	1.52E+01	N/A	2.30E+00 NC	N/A	N/A	Y	ASL
	7440-50-8	COPPER	1.29E+01	3.21E+01	mg/kg	FTA-SB-216 (0 - 2 ft)	27 / 27	-	3.21E+01	N/A	3.10E+02 NC	N/A	N/A	N	BSL
	7439-89-6	IRON	1.64E+04	3.20E+04	mg/kg	FTA-SB-210 (0 - 2 ft)	27 / 27	-	3.20E+04	N/A	5.50E+03 NC	N/A	N/A	Y	ASL
	7439-92-1	LEAD	7.30E+00 J	4.75E+01 J	mg/kg	FTA-AREAA-02 (0 - 2 ft)	27 / 27	-	4.75E+01	N/A	4.00E+02 L	N/A	N/A	N	BSL
	7439-95-4	MAGNESIUM	4.77E+03	9.69E+03	mg/kg	FTA-SB-209 (0 - 2 ft)	27 / 27	-	9.69E+03	N/A	EN	N/A	N/A	N	NUT
	7439-96-5	MANGANESE	3.15E+02	6.86E+02	mg/kg	FTA-SB-210 (0 - 2 ft)	27 / 27	-	6.86E+02	N/A	1.80E+02 NC	N/A	N/A	Y	ASL
	7439-97-6	MERCURY	4.30E-03 J	3.00E-02 J	mg/kg	FTA-SB-206 (0 - 2 ft) FTA-SB-215 (0 - 2 ft) FTA-SB-216 (0 - 2 ft)	19 / 27	0.014 - 0.018	3.00E-02	N/A	2.30E+00 NC	N/A	N/A	N	BSL
	7440-02-0	NICKEL	1.77E+01 J	3.22E+01 J	mg/kg	FTA-AREAI-01 (0 - 2 ft)	27 / 27	-	3.22E+01	N/A	1.50E+02 NC	N/A	N/A	N	BSL
	7440-09-7	POTASSIUM	5.46E+02 J	2.79E+03 J	mg/kg	FTA-ANOM1E-SO-SURF (0 - 2 ft)	27 / 27	-	2.79E+03	N/A	EN	N/A	N/A	N	NUT
	7782-49-2	SELENIUM	5.60E-02 J	4.00E-01	mg/kg	FTA-SB-216 (0 - 2 ft)	22 / 27	0.21 - 0.45	4.00E-01	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-22-4	SILVER	2.00E-02 J	2.20E-01	mg/kg	FTA-SB-216 (0 - 2 ft)	27 / 27	-	2.20E-01	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-23-5	SODIUM	8.70E+01 J	4.17E+02 J	mg/kg	FTA-SB-210 (0 - 2 ft)	26 / 27	145 - 145	4.17E+02	N/A	EN	N/A	N/A	N	NUT
	7440-28-0	THALLIUM	5.00E-02 J	1.40E-01	mg/kg	FTA-ANOM1E-SO-SURF (0 - 2 ft)	27 / 27	-	1.40E-01	N/A	7.80E-02 NC	N/A	N/A	Y	ASL
	7440-62-2	VANADIUM	2.32E+01 J	4.70E+01	mg/kg	FTA-SB-210 (0 - 2 ft)	27 / 27	-	4.70E+01	N/A	3.90E+01 NC	N/A	N/A	Y	ASL
	7440-66-6	ZINC	3.56E+01 J	7.20E+01	mg/kg	FTA-SB-210 (0 - 2 ft)	27 / 27	-	7.20E+01	N/A	2.30E+03 NC	N/A	N/A	N	BSL
		Pesticides													
	72-54-8	4,4-DDD	9.20E-03 J	9.20E-03 J	mg/kg	FTA-AREAH-01 (0 - 2 ft)	1 / 27	0.00027 - 0.935	9.20E-03	N/A	2.30E+00 C	N/A	N/A	N	BSL
	50-29-3	4,4-DDT	3.20E-03 J	7.60E-01 J	mg/kg	FTA-AREAG-03 (0 - 2 ft)	10 / 27	0.00033 - 0.935	7.60E-01	N/A	1.90E+00 C	N/A	N/A	N	BSL
	309-00-2	ALDRIN	1.60E-04 J	1.60E-04 J	mg/kg	FTA-AREAF-01 (0 - 2 ft)	1 / 27	0.00015 - 0.495	1.60E-04	N/A	3.90E-02 C	N/A	N/A	N	BSL
	60-57-1	DIELDRIN	1.80E-03 J	4.80E-01 J	mg/kg	FTA-AREAG-03 (0 - 2 ft)	11 / 27	0.00032 - 0.935	4.80E-01	N/A	3.40E-02 C	N/A	N/A	Y	ASL
	959-98-8	ENDOSULFAN I	2.60E-04 J	4.40E-04 J	mg/kg	FTA-AREAG-02 (0 - 2 ft)	2 / 27	0.00014 - 0.495	4.40E-04	N/A	4.70E+01 NC	N/A	N/A	N	BSL
	33213-65-9	ENDOSULFAN II	5.80E-03	2.00E-02	mg/kg	FTA-AREAA-02 (0 - 2 ft)	2 / 27	0.00027 - 0.935	2.00E-02	N/A	4.70E+01 NC	N/A	N/A	N	BSL
	1031-07-8	ENDOSULFAN SULFATE	2.50E-03 J	2.20E-01 J	mg/kg	FTA-AREAB-02 (0 - 2 ft)	7 / 27	0.00027 - 0.935	2.20E-01	N/A	4.70E+01 NC	N/A	N/A	N	BSL
	72-20-8	ENDRIN	5.00E-04 J	1.30E-01 J	mg/kg	FTA-AREAG-03 (0 - 2 ft)	5 / 27	0.00027 - 0.935	1.30E-01	N/A	1.90E+00 NC	N/A	N/A	N	BSL
	7421-93-4	ENDRIN ALDEHYDE	1.70E-02 J	1.70E-02 J	mg/kg	FTA-AREAF-01 (0 - 2 ft)	1 / 27	0.0003 - 0.935	1.70E-02	N/A	1.90E+00 NC	N/A	N/A	N	BSL
	53494-70-5	ENDRIN KETONE	1.10E-03 J	3.00E+00 J	mg/kg	FTA-SB-211 (0 - 2 ft)	22 / 27	0.0017 - 0.935	3.00E+00	N/A	1.90E+00 NC	N/A	N/A	Y	ASL
	1024-57-3	HEPTACHLOR EPOXIDE	3.10E-03 J	8.70E-02 J	mg/kg	FTA-AREAG-03 (0 - 2 ft)	3 / 27	0.00014 - 0.495	8.70E-02	N/A	7.00E-02 C	N/A	N/A	Y	ASL
	72-43-5	METHOXYCHLOR	1.20E-02 J	1.60E+00 J	mg/kg	FTA-AREAB-02 (0 - 2 ft)	6 / 27	0.0014 - 4.95	1.60E+00	N/A	3.20E+01 NC	N/A	N/A	N	BSL

TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 2

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 2		**PCBS**													
Surface Soil	RATotAroclors	TOTAL AROCLORS	4.80E-02	6.10E+02	mg/kg	PCBAREA1-013 (1 - 1 ft)	97 / 97	-	6.10E+02	N/A	1.20E-01 NC	N/A	N/A	Y	ASL
		SVOCs													
	92-52-4	1,1-BIPHENYL	1.40E-03 J	5.50E-02	mg/kg	FTA-SB-216 (0 - 2 ft)	5 / 31	0.0088 - 0.38	5.50E-02	N/A	4.70E+00 NC	N/A	N/A	N	BSL
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	3.20E-03 J	3.20E-03 J	mg/kg	FTA-AREAG-02 (0 - 2 ft)	1 / 27	0.044 - 0.058	3.20E-03	N/A	1.90E+02 NC	N/A	N/A	N	BSL
	88-06-2	2,4,6-TRICHLOROPHENOL	3.50E-03 J	3.50E-03 J	mg/kg	FTA-AREAG-02 (0 - 2 ft)	1 / 31	0.044 - 0.38	3.50E-03	N/A	6.30E+00 NC	N/A	N/A	N	BSL
	91-57-6	2-METHYLNAPHTHALENE	2.10E-01 J	2.10E-01 J	mg/kg	FTA-SB-216 (0 - 2 ft)	1 / 27	0.22 - 0.29	2.10E-01	N/A	2.40E+01 NC	N/A	N/A	N	BSL
	83-32-9	ACENAPHTHENE	4.60E-03 J	1.70E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	5 / 27	0.0015 - 0.29	1.70E+00	N/A	3.60E+02 NC	N/A	N/A	N	BSL
	120-12-7	ANTHRACENE	8.70E-02 J	2.80E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	2 / 27	0.22 - 0.29	2.80E+00	N/A	1.80E+03 NC	N/A	N/A	N	BSL
	1912-24-9	ATRAZINE	1.00E-03 J	2.10E-03 J	mg/kg	FTA-AREAG-01 (0 - 2 ft)	4 / 31	0.0088 - 0.38	2.10E-03	N/A	2.40E+00 C	N/A	N/A	N	BSL
	56-55-3	BENZO[A]ANTHRACENE	2.00E-03 J	6.60E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	16 / 27	0.0088 - 0.012	6.60E+00	N/A	1.60E-01 C	N/A	N/A	Y	ASL
	50-32-8	BENZO[A]PYRENE	4.20E-03 J	4.30E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	12 / 27	0.0088 - 0.012	4.30E+00	N/A	1.60E-02 C	N/A	N/A	Y	ASL
	205-99-2	BENZO[B]FLUORANTHENE	2.80E-03 J	6.10E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	14 / 27	0.0088 - 0.012	6.10E+00	N/A	1.60E-01 C	N/A	N/A	Y	ASL
	191-24-2	BENZO[G,H,I]PERYLENE	1.50E+00	1.50E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	1 / 27	0.22 - 0.29	1.50E+00	N/A	1.80E+02 NC	N/A	N/A	N	BSL
	207-08-9	BENZO[K]FLUORANTHENE	8.70E-02 J	2.30E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	3 / 27	0.22 - 0.29	2.30E+00	N/A	1.60E+00 C	N/A	N/A	Y	ASL
	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1.50E-01 J	6.10E-01	mg/kg	FTA-SB-220 (0 - 2 ft)	3 / 31	0.22 - 0.38	6.10E-01	N/A	3.90E+01 C	N/A	N/A	N	BSL
	85-68-7	BUTYLBENZYLPHTHALATE	4.40E-03 J	5.20E-03 J	mg/kg	FTA-SB-210 (0 - 2 ft)	3 / 31	0.044 - 0.38	5.20E-03	N/A	2.90E+02 C	N/A	N/A	N	BSL
	86-74-8	CARBAZOLE	7.60E-01	7.60E-01	mg/kg	FTA-SB-216 (0 - 2 ft)	1 / 31	0.22 - 0.38	7.60E-01	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	218-01-9	CHRYSENE	1.10E-01 J	6.00E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	3 / 27	0.22 - 0.29	6.00E+00	N/A	1.60E+01 C	N/A	N/A	N	BSL
	53-70-3	DIBENZ[A,H]ANTHRACENE	4.80E-03 J	9.20E-01 J	mg/kg	FTA-SB-216 (0 - 2 ft)	6 / 27	0.0088 - 0.27	9.20E-01	N/A	1.60E-02 C	N/A	N/A	Y	ASL
	132-64-9	DIBENZOFURAN	6.20E-01	6.20E-01	mg/kg	FTA-SB-216 (0 - 2 ft)	1 / 31	0.22 - 0.38	6.20E-01	N/A	7.30E+00 NC	N/A	N/A	N	BSL
	206-44-0	FLUORANTHENE	2.00E-01 J	1.40E+01	mg/kg	FTA-SB-216 (0 - 2 ft)	4 / 27	0.22 - 0.29	1.40E+01	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	86-73-7	FLUORENE	1.30E+00	1.30E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	1 / 27	0.22 - 0.29	1.30E+00	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	118-74-1	HEXACHLOROBENZENE	2.50E-03 J	1.30E-02 J	mg/kg	FTA-SB-211 (0 - 2 ft)	5 / 31	0.0088 - 0.38	1.30E-02	N/A	2.10E-01 C	N/A	N/A	N	BSL
	193-39-5	INDENO[1,2,3-CD]PYRENE	2.10E-03 J	4.70E+00 J	mg/kg	FTA-SB-216 (0 - 2 ft)	14 / 27	0.0088 - 0.012	4.70E+00	N/A	1.60E-01 C	N/A	N/A	Y	ASL
	91-20-3	NAPHTHALENE	2.70E-03 J	1.60E-01	mg/kg	FTA-SB-216 (0 - 2 ft)	6 / 27	0.0088 - 0.012	1.60E-01	N/A	3.80E+00 C	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	1.30E-01 J	9.30E+00	mg/kg	FTA-SB-216 (0 - 2 ft)	4 / 27	0.22 - 0.29	9.30E+00	N/A	1.80E+03 NC	N/A	N/A	N	BSL
	129-00-0	PYRENE	1.30E-01 J	1.10E+01	mg/kg	FTA-SB-216 (0 - 2 ft)	4 / 27	0.22 - 0.29	1.10E+01	N/A	1.80E+02 NC	N/A	N/A	N	BSL
		VOCs													
	71-55-6	1,1,1-TRICHLOROETHANE	8.50E-04 J	8.50E-04 J	mg/kg	FTA-ANOM1E-SO-SURF (0 - 2 ft)	1 / 32	0.00096 - 0.007	8.50E-04	N/A	8.10E+02 NC	N/A	N/A	N	BSL
	120-82-1	1,2,4-TRICHLOROBENZENE	7.20E-04 J	4.00E-03 J	mg/kg	A31-SB01 (0 - 2 ft)	9 / 32	0.00096 - 0.007	4.00E-03	N/A	5.80E+00 NC	N/A	N/A	N	BSL
	95-50-1	1,2-DICHLOROBENZENE	3.30E-03 J	3.30E-03 J	mg/kg	FTA-SB-211 (0 - 2 ft)	1 / 32	0.00096 - 0.007	3.30E-03	N/A	1.80E+02 NC	N/A	N/A	N	BSL
	541-73-1	1,3-DICHLOROBENZENE	4.20E-03 J	4.20E-03 J	mg/kg	FTA-SB-211 (0 - 2 ft)	1 / 32	0.00096 - 0.007	4.20E-03	N/A	2.60E+00 C	N/A	N/A	N	BSL
	106-46-7	1,4-DICHLOROBENZENE	8.50E-04 J	1.50E-03 J	mg/kg	FTA-SB-211 (0 - 2 ft)	2 / 32	0.00096 - 0.007	1.50E-03	N/A	2.60E+00 C	N/A	N/A	N	BSL
	78-93-3	2-BUTANONE	1.20E-02 J	2.30E-02 J	mg/kg	A31-SB01 (0 - 2 ft)	2 / 4	0.025 - 0.034	2.30E-02	N/A	2.70E+03 NC	N/A	N/A	N	BSL
	67-64-1	ACETONE	3.70E-02 J	1.80E-01 J	mg/kg	A31-SB01 (0 - 2 ft)	17 / 31	0.021 - 0.17	1.80E-01	N/A	6.10E+03 NC	N/A	N/A	N	BSL
	75-15-0	CARBON DISULFIDE	8.00E-03	3.80E-02	mg/kg	A31-SB01 (0 - 2 ft)	2 / 4	0.005 - 0.007	3.80E-02	N/A	7.70E+01 NC	N/A	N/A	N	BSL
	156-59-2	CIS-1,2-DICHLOROETHENE	1.90E-03 J	1.90E-03 J	mg/kg	FTA-ANOM4-SO-SURF (0 - 2 ft)	1 / 32	0.00096 - 0.007	1.90E-03	N/A	1.60E+01 NC	N/A	N/A	N	BSL

TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 2

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 2 Surface Soil	75-71-8	DICHLORODIFLUOROMETHANE	1.00E-03 J	1.00E-03 J	mg/kg	A31-SB03 (0 - 2 ft)	1 / 5	0.00096 - 0.007	1.00E-03	N/A	8.70E+00 NC	N/A	N/A	N	BSL
	100-41-4	ETHYLBENZENE	2.00E-03 J	2.00E-03 J	mg/kg	FTA-SB-215 (0 - 2 ft)	1 / 31	0.0015 - 0.007	2.00E-03	N/A	5.80E+00 C	N/A	N/A	N	BSL
	79-20-9	METHYL ACETATE	3.70E-02 J	3.70E-02 J	mg/kg	A31-SB03 (0 - 2 ft)	1 / 4	0.005 - 0.007	3.70E-02	N/A	7.80E+03 NC	N/A	N/A	N	BSL
	108-88-3	TOLUENE	2.90E-03 J	3.20E-03 J	mg/kg	FTA-SB-215 (0 - 2 ft)	2 / 31	0.0015 - 0.007	3.20E-03	N/A	4.90E+02 NC	N/A	N/A	N	BSL
	79-01-6	TRICHLOROETHENE	7.80E-03	7.80E-03	mg/kg	FTA-ANOM4-SO-SURF (0 - 2 ft)	1 / 32	0.00096 - 0.007	7.80E-03	N/A	4.10E-01 NC	N/A	N/A	N	BSL
Fire Training Area 2 Subsurface Soil		**Metals**													
	7429-90-5	ALUMINUM	9.94E+03	2.62E+04	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	2.62E+04	N/A	7.70E+03 NC	N/A	N/A	Y	ASL
	7440-36-0	ANTIMONY	5.00E-02 J	3.00E-01 J	mg/kg	DDA-SE-5D (4 - 6 ft)	43 / 43	-	3.00E-01	N/A	3.10E+00 NC	N/A	N/A	N	BSL
	7440-38-2	ARSENIC	5.60E+00	2.51E+01	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	2.51E+01	N/A	6.80E-01 C	N/A	N/A	Y	ASL
	7440-39-3	BARIUM	1.76E+01 J	8.80E+01	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	8.80E+01	N/A	1.50E+03 NC	N/A	N/A	N	BSL
	7440-41-7	BERYLLIUM	3.38E-01 J	1.20E+00	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	1.20E+00	N/A	1.60E+01 NC	N/A	N/A	N	BSL
	7440-43-9	CADMIUM	5.00E-02 J	2.20E-01	mg/kg	FTA-WANOM1-SO-BOTPCB (2 - 3 ft)	41 / 43	0.09 - 0.3	2.20E-01	N/A	7.10E+00 NC	N/A	N/A	N	BSL
	7440-70-2	CALCIUM	1.77E+03	7.14E+03	mg/kg	FTA-SB-215 (6 - 10 ft)	43 / 43	-	7.14E+03	N/A	EN	N/A	N/A	N	NUT
	7440-47-3	CHROMIUM, TOTAL	1.82E+01 J	5.64E+01 J	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	5.64E+01	N/A	1.20E+04 NC	N/A	N/A	N	BSL
	7440-48-4	COBALT	8.08E-08	2.08E+01	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	2.08E+01	N/A	2.30E+00 NC	N/A	N/A	Y	ASL
	7440-50-8	COPPER	1.59E+01	4.88E+01	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	4.88E+01	N/A	3.10E+02 NC	N/A	N/A	N	BSL
	7439-89-6	IRON	1.68E+04	4.38E+04	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	4.38E+04	N/A	5.50E+03 NC	N/A	N/A	Y	ASL
	7439-92-1	LEAD	7.34E+00 J	2.24E+01 J	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	2.24E+01	N/A	4.00E+02 L	N/A	N/A	N	BSL
	7439-95-4	MAGNESIUM	4.94E+03	1.30E+04	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	1.30E+04	N/A	EN	N/A	N/A	N	NUT
	7439-96-5	MANGANESE	3.54E+02	1.53E+03	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	1.53E+03	N/A	1.80E+02 NC	N/A	N/A	Y	ASL
	7439-97-6	MERCURY	4.20E-03 J	3.00E-02 J	mg/kg	FTA-SB-215 (6 - 10 ft)	26 / 42	0.013 - 0.021	3.00E-02	N/A	2.30E+00 NC	N/A	N/A	N	BSL
	7440-02-0	NICKEL	1.86E+01 J	4.59E+01	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	4.59E+01	N/A	1.50E+02 NC	N/A	N/A	N	BSL
	7440-09-7	POTASSIUM	6.55E+02 J	5.64E+03 J	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	5.64E+03	N/A	EN	N/A	N/A	N	NUT
	7782-49-2	SELENIUM	1.30E-01 J	1.00E+00 J	mg/kg	DDA-SE-5D (4 - 6 ft)	33 / 43	0.15 - 0.45	1.00E+00	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-22-4	SILVER	2.30E-02 J	9.00E-02	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	40 / 43	0.0502 - 0.3	9.00E-02	N/A	3.90E+01 NC	N/A	N/A	N	BSL
	7440-23-5	SODIUM	8.90E+01 J	3.35E+02 J	mg/kg	FTA-SB-214 (2 - 6 ft)	43 / 43	-	3.35E+02	N/A	EN	N/A	N/A	N	NUT
	7440-28-0	THALLIUM	4.40E-02 J	2.60E-01 J	mg/kg	FTA-SB-214 (2 - 6 ft)	42 / 43	0.3 - 0.3	2.60E-01	N/A	7.80E-02 NC	N/A	N/A	Y	ASL
	7440-62-2	VANADIUM	2.44E+01 J	6.44E+01 J	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	6.44E+01	N/A	3.90E+01 NC	N/A	N/A	Y	ASL
	7440-66-6	ZINC	3.58E+01 J	9.88E+01 J	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	43 / 43	-	9.88E+01	N/A	2.30E+03 NC	N/A	N/A	N	BSL

TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 2

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 2		**Pesticides**													
Subsurface Soil	72-54-8	4,4-DDD	1.50E-03 J	2.00E-03 J	mg/kg	FTA-AREAC-01 (2 - 6 ft)	2 / 44	0.00032 - 0.0028	2.00E-03	N/A	2.30E+00 C	N/A	N/A	N	BSL
	72-55-9	4,4-DDE	8.20E-05 J	5.80E-04 J	mg/kg	FTA-AREAH-01 (2 - 6 ft)	2 / 44	0.00029 - 0.0028	5.80E-04	N/A	2.00E+00 C	N/A	N/A	N	BSL
	50-29-3	4,4-DDT	7.40E-04 J	4.30E-02 J	mg/kg	FTA-SB-211 (2 - 6 ft)	9 / 44	0.00029 - 0.0028	4.30E-02	N/A	1.90E+00 C	N/A	N/A	N	BSL
	319-85-7	BETA-BHC	8.60E-05 J	7.40E-04 J	mg/kg	FTA-AREAB-01 (2 - 6 ft)	2 / 44	0.00015 - 0.0014	7.40E-04	N/A	3.00E-01 C	N/A	N/A	N	BSL
	60-57-1	DIELDRIN	2.30E-04 J	2.00E-02 J	mg/kg	FTA-AREAG-03 (2 - 6 ft)	9 / 44	0.00029 - 0.0028	2.00E-02	N/A	3.40E-02 C	N/A	N/A	N	BSL
	33213-65-9	ENDOSULFAN II	3.20E-04 J	4.40E-04 J	mg/kg	FTA-AREAG-02 (2 - 6 ft)	2 / 44	0.00029 - 0.0028	4.40E-04	N/A	4.70E+01 NC	N/A	N/A	N	BSL
	1031-07-8	ENDOSULFAN SULFATE	6.80E-04 J	3.40E-02 J	mg/kg	FTA-AREAG-03 (2 - 6 ft)	6 / 44	0.00029 - 0.0028	3.40E-02	N/A	4.70E+01 NC	N/A	N/A	N	BSL
	72-20-8	ENDRIN	2.50E-04 J	6.50E-03 J	mg/kg	FTA-AREAG-03 (2 - 6 ft)	4 / 44	0.00029 - 0.0028	6.50E-03	N/A	1.90E+00 NC	N/A	N/A	N	BSL
	7421-93-4	ENDRIN ALDEHYDE	1.00E-03 J	1.00E-03 J	mg/kg	FTA-AREAC-01 (2 - 6 ft)	1 / 44	0.00032 - 0.0028	1.00E-03	N/A	1.90E+00 NC	N/A	N/A	N	BSL
	53494-70-5	ENDRIN KETONE	1.30E-04 J	2.70E-01 J	mg/kg	FTA-SB-209 (2 - 6 ft)	16 / 44	0.00034 - 0.0028	2.70E-01	N/A	1.90E+00 NC	N/A	N/A	N	BSL
	1024-57-3	HEPTACHLOR EPOXIDE	1.20E-04 J	4.30E-03 J	mg/kg	FTA-AREAG-03 (2 - 6 ft)	4 / 44	0.00015 - 0.0014	4.30E-03	N/A	7.00E-02 C	N/A	N/A	N	BSL
	58-89-9	LINDANE	1.80E-04 J	9.40E-04	mg/kg	FTA-AREAC-01 (2 - 6 ft)	2 / 44	0.00016 - 0.0014	9.40E-04	N/A	5.70E-01 C	N/A	N/A	N	BSL
	72-43-5	METHOXYCHLOR	3.20E-02 J	3.20E-02 J	mg/kg	FTA-AREAB-01 (2 - 6 ft)	1 / 44	0.0015 - 0.014	3.20E-02	N/A	3.20E+01 NC	N/A	N/A	N	BSL
		PCBs													
	RATotAroclors	TOTAL AROCLORS	1.20E-02	8.30E+01	mg/kg	PCBAREA1-202 (3 - 3 ft)	63 / 104	0.002 - 0.0215	8.30E+01	N/A	1.20E-01 NC	N/A	N/A	Y	ASL
		SVOCs													
	92-52-4	1,1-BIPHENYL	1.30E-03 J	3.20E-01	mg/kg	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	4 / 46	0.0085 - 0.39	3.20E-01	N/A	4.70E+00 NC	N/A	N/A	N	BSL
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	2.20E-02	2.20E-02	mg/kg	FTA-ANOM2-SO-INT (2 - 4 ft)	1 / 42	0.0085 - 0.016	2.20E-02	N/A	2.30E+00 NC	N/A	N/A	N	BSL
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	4.10E-03 J	4.10E-03 J	mg/kg	FTA-SB-212 (2 - 6 ft)	1 / 42	0.042 - 0.083	4.10E-03	N/A	1.90E+02 NC	N/A	N/A	N	BSL
	88-06-2	2,4,6-TRICHLOROPHENOL	4.00E-03 J	4.00E-03 J	mg/kg	FTA-ANOM4-SO-INT (2 - 4 ft)	1 / 46	0.042 - 0.39	4.00E-03	N/A	6.30E+00 NC	N/A	N/A	N	BSL
	121-14-2	2,4-DINITROTOLUENE	1.60E-01	2.90E-01	mg/kg	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	2 / 46	0.0085 - 0.39	2.90E-01	N/A	1.70E+00 C	N/A	N/A	N	BSL
	83-32-9	ACENAPHTHENE	6.80E-02 J	1.80E-01 J	mg/kg	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	2 / 42	0.0093 - 0.41	1.80E-01	N/A	3.60E+02 NC	N/A	N/A	N	BSL
	1912-24-9	ATRAZINE	1.40E-03 J	2.30E-03 J	mg/kg	FTA-AREAG-02 (2 - 6 ft)	3 / 46	0.0085 - 0.39	2.30E-03	N/A	2.40E+00 C	N/A	N/A	N	BSL
	100-52-7	BENZALDEHYDE	2.10E-01 J	7.60E-01 J	mg/kg	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	3 / 46	0.21 - 0.41	7.60E-01	N/A	1.70E+02 C	N/A	N/A	N	BSL
	56-55-3	BENZO[A]ANTHRACENE	2.30E-03 J	1.40E-01	mg/kg	FTA-SB-216 (2 - 6 ft)	6 / 42	0.0085 - 0.016	1.40E-01	N/A	1.60E-01 C	N/A	N/A	N	BSL
	50-32-8	BENZO[A]PYRENE	5.00E-03 J	1.00E-01	mg/kg	FTA-SB-216 (2 - 6 ft)	3 / 42	0.0085 - 0.016	1.00E-01	N/A	1.60E-02 C	N/A	N/A	Y	ASL
	205-99-2	BENZO[B]FLUORANTHENE	2.60E-03 J	1.60E-01	mg/kg	FTA-SB-216 (2 - 6 ft)	6 / 42	0.0085 - 0.016	1.60E-01	N/A	1.60E-01 C	N/A	N/A	N	BSL
	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	1.20E-01 J	6.80E-01	mg/kg	FTA-SB-214 (2 - 6 ft)	7 / 46	0.21 - 0.39	6.80E-01	N/A	3.90E+01 C	N/A	N/A	N	BSL
	218-01-9	CHRYSENE	1.40E-01 J	1.40E-01 J	mg/kg	FTA-SB-216 (2 - 6 ft)	1 / 42	0.21 - 0.41	1.40E-01	N/A	1.60E+01 C	N/A	N/A	N	BSL
	53-70-3	DIBENZ[A,H]ANTHRACENE	2.50E-03 J	2.10E-02 J	mg/kg	FTA-SB-216 (2 - 6 ft)	3 / 42	0.0085 - 0.3	2.10E-02	N/A	1.60E-02 C	N/A	N/A	Y	ASL
	84-74-2	DI-N-BUTYLPHTHALATE	3.50E-02 J	3.50E-02 J	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	1 / 46	0.042 - 0.39	3.50E-02	N/A	6.30E+02 NC	N/A	N/A	N	BSL
	206-44-0	FLUORANTHENE	2.90E-01 J	2.90E-01 J	mg/kg	FTA-SB-216 (2 - 6 ft)	1 / 42	0.21 - 0.41	2.90E-01	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	86-73-7	FLUORENE	8.90E-02 J	8.90E-02 J	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	1 / 42	0.21 - 0.41	8.90E-02	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	118-74-1	HEXACHLOROBENZENE	2.90E-03 J	7.40E-03 J	mg/kg	FTA-ANOM2-SO-INT (2 - 4 ft)	2 / 46	0.0085 - 0.39	7.40E-03	N/A	2.10E-01 C	N/A	N/A	N	BSL
	193-39-5	INDENO[1,2,3-CD]PYRENE	3.20E-03 J	1.00E-01	mg/kg	FTA-SB-216 (2 - 6 ft)	10 / 42	0.0085 - 0.016	1.00E-01	N/A	1.60E-01 C	N/A	N/A	N	BSL
	91-20-3	NAPHTHALENE	6.60E-03 J	3.10E-02	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	3 / 42	0.0085 - 0.016	3.10E-02	N/A	3.80E+00 C	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	2.00E-01 J	3.50E-01	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	2 / 42	0.21 - 0.41	3.50E-01	N/A	1.80E+03 NC	N/A	N/A	N	BSL
	129-00-0	PYRENE	1.80E-01 J	1.80E-01 J	mg/kg	FTA-SB-216 (2 - 6 ft)	1 / 42	0.21 - 0.41	1.80E-01	N/A	1.80E+02 NC	N/A	N/A	N	BSL

TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 2

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area 2		**EPHs**													
Subsurface Soil	83-32-9	ACENAPHTHENE	2.40E-01	4.50E-01	mg/kg	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	2 / 11	0.18 - 0.3	4.50E-01	N/A	3.60E+02 NC	N/A	N/A	N	BSL
	86-73-7	FLUORENE	2.40E-01	2.70E-01	mg/kg	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	2 / 11	0.14 - 0.24	2.70E-01	N/A	2.40E+02 NC	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	7.00E-01	1.00E+00	mg/kg	FTA-ANOM1B-SO-DEEP (3 - 4.5 ft)	2 / 11	0.14 - 0.24	1.00E+00	N/A	1.80E+03 NC	N/A	N/A	N	BSL
	129-00-0	PYRENE	3.90E-01	3.90E-01	mg/kg	FTA-ANOM2-SO-INT (2 - 4 ft)	1 / 11	0.14 - 0.24	3.90E-01	N/A	1.80E+02 NC	N/A	N/A	N	BSL
		VOCs													
	71-55-6	1,1,1-TRICHLOROETHANE	1.30E-03 J	4.50E-03 J	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	4 / 50	0.00081 - 0.005	4.50E-03	N/A	8.10E+02 NC	N/A	N/A	N	BSL
	75-34-3	1,1-DICHLOROETHANE	5.10E-03	1.90E-02	mg/kg	FTA-ANOM1C-SO-INT (2 - 3.75 ft)	2 / 50	0.00081 - 0.005	1.90E-02	N/A	3.60E+00 C	N/A	N/A	N	BSL
	120-82-1	1,2,4-TRICHLOROBENZENE	2.00E-04 J	1.10E-01	mg/kg	FTA-ANOM2-SO-INT (2 - 4 ft)	10 / 50	0.00081 - 0.005	1.10E-01	N/A	5.80E+00 NC	N/A	N/A	N	BSL
	95-50-1	1,2-DICHLOROBENZENE	1.80E-03 J	1.00E-02 J	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	3 / 50	0.00081 - 0.005	1.00E-02	N/A	1.80E+02 NC	N/A	N/A	N	BSL
	541-73-1	1,3-DICHLOROBENZENE	1.70E-03 J	2.90E-02	mg/kg	FTA-ANOM2-SO-INT (2 - 4 ft)	3 / 50	0.00081 - 0.005	2.90E-02	N/A	2.60E+00 C	N/A	N/A	N	BSL
	106-46-7	1,4-DICHLOROBENZENE	2.40E-03 J	2.40E-02	mg/kg	FTA-ANOM2-SO-INT (2 - 4 ft)	3 / 50	0.00081 - 0.005	2.40E-02	N/A	2.60E+00 C	N/A	N/A	N	BSL
	78-93-3	2-BUTANONE	5.00E-03 J	5.00E-03 J	mg/kg	A31-SB01 (4 - 6 ft)	1 / 4	0.025 - 0.025	5.00E-03	N/A	2.70E+03 NC	N/A	N/A	N	BSL
	67-64-1	ACETONE	6.70E-03 J	1.50E-01	mg/kg	FTA-SB-209 (2 - 6 ft)	21 / 46	0.0075 - 0.08	1.50E-01	N/A	6.10E+03 NC	N/A	N/A	N	BSL
	71-43-2	BENZENE	2.10E-03 J	2.10E-03 J	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	1 / 46	0.0015 - 0.005	2.10E-03	N/A	1.20E+00 C	N/A	N/A	N	BSL
	75-15-0	CARBON DISULFIDE	3.00E-03 J	3.00E-03 J	mg/kg	A31-SB01 (4 - 6 ft)	1 / 4	0.005 - 0.005	3.00E-03	N/A	7.70E+01 NC	N/A	N/A	N	BSL
	156-59-2	CIS-1,2-DICHLOROETHENE	1.30E-03 J	4.50E-03	mg/kg	FTA-ANOM2-SO-DEEP (6 - 7.5 ft)	2 / 50	0.00081 - 0.005	4.50E-03	N/A	1.60E+01 NC	N/A	N/A	N	BSL
	100-41-4	ETHYLBENZENE	5.60E-03	2.30E-02	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	2 / 46	0.0015 - 0.005	2.30E-02	N/A	5.80E+00 C	N/A	N/A	N	BSL
	98-82-8	ISOPROPYLBENZENE	2.70E-03 J	2.10E-02 J	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	2 / 46	0.0015 - 0.005	2.10E-02	N/A	1.90E+02 NC	N/A	N/A	N	BSL
	108-87-2	METHYL CYCLOHEXANE	1.50E-03 J	7.30E-03	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	2 / 46	0.0015 - 0.005	7.30E-03	N/A	4.90E+02 NC	N/A	N/A	N	BSL
	108-88-3	TOLUENE	1.60E-02	1.90E-02	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	2 / 46	0.0015 - 0.005	1.90E-02	N/A	4.90E+02 NC	N/A	N/A	N	BSL
	79-01-6	TRICHLOROETHENE	6.00E-04 J	7.00E-03	mg/kg	FTA-ANOM4-SO-INT (2 - 4 ft)	5 / 50	0.00081 - 0.005	7.00E-03	N/A	4.10E-01 NC	N/A	N/A	N	BSL
	RA-1330-20-7	XYLENES, TOTAL	1.30E-02 J	8.80E-02	mg/kg	FTA-ANOM1A-SO-DEEP (3 - 4.5 ft)	2 / 46	0.003 - 0.01	8.80E-02	N/A	5.80E+01 NC	N/A	N/A	N	BSL

TABLE 2.2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - SOIL EXPOSURE AREA 2

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)

Notes:

Refer to Attachment A for samples included in data set.

Surface soil is defined as soil samples collected from 0 to 2 ft bgs.

Subsurface soil is defined as soil samples collected at depths greater than 2 ft bgs, to a maximum depth of 15 ft bgs. One sample collected from 1 to 3 ft bgs is included as subsurface soil.

Totals for use in risk assessment are calculated as discussed in the report text and have a CAS number beginning with "RA-".

ARAR/TBC = Applicable or Relevant and Appropriate Requirements/To be Considered.

C = Cancer. Screening value is based on the screening level protective of carcinogenic effects.

CAS = Chemical Abstracts Service.

COPC = Chemical of Potential Concern.

EPHs = Extractable Petroleum Hydrocarbons.

ft bgs - feet below ground surface.

L = Lead screening level developed by USEPA using blood-lead modeling based on target blood lead concentrations (USEPA Regional Screening Level (RSL) Table User's Guide.

mg/kg - milligrams per kilogram.

N/A = Not Applicable or Not Available.

NC = Noncancer. Screening value is based on the screening level protective of noncarcinogenic effects.

PCBs = Polychlorinated biphenyls.

SVOCs = Semivolatile organic compounds.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds.

(1) Minimum/maximum detected concentration and associated data flags.

B = For organics, the analyte was found in the associated blank at a significant level relative to the sample result.

J = The chemical was positively identified; however, the associated numerical value is an estimated concentration.

(2) Lab Reporting Detection Limits (RDLs) are shown where the frequency of detection is less than 100%.

(3) Maximum detected concentration used for screening, except for lead for which the mean detected concentration is used.

(4) Background values were not used for COPC screening purposes, although applicable background values may be considered in the risk characterization portion of the risk assessment, if available.

(5) Screening levels are equal to the USEPA Regional Screening Level (RSL) for residential soil based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens (May 2016).

The following surrogates were used for chemicals without available screening levels or with multiple forms:

The value for cadmium in the diet was used for cadmium.

The value for trivalent chromium was used for total chromium.

The value for manganese non-diet was used for manganese.

The value for mercuric chloride was used for mercury.

The value for endrin was used for endrin aldehyde and endrin ketone.

The value for endosulfan was used for endosulfan I, endosulfan II, and endosulfan sulfate.

The value for Aroclor 1254 was used for Total Aroclors.

The value for 1,4-dichlorobenzene was used for 1,3-dichlorobenzene.

The value for anthracene was used for phenanthrene.

The value for fluorene was used for carbazole.

The value for pyrene was used for benzo(g,h,i)perylene.

The value for toluene was used for methylcyclohexane.

The value for xylenes was used for m- and p-xylene

(6) Rationale Codes:

Selection Reason: Above Screening Level (ASL)

Deletion Reason: Below Screening Level (BSL); Essential Nutrient (NUT)

TABLE 2.3

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Values (5)			Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
											MCL	RSL (NC/C)	VISL (NC/C)				
Fire Training Area		**Metals**															
	7429-90-5	ALUMINUM	2.40E+01 J	3.08E+03	ug/L	FTA-MW-1	22 / 28	100 - 100	3.08E+03	N/A	N/A	2.00E+03 NC	NV	N/A	N/A	Y	ASL (RSL)
	7440-36-0	ANTIMONY	1.30E-01 J	5.90E-01 J	ug/L	FTA-MW-210	13 / 28	0.5 - 0.5	5.90E-01	N/A	6.00E+00	7.80E-01 NC	NV	N/A	N/A	N	BSL
	7440-38-2	ARSENIC	2.50E+00 J	1.60E+01	ug/L	FTA-MW-5	17 / 28	4 - 6.6	1.60E+01	N/A	1.00E+01	5.20E-02 C	NV	N/A	N/A	Y	ASL (MCL, RSL)
	7440-39-3	BARIUM	1.40E+00 J	2.12E+01	ug/L	FTA-MW-1	26 / 28	3 - 3	2.12E+01	N/A	2.00E+03	3.80E+02 NC	NV	N/A	N/A	N	BSL
	7440-41-7	BERYLLIUM	3.60E-02 J	2.80E-01 J	ug/L	FTA-MW-1	11 / 28	0.2 - 0.2	2.80E-01	N/A	4.00E+00	2.50E+00 NC	NV	N/A	N/A	N	BSL
	7440-43-9	CADMIUM	4.00E-02 J	1.60E+00	ug/L	FTA-MW-12	12 / 28	0.2 - 0.2	1.60E+00	N/A	N/A	9.20E-01 NC	NV	N/A	N/A	Y	ASL (RSL)
	7440-70-2	CALCIUM	3.49E+03	4.52E+04	ug/L	FTA-MW-206	28 / 28	-	4.52E+04	N/A	N/A	EN	NV	N/A	N/A	N	NUT
	7440-47-3	CHROMIUM, TOTAL	1.40E+00 J	7.60E+00	ug/L	FTA-MW-1	17 / 28	4 - 4.08	7.60E+00	N/A	1.00E+02	2.20E+03 NC	NV	N/A	N/A	N	BSL
	7440-48-4	COBALT	8.70E-02 J	8.02E+00	ug/L	FTA-MW-10	28 / 28	-	8.02E+00	N/A	N/A	6.00E-01 NC	NV	N/A	N/A	Y	ASL (RSL)
	7440-50-8	COPPER	5.50E-01 J	8.30E+00	ug/L	FTA-MW-1	17 / 28	2 - 2	8.30E+00	N/A	1.30E+03	8.00E+01 NC	NV	N/A	N/A	N	BSL
	7439-89-6	IRON	9.20E+00 J	4.10E+03	ug/L	FTA-MW-9	25 / 28	80 - 80	4.10E+03	N/A	N/A	1.40E+03 NC	NV	N/A	N/A	Y	ASL (RSL)
	7439-92-1	LEAD	7.80E-02 J	1.28E+01	ug/L	FTA-MW-1	21 / 28	0.5 - 0.58	1.28E+01	N/A	1.50E+01	1.50E+01 NC	NV	N/A	N/A	N	BSL
	7439-95-4	MAGNESIUM	1.04E+03	8.78E+03	ug/L	FTA-MW-206	28 / 28	-	8.78E+03	N/A	N/A	EN	NV	N/A	N/A	N	NUT
	7439-96-5	MANGANESE	3.48E+01	3.85E+03	ug/L	FTA-MW-9	28 / 28	-	3.85E+03	N/A	N/A	4.30E+01 NC	NV	N/A	N/A	Y	ASL (RSL)
	7439-97-6	MERCURY	1.70E-02 J	1.70E-02 J	ug/L	FTA-MW-10	1 / 28	0.1 - 0.1	1.70E-02	N/A	2.00E+00	5.70E-01 NC	NV	N/A	N/A	N	BSL
	7440-02-0	NICKEL	6.10E-01 J	3.00E+01	ug/L	FTA-MW-10	27 / 28	1.2 - 1.2	3.00E+01	N/A	N/A	3.90E+01 NC	NV	N/A	N/A	N	BSL
	7440-09-7	POTASSIUM	4.22E+02 J	2.32E+03	ug/L	FTA-DP-35	25 / 28	1560 - 2150	2.32E+03	N/A	N/A	EN	NV	N/A	N/A	N	NUT
	7782-49-2	SELENIUM	2.10E-01 J	7.80E-01 J	ug/L	FTA-MW-9	9 / 28	3 - 3	7.80E-01	N/A	5.00E+01	1.00E+01 NC	NV	N/A	N/A	N	BSL
	7440-22-4	SILVER	4.50E-01 J	4.50E-01 J	ug/L	FTA-MW-10	1 / 28	0.4 - 0.4	4.50E-01	N/A	N/A	9.40E+00 NC	NV	N/A	N/A	N	BSL
	7440-23-5	SODIUM	3.52E+03	1.04E+04	ug/L	FTA-DP-35	28 / 28	-	1.04E+04	N/A	N/A	EN	NV	N/A	N/A	N	NUT
	7440-28-0	THALLIUM	5.00E-02 J	1.40E-01 J	ug/L	FTA-MW-14	3 / 28	0.4 - 0.4	1.40E-01	N/A	2.00E+00	2.00E-02 NC	NV	N/A	N/A	Y	ASL (RSL)
	7440-62-2	VANADIUM	6.00E-01 J	5.10E+00	ug/L	FTA-MW-5	21 / 28	4 - 5.4	5.10E+00	N/A	N/A	8.60E+00 NC	NV	N/A	N/A	N	ASL (RSL)
	7440-66-6	ZINC	1.30E+00 J	1.28E+01 J	ug/L	FTA-MW-1	18 / 28	10 - 10	1.28E+01	N/A	N/A	6.00E+02 NC	NV	N/A	N/A	N	BSL
		PFAS															
	1763-23-1	PFOS	1.30E-03 J	2.50E-01	ug/L	FTA-MW-11	13 / 22	0.003 - 0.02	2.50E-01	N/A	N/A	4.01E-02 NC	NV	N/A	N/A	Y	ASL (RSL)
	335-67-1	PFOA	1.40E-03 J	4.50E-01	ug/L	FTA-MW-14	20 / 22	0.0074 - 0.0075	4.50E-01	N/A	N/A	4.01E-02 NC	NV	N/A	N/A	Y	ASL (RSL)
		SVOCs															
	92-52-4	1,1-BIPHENYL	1.10E-01 J	2.10E-01 J	ug/L	FTA-MW-10	4 / 18	0.094 - 0.11	2.10E-01	N/A	N/A	8.30E-02 NC	3.31E+00 NC	N/A	N/A	Y	ASL (RSL)
	1912-24-9	ATRAZINE	5.50E-02 J	7.00E-02 J	ug/L	FTA-MW-9	2 / 18	0.094 - 0.11	7.00E-02	N/A	3.00E+00	3.00E-01 C	NV	N/A	N/A	N	BSL
	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	5.00E-01 J	9.70E-01 J	ug/L	FTA-MW-14	3 / 18	0.47 - 1.5	9.70E-01	N/A	6.00E+00	5.60E+00 C	NV	N/A	N/A	N	BSL
	132-64-9	DIBENZOFURAN	7.40E-02 J	8.60E-02 J	ug/L	FTA-MW-10	2 / 18	0.094 - 0.11	8.60E-02	N/A	N/A	7.90E-01 NC	NV	N/A	N/A	N	BSL
	77-47-4	HEXACHLOROCYCLOPENTADIENE	1.10E-01 J	1.10E-01 J	ug/L	FTA-MW-5	1 / 18	0.094 - 0.11	1.10E-01	N/A	5.00E+01	4.10E-02 NC	1.89E-02 NC	N/A	N/A	Y	ASL (RSL, VISL)
	91-20-3	NAPHTHALENE	8.10E-02 J	8.10E-02 J	ug/L	FTA-MW-9	1 / 20	0.094 - 1.6	8.10E-02	N/A	N/A	1.70E-01 C	4.59E+00 C	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	1.40E-01 J	1.40E-01 J	ug/L	FTA-MW-5	1 / 20	0.094 - 1.6	1.40E-01	N/A	N/A	1.80E+02 NC	NV	N/A	N/A	N	BSL
	129-00-0	PYRENE	6.90E-02 J	6.90E-02 J	ug/L	FTA-MW-5	1 / 20	0.094 - 1.6	6.90E-02	N/A	N/A	1.20E+01 NC	NV	N/A	N/A	N	BSL

TABLE 2.3

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Values (5)			Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
											MCL	RSL (NC/C)	VISL (NC/C)				
Fire Training Area		**VOCs**															
	71-55-6	1,1,1-TRICHLOROETHANE	1.00E+00	1.50E+00	ug/L	FTA-MW-210	2 / 30	0.5 - 0.5	1.50E+00	N/A	2.00E+02	8.00E+02 NC	7.42E+02 NC	N/A	N/A	N	BSL
	75-34-3	1,1-DICHLOROETHANE	8.00E-01 J	1.50E+00	ug/L	FTA-MW-210	4 / 30	0.5 - 0.5	1.50E+00	N/A	N/A	2.80E+00 C	7.64E+00 C	N/A	N/A	N	BSL
	67-64-1	ACETONE	2.30E+00 J	5.10E+00	ug/L	FTA-MW-11	8 / 30	2.5 - 2.5	5.10E+00	N/A	N/A	1.40E+03 NC	2.26E+06 NC	N/A	N/A	N	BSL
	74-87-3	CHLOROMETHANE	4.00E-01 J	1.10E+00 J	ug/L	FTA-MW-14	5 / 30	1 - 1	1.10E+00	N/A	N/A	1.90E+01 NC	2.60E+01 NC	N/A	N/A	N	BSL
	156-59-2	CIS-1,2-DICHLOROETHENE	2.40E-01 J	2.60E+01	ug/L	FTA-MW-206	13 / 30	0.5 - 0.5	2.60E+01	N/A	7.00E+01	3.60E+00 NC	N/A	N/A	N/A	Y	ASL (RSL)
	127-18-4	TETRACHLOROETHENE	1.10E-02 J	2.40E-02 J	ug/L	FTA-MW-10	4 / 30	0.025 - 0.5	2.40E-02	N/A	5.00E+00	4.10E+00 NC	5.76E+00 NC	N/A	N/A	N	BSL
	108-88-3	TOLUENE	3.00E-01 J	3.00E-01 J	ug/L	FTA-MW-14	1 / 30	0.5 - 0.5	3.00E-01	N/A	1.00E+03	1.10E+02 NC	1.90E+03 NC	N/A	N/A	N	BSL
	79-01-6	TRICHLOROETHENE	6.90E+00	1.00E+01	ug/L	FTA-MW-206	4 / 30	0.5 - 0.5	1.00E+01	N/A	5.00E+00	2.80E-01 NC	5.18E-01 NC	N/A	N/A	Y	ASL (MCL, RSL, VISL)
	75-01-4	VINYL CHLORIDE	5.30E-02 J	8.40E-01	ug/L	FTA-MW-9	7 / 20	0.025 - 0.05	8.40E-01	N/A	2.00E+00	1.90E-02 C	1.47E-01 C	N/A	N/A	Y	ASL (RSL, VISL)

Notes:

Refer to Attachment A for samples included in data set.

ARAR/TBC = Applicable or Relevant and Appropriate Requirements/To be Considered.
Totals for use in risk assessment are calculated as discussed in the report text and have a CAS number beginning with "RA-".

C = Cancer. Screening value is based on the screening level protective of carcinogenic effects.

CAS = Chemical Abstracts Service.

COPC = Chemical of Potential Concern.

EN = Essential nutrient.

ft = Feet.

ug/L - micrograms per liter.

MCL - Maximum Contaminant Level.

N/A = Not Applicable or Not Available.

NC = Noncancer. Screening value is based on the screening level protective of noncarcinogenic effects.

NV = Not volatile.

PFAS = Poly- and Perfluoroalkyl Substances.

PFOS = Perfluorooctanesulfonic acid or Perfluorooctane sulfonate

PFOA = Perfluorooctanoic acid.

SVOCs = Semivolatile organic compounds.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds.

(1) Minimum/maximum detected concentration and associated data flags.

J = The chemical was positively identified; however, the associated numerical value is an estimated concentration.

(2) Lab Reporting Detection Limits (RDLs) are shown where the frequency of detection is less than 100%.

(3) Maximum detected concentration used for screening.

(4) Background values were not used for COPC screening purposes, although applicable background values may be considered in the risk characterization portion of the risk assessment, if available.

(5) Groundwater screening levels include the following:

- USEPA Maximum Contaminant Levels (MCLs) for drinking water. Accessed October 2016. https://www.epa.gov/ground-water-and-drinking-water/table-regulated-drinking-water-contaminants.

- USEPA Regional Screening Level (RSL) for tapwater based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens (May 2016).

Values calculated for PFOA and PFOS using the USEPA Regional Screening Level (RSL) Calculator (May 2016 version). Default exposure assumptions provided by USEPA in the calculator were used unless noted otherwise. Target cancer risk of 1x10-6 and a target hazard quotient of 0.1 used to account for cumulative effects on the same target organ. USEPA's chronic RfD for PFOS and PFOA (2x10-5 mg/kg-day) published in the following documents in May 2016: "Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS)" and "Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA)". [EPA 822-R-16-004] were used.

The following surrogates were used for chemicals without available screening levels or with multiple forms:

The value for cadmium in water was used for cadmium.

The value for trivalent chromium was used for total chromium.

The value for manganese non-diet was used for manganese.

The value for anthracene was used for phenanthrene.

- USEPA Vapor Intrusion Screening Level (VISL) for groundwater based on a residential exposure scenario, a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens (May 2016).

(6) Rationale Codes:

Selection Reason: Above Screening Level (ASL) - MCL and/or RSL and/or VISL

Deletion Reason: Below Screening Levels (BSL); Essential Nutrient (NUT)

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - WETLAND SURFACE WATER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Values (5)			Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
											USEPA AWQCs	MEDEP AWQCs	RSL (NC/C)				
Fire Training Area		**Metals**															
	7429-90-5	ALUMINUM	4.42E+01 J	1.59E+03	ug/L	FTA-SW-02	11 / 14	100 - 110	1.59E+03	N/A	N/A	N/A	5.15E+04 NC	N/A	N/A	N	BSL
	7440-36-0	ANTIMONY	9.60E-02 J	1.90E-01 J	ug/L	FTA-SW-07	5 / 14	0.09 - 0.5	1.90E-01	N/A	5.60E+00	5.50E+00	1.64E+01 NC	N/A	N/A	N	BSL
	7440-38-2	ARSENIC	3.30E+00 J	7.90E+00	ug/L	FTA-SW-06 FTA-SW-07	9 / 14	3 - 4	7.90E+00	N/A	1.80E-02	1.30E+00	3.32E+00 C	N/A	N/A	Y	ASL
	7440-39-3	BARIUM	9.90E-01 J	2.06E+01	ug/L	FTA-SW-04	14 / 14	-	2.06E+01	N/A	1.00E+03	N/A	6.44E+03 NC	N/A	N/A	N	BSL
	7440-41-7	BERYLLIUM	4.00E-02 J	4.00E-02 J	ug/L	FTA-SW-03	1 / 14	0.2 - 0.2	4.00E-02	N/A	N/A	N/A	1.39E+01 NC	N/A	N/A	N	BSL
	7440-43-9	CADMIUM	3.00E-02 J	2.14E+00	ug/L	FTA-SW-02	6 / 14	0.2 - 0.2	2.14E+00	N/A	N/A	N/A	1.39E+01 NC	N/A	N/A	N	BSL
	7440-70-2	CALCIUM	4.63E+03	8.78E+04	ug/L	FTA-SW-05	14 / 14	-	8.78E+04	N/A	EN	EN	EN	N/A	N/A	N	NUT
	7440-48-4	COBALT	4.90E-01 J	5.29E+00	ug/L	FTA-SW-06	14 / 14	-	5.29E+00	N/A	N/A	N/A	1.59E+01 NC	N/A	N/A	N	BSL
	7440-50-8	COPPER	1.30E+00 J	9.42E+00	ug/L	FTA-SW-02	12 / 14	2 - 2.4	9.42E+00	N/A	1.30E+03	1.30E+03	2.06E+03 NC	N/A	N/A	N	BSL
	7439-89-6	IRON	2.91E+02	6.48E+03	ug/L	FTA-SW-06	14 / 14	-	6.48E+03	N/A	N/A	N/A	3.61E+04 NC	N/A	N/A	N	BSL
	7439-92-1	LEAD	7.00E-02 J	2.10E+00	ug/L	FTA-SW-03	8 / 14	0.5 - 0.5	2.10E+00	N/A	1.50E+01	N/A	N/A	N/A	N/A	N	BSL
	7439-95-4	MAGNESIUM	1.36E+03	7.34E+03	ug/L	FTA-SW-05	14 / 14	-	7.34E+03	N/A	EN	EN	EN	N/A	N/A	N	NUT
	7439-96-5	MANGANESE	2.83E+01	1.19E+03	ug/L	FTA-SW-04	14 / 14	-	1.19E+03	N/A	5.00E+01	N/A	5.93E+02 NC	N/A	N/A	Y	ASL
	7440-02-0	NICKEL	9.30E-01 J	8.09E+00	ug/L	FTA-SW-02	12 / 14	1.2 - 1.2	8.09E+00	N/A	6.10E+02	4.00E+02	8.73E+02 NC	N/A	N/A	N	BSL
	7440-09-7	POTASSIUM	8.10E+02 J	4.18E+03	ug/L	FTA-SW-06	14 / 14	-	4.18E+03	N/A	EN	EN	EN	N/A	N/A	N	NUT
	7782-49-2	SELENIUM	3.50E-01 J	8.20E-01 J	ug/L	FTA-SW-01	5 / 14	3 - 3	8.20E-01	N/A	1.70E+02	1.62E+02	2.58E+02 NC	N/A	N/A	N	BSL
	7440-22-4	SILVER	7.00E-02 J	1.10E-01 J	ug/L	FTA-SW-04	3 / 14	0.4 - 0.4	1.10E-01	N/A	N/A	N/A	1.58E+02 NC	N/A	N/A	N	BSL
	7440-23-5	SODIUM	2.73E+03	6.54E+03	ug/L	FTA-SW-06	14 / 14	-	6.54E+03	N/A	EN	EN	EN	N/A	N/A	N	NUT
	7440-28-0	THALLIUM	3.20E-01 J	3.20E-01 J	ug/L	FTA-SW-02	1 / 14	0.4 - 0.4	3.20E-01	N/A	2.40E-01	1.70E-01	5.15E-01 NC	N/A	N/A	Y	ASL
	7440-66-6	ZINC	2.20E+00 J	2.30E+01	ug/L	FTA-SW-04	9 / 14	10 - 10	2.30E+01	N/A	7.40E+03	6.00E+03	1.57E+04 NC	N/A	N/A	N	BSL
		PCBs															
	RATotAroclors	TOTAL AROCLORS	3.80E-01	3.80E-01	ug/L	FTA-SW-06	1 / 6	0.024 - 0.05	3.80E-01	N/A	6.40E-05	3.50E-05	1.40E+01 C	N/A	N/A	Y	ASL
		SVOCs															
	92-52-4	1,1-BIPHENYL	8.20E-02 J	8.20E-02 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	8.20E-02	N/A	N/A	N/A	4.20E+01 C	N/A	N/A	N	BSL
	95-94-3	1,2,4,5-TETRACHLOROBENZENE	1.10E-01 J	1.10E-01 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	1.10E-01	N/A	3.00E-02	5.50E-01	1.21E+00 NC	N/A	N/A	Y	ASL
	88-06-2	2,4,6-TRICHLOROPHENOL	2.20E-01 J	2.20E-01 J	ug/L	FTA-SW-06	1 / 14	0.47 - 0.51	2.20E-01	N/A	1.50E+00	1.30E+03	1.27E+01 NC	N/A	N/A	N	BSL
	1912-24-9	ATRAZINE	4.70E-02 J	6.00E-02 J	ug/L	FTA-SW-06	2 / 14	0.094 - 0.1	6.00E-02	N/A	N/A	N/A	1.07E+01 C	N/A	N/A	N	BSL
	56-55-3	BENZO(A)ANTHRACENE	6.50E-02 J	6.50E-02 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	6.50E-02	N/A	1.20E-03	3.00E-03	1.55E+00 C	N/A	N/A	Y	ASL
	50-32-8	BENZO(A)PYRENE	7.60E-02 J	7.60E-02 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	7.60E-02	N/A	1.20E-04	3.00E-03	1.55E-01 C	N/A	N/A	Y	ASL
	207-08-9	BENZO(K)FLUORANTHENE	5.20E-02 J	5.20E-02 J	ug/L	FTA-SW-06	1 / 14	0.094 - 7.6	5.20E-02	N/A	1.20E-02	3.00E-03	1.55E+01 C	N/A	N/A	Y	ASL
	111-44-4	BIS(2-CHLOROETHYL)ETHER	4.40E-02 J	4.40E-02 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	4.40E-02	N/A	3.00E-02	2.90E-02	3.94E+00 C	N/A	N/A	Y	ASL
	132-64-9	DIBENZOFURAN	8.70E-02 J	8.70E-02 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	8.70E-02	N/A	N/A	N/A	6.13E+00 NC	N/A	N/A	N	BSL
	193-39-5	INDENO(1,2,3-CD)PYRENE	1.20E-01 J	1.60E-01 J	ug/L	FTA-SW-06	4 / 14	0.094 - 0.1	1.60E-01	N/A	1.20E-03	3.00E-03	1.55E+00 C	N/A	N/A	Y	ASL
	91-20-3	NAPHTHALENE	1.00E-01 J	1.00E-01 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	1.00E-01	N/A	N/A	N/A	2.73E+02 NC	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	9.50E-02 J	9.50E-02 J	ug/L	FTA-SW-06	1 / 14	0.094 - 0.1	9.50E-02	N/A	3.00E+02	7.10E+03	1.26E+03 NC	N/A	N/A	N	BSL
		VOCs															
	67-64-1	ACETONE	2.30E+00 J	9.30E+00 J	ug/L	FTA-SW-06	6 / 14	2.5 - 2.5	9.30E+00	N/A	N/A	N/A	4.73E+04 NC	N/A	N/A	N	BSL
	108-88-3	TOLUENE	3.50E-01 J	5.10E+00	ug/L	FTA-SW-07	5 / 14	0.5 - 0.5	5.10E+00	N/A	5.70E+01	1.20E+03	1.56E+03 NC	N/A	N/A	N	BSL

See notes on following page.

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - WETLAND SURFACE WATER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Notes:

Refer to Attachment A for samples included in data set.

ARAR/TBC = Applicable or Relevant and Appropriate Requirements/To be Considered.

Totals for use in risk assessment are calculated as discussed in the report text and have a CAS number beginning with "RA-".

C = Cancer. Screening value is based on the screening level protective of carcinogenic effects.

CAS = Chemical Abstracts Service.

COPC = Chemical of Potential Concern.

EN = Essential Nutrient.

MEDEP = Maine Department of Environmental Protection.

ug/L - micrograms per liter.

N/A = Not Applicable or Not Available.

NC = Noncancer. Screening value is based on the screening level protective of noncarcinogenic effects.

PCBs = Polychlorinated biphenyls.

SVOCs = Semivolatile organic compounds.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds.

(1) Minimum/maximum detected concentration and associated data flags.

J = The chemical was positively identified; however, the associated numerical value is an estimated concentration.

(2) Lab Reporting Detection Limits (RDLs) are shown where the frequency of detection is less than 100%.

(3) Maximum detected concentration used for screening.

(4) Background values were not used for COPC screening purposes, although applicable background values may be considered in the risk characterization portion of the risk assessment, if available.

(5) Surface water screening levels include the following:

- USEPA National Recommended Water Quality Criteria for Priority Pollutants. Value for Human Health for the consumption of water and organisms. 2015.

  Value for lead is equal to the USEPA Action Level for lead in water. http://water.epa.gov/drink/contaminants/index.cfm.

- MEDEP Surface Water Quality Criteria for human health consumption of water and organisms. 2012.

- Risk-based screening levels for surface water calculated using the USEPA Regional Screening Level (RSL) Calculator (May 2016) for a recreator adult/child scenario, based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens, using the following exposure assumptions protective of site-specific exposures:

  Exposure Frequency (days/year) = 78

  Exposure Duration (years) = Adult - 20; Child - 6

  Exposure Time (hour/day) = 2.6

  Body Weight (kg) = Adult - 80; Child - 15

  Skin Surface Area (cm^2/day) = Adult - 7,535; Child - 2,373

  Ingestion Rate (L/hour) = Adult - 0.01; Child - 0.05

The following surrogates were used for chemicals without available screening levels or with multiple forms:

The value for cadmium in water was used for cadmium.

The value for anthracene was used for phenanthrene.

The value for PCBs (low risk) was used for Total Aroclors.

(6) Rationale Codes:

Selection Reason: Above Screening Level (ASL)

Deletion Reason: Below Screening Level (BSL); Essential Nutrient (NUT)

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - WETLAND SEDIMENT
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area		**Metals**													
	7429-90-5	ALUMINUM	4.69E+03 J	2.04E+04	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	2.04E+04	N/A	3.51E+04 NC	N/A	N/A	N	BSL
	7440-36-0	ANTIMONY	8.60E-02 J	7.30E-01 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	16 / 16	-	7.30E-01	N/A	1.40E+01 NC	N/A	N/A	N	BSL
	7440-38-2	ARSENIC	1.60E+00 J	1.90E+01	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	1.90E+01	N/A	2.65E+00 C	N/A	N/A	Y	ASL
	7440-39-3	BARIUM	1.52E+01 J	8.91E+01 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	16 / 16	-	8.91E+01	N/A	7.02E+03 NC	N/A	N/A	N	BSL
	7440-41-7	BERYLLIUM	2.40E-01	8.40E-01 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	16 / 16	-	8.40E-01	N/A	7.02E+01 NC	N/A	N/A	N	BSL
	7440-43-9	CADMIUM	6.10E-02 J	6.73E-01 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	16 / 16	-	6.73E-01	N/A	3.21E+01 NC	N/A	N/A	N	BSL
	7440-70-2	CALCIUM	1.51E+03	3.37E+04 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	16 / 16	-	3.37E+04	N/A	EN	N/A	N/A	N	NUT
	7440-47-3	CHROMIUM, TOTAL	1.13E+01	3.37E+01	mg/kg	FTA-SED-07 (0 - 0.5 ft)	17 / 17	-	3.37E+01	N/A	5.26E+04 NC	N/A	N/A	N	BSL
	7440-48-4	COBALT	3.56E+00 J	1.90E+01	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	1.90E+01	N/A	1.05E+01 NC	N/A	N/A	Y	ASL
	7440-50-8	COPPER	5.59E+00	1.08E+02 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	16 / 16	-	1.08E+02	N/A	1.40E+03 NC	N/A	N/A	N	BSL
	7439-89-6	IRON	8.10E+03 J	2.56E+04	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	2.56E+04	N/A	2.46E+04 NC	N/A	N/A	Y	ASL
	7439-92-1	LEAD	5.20E+00	2.56E+01	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	2.56E+01	N/A	4.00E+02 L	N/A	N/A	N	BSL
	7439-95-4	MAGNESIUM	2.57E+03 J	7.58E+03	mg/kg	FTA-SED-07 (0 - 0.5 ft)	16 / 16	-	7.58E+03	N/A	EN	N/A	N/A	N	NUT
	7439-96-5	MANGANESE	1.16E+02 J	7.14E+02	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	7.14E+02	N/A	8.42E+02 NC	N/A	N/A	N	BSL
	7439-97-6	MERCURY	1.00E-02 J	3.20E-01 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	16 / 16	-	3.20E-01	N/A	1.05E+01 NC	N/A	N/A	N	BSL
	7440-02-0	NICKEL	7.55E+00 J	3.45E+01	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	3.45E+01	N/A	7.02E+02 NC	N/A	N/A	N	BSL
	7440-09-7	POTASSIUM	3.72E+02 J	2.50E+03 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	16 / 16	-	2.50E+03	N/A	EN	N/A	N/A	N	NUT
	7782-49-2	SELENIUM	3.30E-01	5.50E+00 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	8 / 16	0.21 - 1.5	5.50E+00	N/A	1.75E+02 NC	N/A	N/A	N	BSL
	7440-22-4	SILVER	6.00E-02 J	2.34E+00 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	14 / 16	0.033 - 0.0608	2.34E+00	N/A	1.75E+02 NC	N/A	N/A	N	BSL
	7440-23-5	SODIUM	4.44E+01 J	2.84E+02 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	16 / 16	-	2.84E+02	N/A	EN	N/A	N/A	N	NUT
	7440-28-0	THALLIUM	6.00E-02 J	3.00E-01	mg/kg	FTA-SED-03 (0 - 0.5 ft)	15 / 16	0.074 - 0.074	3.00E-01	N/A	3.51E-01 NC	N/A	N/A	N	BSL
	7440-62-2	VANADIUM	1.45E+01 J	4.62E+01	mg/kg	FTA-SED-04 (0 - 0.5 ft)	16 / 16	-	4.62E+01	N/A	1.77E+02 NC	N/A	N/A	N	BSL
	7440-66-6	ZINC	2.57E+01	1.98E+02 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	16 / 16	-	1.98E+02	N/A	1.05E+04 NC	N/A	N/A	N	BSL
		Pesticides													
	72-54-8	4,4-DDD	1.60E-03 J	4.30E-02 J	mg/kg	FTA-SED-04 (0 - 0.5 ft)	6 / 16	0.0004 - 0.0063	4.30E-02	N/A	8.07E+00 C	N/A	N/A	N	BSL
	72-55-9	4,4-DDE	8.60E-04 J	6.10E-03 J	mg/kg	FTA-SED-08 (0 - 0.5 ft)	7 / 16	0.0004 - 0.0046	6.10E-03	N/A	9.18E+00 C	N/A	N/A	N	BSL
	50-29-3	4,4-DDT	3.10E-03 J	4.30E-02 J	mg/kg	FTA-SED-04 (0 - 0.5 ft)	7 / 16	0.00056 - 0.0063	4.30E-02	N/A	7.75E+00 C	N/A	N/A	N	BSL
	60-57-1	DIELDRIN	7.10E-03 J	7.80E-03 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	2 / 16	0.0004 - 0.0063	7.80E-03	N/A	1.21E-01 C	N/A	N/A	N	BSL
	959-98-8	ENDOSULFAN I	7.30E-04 J	7.30E-04 J	mg/kg	FTA-SED-04 (0 - 0.5 ft)	1 / 16	0.0002 - 0.0032	7.30E-04	N/A	2.11E+02 NC	N/A	N/A	N	BSL
	33213-65-9	ENDOSULFAN II	1.30E-02 J	1.30E-02 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	1 / 16	0.0004 - 0.0063	1.30E-02	N/A	2.11E+02 NC	N/A	N/A	N	BSL
	1031-07-8	ENDOSULFAN SULFATE	7.00E-03 J	3.50E-02 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	2 / 16	0.0005 - 0.0063	3.50E-02	N/A	2.11E+02 NC	N/A	N/A	N	BSL
	7421-93-4	ENDRIN ALDEHYDE	7.20E-03 J	7.20E-03 J	mg/kg	FTA-SED-03 (0 - 0.5 ft)	1 / 16	0.0004 - 0.0063	7.20E-03	N/A	8.51E+00 NC	N/A	N/A	N	BSL
	53494-70-5	ENDRIN KETONE	1.40E-02 J	2.90E-01 J	mg/kg	FTA-SED-04 (0 - 0.5 ft)	10 / 16	0.0005 - 0.0063	2.90E-01	N/A	8.51E+00 NC	N/A	N/A	N	BSL
		PCBs													
	RATotAroclors	TOTAL AROCLORS	2.80E-02	2.10E+00	mg/kg	FTA-SED-04 (0 - 0.5 ft)	15 / 16	0.026 - 0.026	2.10E+00	N/A	8.40E-01 C	N/A	N/A	Y	ASL

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - WETLAND SEDIMENT
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
Fire Training Area		**SVOCs**													
	92-52-4	1,1-BIPHENYL	8.90E-03 J	1.30E-02 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	2 / 16	0.012 - 1	1.30E-02	N/A	3.90E+02 C	N/A	N/A	N	BSL
	123-91-1	1,4-DIOXANE	1.30E-02 J	1.30E-02 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	1 / 16	0.06 - 1	1.30E-02	N/A	3.12E+01 C	N/A	N/A	N	BSL
	58-90-2	2,3,4,6-TETRACHLOROPHENOL	6.00E-03 J	4.50E-02 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	5 / 16	0.06 - 0.21	4.50E-02	N/A	8.51E+02 NC	N/A	N/A	N	BSL
	88-06-2	2,4,6-TRICHLOROPHENOL	7.90E-03 J	2.00E-02 J	mg/kg	FTA-SED-05 (0 - 0.5 ft) FTA-SED-01 (0 - 0.5 ft) FTA-SED-02 (0 - 0.5 ft)	5 / 16	0.06 - 0.21	2.00E-02	N/A	2.84E+01 NC	N/A	N/A	N	BSL
	120-83-2	2,4-DICHLOROPHENOL	5.50E-03 J	5.50E-03 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	1 / 16	0.015 - 1.2	5.50E-03	N/A	8.51E+01 NC	N/A	N/A	N	BSL
	121-14-2	2,4-DINITROTOLUENE	1.80E-02 J	1.50E-01	mg/kg	FTA-SED-04 (0 - 0.5 ft)	3 / 16	0.012 - 0.048	1.50E-01	N/A	6.20E+00 C	N/A	N/A	N	BSL
	91-57-6	2-METHYLNAPHTHALENE	2.20E-02 J	3.30E-01	mg/kg	FTA-SED-04 (0 - 0.5 ft)	5 / 16	0.015 - 1.2	3.30E-01	N/A	1.07E+02 NC	N/A	N/A	N	BSL
	108-39-4/106-44-5	3- AND 4-METHYLPHENOL	2.90E-02 J	3.50E-01 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	4 / 16	0.06 - 1	3.50E-01	N/A	8.51E+03 NC	N/A	N/A	N	BSL
	83-32-9	ACENAPHTHENE	2.80E-03 J	1.50E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	12 / 16	0.015 - 0.024	1.50E+00	N/A	1.61E+03 NC	N/A	N/A	N	BSL
	120-12-7	ANTHRACENE	4.90E-03 J	1.70E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	8 / 16	0.3 - 1.2	1.70E+00	N/A	8.05E+03 NC	N/A	N/A	N	BSL
	1912-24-9	ATRAZINE	5.90E-03 J	5.90E-03 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	1 / 16	0.012 - 0.048	5.90E-03	N/A	8.42E+00 C	N/A	N/A	N	BSL
	56-55-3	BENZO(A)ANTHRACENE	7.80E-03 J	3.60E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	14 / 16	0.024 - 0.024	3.60E+00	N/A	6.18E-01 C	N/A	N/A	Y	ASL
	50-32-8	BENZO(A)PYRENE	7.20E-03 J	2.40E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	15 / 16	0.024 - 0.024	2.40E+00	N/A	6.18E-02 C	N/A	N/A	Y	ASL
	205-99-2	BENZO(B)FLUORANTHENE	1.30E-02 J	3.20E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	13 / 16	0.024 - 0.042	3.20E+00	N/A	6.18E-01 C	N/A	N/A	Y	ASL
	191-24-2	BENZO(G,H,I)PERYLENE	1.70E-02 J	1.20E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	6 / 16	0.024 - 1.2	1.20E+00	N/A	8.05E+02 NC	N/A	N/A	N	BSL
	207-08-9	BENZO(K)FLUORANTHENE	1.10E-02 J	1.40E+00 J	mg/kg	FTA-SED-01 (0 - 0.5 ft)	7 / 16	0.024 - 1.2	1.40E+00	N/A	6.18E+00 C	N/A	N/A	N	BSL
	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	4.80E-01 J	2.90E+00 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	5 / 16	0.12 - 1.1	2.90E+00	N/A	1.38E+02 C	N/A	N/A	N	BSL
	85-68-7	BUTYLBENZYLPHTHALATE	5.90E-02 J	5.90E-02 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	1 / 16	0.06 - 1	5.90E-02	N/A	1.02E+03 C	N/A	N/A	N	BSL
	86-74-8	CARBAZOLE	1.20E+00	1.20E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	1 / 16	0.3 - 1.2	1.20E+00	N/A	1.07E+03 NC	N/A	N/A	N	BSL
	218-01-9	CHRYSENE	4.50E-03 J	3.20E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	9 / 16	0.024 - 1.2	3.20E+00	N/A	6.18E+01 C	N/A	N/A	N	BSL
	53-70-3	DIBENZ(A,H)ANTHRACENE	5.80E-03 J	5.10E-01 J	mg/kg	FTA-SED-01 (0 - 0.5 ft)	7 / 16	0.024 - 1.2	5.10E-01	N/A	6.18E-02 C	N/A	N/A	Y	ASL
	132-64-9	DIBENZOFURAN	7.90E-01	7.90E-01	mg/kg	FTA-SED-01 (0 - 0.5 ft)	1 / 16	0.3 - 1.2	7.90E-01	N/A	3.28E+01 NC	N/A	N/A	N	BSL
	84-74-2	DI-N-BUTYLPHTHALATE	1.10E-01 J	1.10E-01 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	1 / 16	0.06 - 1	1.10E-01	N/A	2.84E+03 NC	N/A	N/A	N	BSL
	206-44-0	FLUORANTHENE	2.80E-01 J	7.30E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	6 / 16	0.3 - 1.2	7.30E+00	N/A	1.07E+03 NC	N/A	N/A	N	BSL
	86-73-7	FLUORENE	2.60E-02 J	1.30E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	6 / 16	0.015 - 1.2	1.30E+00	N/A	1.07E+03 NC	N/A	N/A	N	BSL
	67-72-1	HEXACHLOROETHANE	1.50E-02 J	1.50E-02 J	mg/kg	FTA-SED-06 (0 - 0.5 ft)	1 / 16	0.012 - 1	1.50E-02	N/A	2.46E+01 NC	N/A	N/A	N	BSL
	193-39-5	INDENO(1,2,3-CD)PYRENE	1.20E-02 J	2.40E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	13 / 16	0.024 - 0.031	2.40E+00	N/A	6.18E-01 C	N/A	N/A	Y	ASL
	91-20-3	NAPHTHALENE	6.60E-03 J	5.70E-01 J	mg/kg	FTA-SED-01 (0 - 0.5 ft)	7 / 16	0.012 - 0.048	5.70E-01	N/A	5.36E+02 NC	N/A	N/A	N	BSL
	87-86-5	PENTACHLOROPHENOL	2.80E-02 J	7.80E-02 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	2 / 16	0.06 - 0.21	7.80E-02	N/A	3.08E+00 C	N/A	N/A	N	BSL
	85-01-8	PHENANTHRENE	1.20E-02 J	7.00E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	10 / 16	0.3 - 1.2	7.00E+00	N/A	8.05E+03 NC	N/A	N/A	N	BSL
	129-00-0	PYRENE	1.30E-01	5.10E+00	mg/kg	FTA-SED-01 (0 - 0.5 ft)	9 / 16	0.024 - 1.2	5.10E+00	N/A	8.05E+02 NC	N/A	N/A	N	BSL
		VOCs													
	67-64-1	ACETONE	2.60E-02 J	3.00E+00 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	14 / 16	0.043 - 0.06	3.00E+00	N/A	3.16E+04 NC	N/A	N/A	N	BSL
	156-59-2	CIS-1,2-DICHLOROETHENE	6.00E-03 J	6.00E-03 J	mg/kg	FTA-SED-07 (0 - 0.5 ft)	1 / 16	0.0028 - 0.016	6.00E-03	N/A	7.02E+01 NC	N/A	N/A	N	BSL
	100-41-4	ETHYLBENZENE	9.30E-04 J	1.10E-02 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	3 / 16	0.0028 - 0.016	1.10E-02	N/A	2.84E+02 C	N/A	N/A	N	BSL
	98-82-8	ISOPROPYLBENZENE	1.60E-03 J	3.90E-03 J	mg/kg	FTA-SED-04 (0 - 0.5 ft)	3 / 16	0.0028 - 0.016	3.90E-03	N/A	3.51E+03 NC	N/A	N/A	N	BSL
	108-87-2	METHYL CYCLOHEXANE	2.80E-03 J	2.80E-03 J	mg/kg	FTA-SED-04 (0 - 0.5 ft)	1 / 16	0.0028 - 0.016	2.80E-03	N/A	2.81E+03 NC	N/A	N/A	N	BSL
	108-88-3	TOLUENE	2.90E-03 J	3.10E-01 J	mg/kg	FTA-SED-05 (0 - 0.5 ft)	14 / 16	0.0028 - 0.01	3.10E-01	N/A	2.81E+03 NC	N/A	N/A	N	BSL

See notes on following page.

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN - WETLAND SEDIMENT
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits (2)	Concentration Used for Screening (3)	Background Value (4)	Screening Toxicity Value (NC/C) (5)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)

Notes:

Refer to Attachment A for samples included in data set.

Totals for use in risk assessment are calculated as discussed in the report text and have a CAS number beginning with "RA-".

ARAR/TBC = Applicable or Relevant and Appropriate Requirements/To be Considered.

C = Cancer. Screening value is based on the screening level protective of carcinogenic effects.

CAS = Chemical Abstracts Service.

COPC = Chemical of Potential Concern.

EN = Essential Nutrient.

L = Lead screening level developed by USEPA using blood-lead modeling based on target blood lead concentrations (USEPA Regional Screening Level (RSL) Table User's Guide.

ft = Feet.

mg/kg - milligrams per kilogram.

N/A = Not Applicable or Not Available.

NC = Noncancer. Screening value is based on the screening level protective of noncarcinogenic effects.

PCBs = Polychlorinated biphenyls.

SVOCs = Semivolatile organic compounds.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds.

(1) Minimum/maximum detected concentration and associated data flags.

J = The chemical was positively identified; however, the associated numerical value is an estimated concentration.

(2) Lab Reporting Detection Limits (RDLs) are shown where the frequency of detection is less than 100%.

(3) Maximum detected concentration used for screening.

(4) Background values were not used for COPC screening purposes, although applicable background values may be considered in the risk characterization portion of the risk assessment, if available.

(5) Risk-based screening levels for sediment are calculated using the USEPA Regional Screening Level (RSL) Calculator (May 2016) for a recreator adult/child scenario, based on a target risk level of 1x10-6 for carcinogens and a target hazard quotient of 0.1 for noncarcinogens, using the following exposure assumptions protective of site-specific exposures:

Exposure Frequency (days/year) = 78

Exposure Duration (years) = Adult - 20; Child - 6

Exposure Time (hour/event) = 0 (used for inhalation pathway only, which is not applicable for sediment exposure)

Body Weight (kg) = Adult - 80; Child - 15

Skin Surface Area (cm^2/day) = Adult - 7,535; Child - 2,373

Adherence Factor (mg/cm^2) = Adult - 0.3; Child - 0.2

Ingestion Rate (mg/day) = Adult - 100; Child - 200

The following surrogates were used for chemicals without available screening levels or with multiple forms:

The value for phenol was used for 3- and 4-methylphenol.

The value for pyrene was used for benzo(g,h,i)perylene.

The value for cadmium in the diet was used for cadmium.

The value for fluorene was used for carbazole.

The value for endosulfan was used for endosulfan I, endosulfan II and endosulfan sulfate.

The value for endrin was used for endrin aldehyde and endrin ketone.

The value for mercuric chloride was used for mercury.

The value for anthracene was used for phenanthrene.

The value for PCBs (high risk) was used for Total Aroclors.

The value for toluene was used for methylcyclohexane.

The value for trivalent chromium was used for total chromium.

(6) Rationale Codes:

Selection Reason: Above Screening Level (ASL)

Deletion Reason: Below Screening Level (BSL); Essential Nutrient (NUT)

TABLE 2.6
SUMMARY OF CHEMICALS OF POTENTIAL CONCERN (COPCs)
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	CAS	Soil Exposure Area 1		Soil Exposure Area 2		Groundwater	Wetland Sediment	Wetland Surface Water
		Surface Soil	Subsurface Soil	Surface Soil	Subsurface Soil			
Metals								
ALUMINUM	7429-90-5	X	X	X	X	X (a)		
ARSENIC	7440-38-2	X	X	X	X	X (a)	X	X
CADMIUM	7440-43-9					X (a)		
COBALT	7440-48-4	X	X	X	X	X (a)	X	
IRON	7439-89-6	X	X	X	X	X (a)	X	
MANGANESE	7439-96-5	X	X	X	X	X (a)		X
THALLIUM	7440-28-0	X	X	X	X	X (a)		X
VANADIUM	7440-62-2	X	X	X	X			
Pesticides								
DIELDRIN	60-57-1			X				
ENDRIN KETONE	53494-70-5			X				
HEPTACHLOR EPOXIDE	1024-57-3			X				
PCBs								
TOTAL AROCLORS	RATotAroclors	X		X	X		X	X
PFASs								
PFOS	1763-23-1					X (a)		
PFOA	335-67-1					X (a)		
SVOCs								
1,1-BIPHENYL	92-52-4					X (b)		
1,2,4,5-TETRACHLOROBENZENE	95-94-3							X
BENZO(A)ANTHRACENE	56-55-3			X			X	X
BENZO(A)PYRENE	50-32-8	X		X	X		X	X
BENZO(B)FLUORANTHENE	205-99-2			X			X	
BENZO(K)FLUORANTHENE	207-08-9			X				X
BIS(2-CHLOROETHYL)ETHER	111-44-4							X
DIBENZ(A,H)ANTHRACENE	53-70-3			X	X		X	
HEXACHLOROCYCLOPENTADIENE	77-47-4					X (c)		
INDENO(1,2,3-CD)PYRENE	193-39-5			X			X	X
VOCs								
CIS-1,2-DICHLOROETHENE	156-59-2					X (a)		
TRICHLOROETHENE	79-01-6					X (c)		
VINYL CHLORIDE	75-01-4		X			X (c)		
Total:		**9**	**8**	**17**	**10**	**14**	**9**	**10**

Notes:

CAS = Chemical Abstracts Service.
COPC = Chemical of Potential Concern.
PCBs = Polychlorinated biphenyls
PFASs = Poly- and Perfluoroalkyl Substances.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
PFOA = Perfluorooctanoic acid.
SVOCs = Semivolatile organic compounds.
VOCs = Volatile organic compounds.

Surface soil is defined as soil samples collected from 0 to 2 ft bgs.
Subsurface soil is defined as soil samples collected at depths greater than 2 ft bgs, to a maximum depth of 15 ft bgs.
X = Indicates the chemical is a COPC for the associated receptor.
(a) COPC for groundwater direct-contact pathways.
(b) COPC for groundwater direct-contact pathways, shower air, and trench air pathways.
(c) COPC for groundwater direct-contact pathways, indoor air, shower air, and trench air pathways.

TABLE 3.1.RME
EXPOSURE POINT CONCENTRATION SUMMARY - SOIL
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)		Maximum Concentration (Qualifier) (3)		Exposure Point Concentration Value	Units	Statistic (4)	Rationale (5)
Fire Training Area Surface Soil	**Metals**												
Soil Exposure Area 1	ALUMINUM	7429-90-5	mg/kg	10 / 10	1.22E+04	1.48E+04	N	1.70E+04		1.48E+04	mg/kg	95% Student's-t UCL	
	ARSENIC	7440-38-2	mg/kg	10 / 10	6.80E+00	8.11E+00	N	1.20E+01	J	8.11E+00	mg/kg	95% Student's-t UCL	
	COBALT	7440-48-4	mg/kg	10 / 10	1.14E+01	1.50E+01	G	2.42E+01	J	1.50E+01	mg/kg	95% Adjusted Gamma UCL	
	IRON	7439-89-6	mg/kg	10 / 10	1.89E+04	2.21E+04	ND	2.48E+04	J	2.21E+04	mg/kg	95% Student's-t UCL	
	MANGANESE	7439-96-5	mg/kg	10 / 10	1.70E+03	5.23E+03	N	8.60E+03	J	5.23E+03	mg/kg	95% Chebyshev (Mean, Sd) UCL	
	THALLIUM	7440-28-0	mg/kg	10 / 10	7.70E-02	8.61E-02	N	1.00E-01	J	8.61E-02	mg/kg	95% Student's-t UCL	
	VANADIUM	7440-62-2	mg/kg	10 / 10	3.03E+01	3.47E+01	N	4.27E+01		3.47E+01	mg/kg	95% Student's-t UCL	
	PCBs												
	TOTAL AROCLORS	RATotAroclors	mg/kg	6 / 10	2.76E-01	7.67E-01	G	8.70E-01		7.67E-01	mg/kg	95% Gamma Adjusted KM-UCL	(b)
	SVOCs												
	BENZO(A)PYRENE	50-32-8	mg/kg	3 / 10	2.30E-02	NC		3.70E-02		3.70E-02	mg/kg	Maximum Concentration	(a)
Fire Training Area Surface Soil	**Metals**												
Soil Exposure Area 2	ALUMINUM	7429-90-5	mg/kg	27 / 27	1.37E+04	1.45E+04	N	1.97E+04		1.45E+04	mg/kg	95% Student's-t UCL	
	ARSENIC	7440-38-2	mg/kg	27 / 27	7.90E+00	8.50E+00	N	1.13E+01	J	8.50E+00	mg/kg	95% Student's-t UCL	
	COBALT	7440-48-4	mg/kg	27 / 27	1.11E+01	1.17E+01	N	1.52E+01		1.17E+01	mg/kg	95% Student's-t UCL	
	IRON	7439-89-6	mg/kg	27 / 27	2.31E+04	2.43E+04	N	3.20E+04		2.43E+04	mg/kg	95% Student's-t UCL	
	MANGANESE	7439-96-5	mg/kg	27 / 27	4.98E+02	5.29E+02	N	6.86E+02		5.29E+02	mg/kg	95% Student's-t UCL	
	THALLIUM	7440-28-0	mg/kg	27 / 27	8.08E-02	8.88E-02	G	1.40E-01		8.88E-02	mg/kg	95% Adjusted Gamma UCL	
	VANADIUM	7440-62-2	mg/kg	27 / 27	3.46E+01	3.66E+01	N	4.70E+01		3.66E+01	mg/kg	95% Student's-t UCL	
	Pesticides												
	DIELDRIN	60-57-1	mg/kg	11 / 27	6.76E-02	1.18E-01	G	4.80E-01	J	1.18E-01	mg/kg	Gamma Adjusted KM-UCL	
	ENDRIN KETONE	53494-70-5	mg/kg	22 / 27	3.74E-01	7.74E-01	G	3.00E+00	J	7.74E-01	mg/kg	Gamma Adjusted KM-UCL	
	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	3 / 27	3.15E-02	NC		8.70E-02	J	8.70E-02	mg/kg	Maximum Concentration	(a)
	PCBs												
	TOTAL AROCLORS	RATotAroclors	mg/kg	97 / 97	1.96E+01	5.19E+01	LN	6.10E+02		5.19E+01	mg/kg	95% Chebyshev (MVUE) UCL	
	SVOCs												
	BENZO[A]ANTHRACENE	56-55-3	mg/kg	16 / 27	4.46E-01	1.81E+00	LN	6.60E+00		1.81E+00	mg/kg	97.5% KM (Chebyshev) UCL	
	BENZO[A]PYRENE	50-32-8	mg/kg	12 / 27	3.92E-01	8.86E-01	LN	4.30E+00		8.86E-01	mg/kg	95% KM (Chebyshev) UCL	
	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	14 / 27	4.83E-01	1.68E+00	LN	6.10E+00		1.68E+00	mg/kg	97.5% KM (Chebyshev) UCL	
	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	3 / 27	8.27E-01	NC		2.30E+00		2.30E+00	mg/kg	Maximum Concentration	(a)
	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	6 / 27	1.65E-01	2.02E-01	LN	9.20E-01	J	2.02E-01	mg/kg	95% KM (Chebyshev) UCL	
	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	14 / 27	3.71E-01	9.64E-01	LN	4.70E+00	J	9.64E-01	mg/kg	95% KM (Chebyshev) UCL	

TABLE 3.1.RME
EXPOSURE POINT CONCENTRATION SUMMARY - SOIL
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)		Maximum Concentration (Qualifier) (3)		Exposure Point Concentration Value	Units	Statistic (4)	Rationale (5)
Fire Training Area Subsurface Soil Area 1	**Metals**												
	ALUMINUM	7429-90-5	mg/kg	11 / 11	1.35E+04	1.61E+04	N	1.91E+04		1.61E+04	mg/kg	95% Student's-t UCL	
	ARSENIC	7440-38-2	mg/kg	11 / 11	8.11E+00	9.77E+00	N	1.29E+01	J	9.77E+00	mg/kg	95% Student's-t UCL	
	COBALT	7440-48-4	mg/kg	11 / 11	1.03E+01	1.25E+01	N	1.58E+01		1.25E+01	mg/kg	95% Student's-t UCL	
	IRON	7439-89-6	mg/kg	11 / 11	2.21E+04	2.74E+04	N	3.47E+04	J	2.74E+04	mg/kg	95% Student's-t UCL	
	MANGANESE	7439-96-5	mg/kg	11 / 11	5.88E+02	8.02E+02	G	1.46E+03	J	8.02E+02	mg/kg	95% Adjusted Gamma UCL	
	THALLIUM	7440-28-0	mg/kg	10 / 11	9.40E-02	1.09E-01	N	1.50E-01		1.09E-01	mg/kg	95% KM (t) UCL	
	VANADIUM	7440-62-2	mg/kg	11 / 11	3.34E+01	3.88E+01	ND	4.24E+01		3.88E+01	mg/kg	95% Student's-t UCL	
	VOCs												
	VINYL CHLORIDE	75-01-4	mg/kg	1 / 13	8.30E-02	NC		8.30E-02	J	8.30E-02	mg/kg	Maximum Concentration	(a)
Fire Training Area Subsurface Soil Soil Exposure Area 2	**Metals**												
	ALUMINUM	7429-90-5	mg/kg	43 / 43	1.50E+04	1.59E+04	ND	2.62E+04		1.59E+04	mg/kg	95% Modified-t UCL	
	ARSENIC	7440-38-2	mg/kg	43 / 43	1.09E+01	1.21E+01	ND	2.51E+01		1.21E+01	mg/kg	95% Modified-t UCL	
	COBALT	7440-48-4	mg/kg	43 / 43	1.22E+01	1.29E+01	LN	2.08E+01		1.29E+01	mg/kg	95% Modified-t UCL	
	IRON	7439-89-6	mg/kg	43 / 43	2.60E+04	2.75E+04	LN	4.38E+04		2.75E+04	mg/kg	95% Modified-t UCL	
	MANGANESE	7439-96-5	mg/kg	43 / 43	5.95E+02	6.54E+02	ND	1.53E+03		6.54E+02	mg/kg	95% Modified-t UCL	
	THALLIUM	7440-28-0	mg/kg	42 / 43	1.05E-01	1.16E-01	N	2.60E-01		1.16E-01	mg/kg	95% KM (t) UCL	
	VANADIUM	7440-62-2	mg/kg	43 / 43	3.69E+01	3.90E+01	G	6.44E+01		3.90E+01	mg/kg	95% Adjusted Gamma UCL	
	PCBs												
	TOTAL AROCLORS	RATotAroclors	mg/kg	63 / 104	2.60E+00	6.64E+00	LN	8.30E+01		6.64E+00	mg/kg	95% H-UCL (KM -Log)	
	SVOCs												
	BENZO[A]PYRENE	50-32-8	mg/kg	3 / 42	3.93E-02	NC		1.00E-01		1.00E-01	mg/kg	Maximum Concentration	(a)
	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	3 / 42	8.93E-03	NC		2.10E-02		2.10E-02	mg/kg	Maximum Concentration	(a)

See notes on following page.

TABLE 3.1.RME
EXPOSURE POINT CONCENTRATION SUMMARY - SOIL
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale (5)

Notes:

CAS = Chemical Abstracts Service.

EPC = Exposure point concentration.

mg/kg = milligrams per kilogram.

RME = Reasonable Maximum Exposure.

PCBs = Polychlorinated biphenyls.

SVOCs = Semivolatile organic compounds.

UCL = Upper confidence limit.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds.

(1) Arithmetic means were calculated using detected concentrations only.

(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated.

(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

(4) Indicates the statistic on which the exposure point concentration is based.
Average Concentration = Arithmetic Mean detected concentration.
Maximum Concentration = Maximum detected concentration.
95% Student's-t UCL = Calculated using a normal Student's t approximation procedure.
95% Modified-t UCL = Calculated using a modified t approximation procedure.
95% Adjusted Gamma UCL = Calculated using Adjusted Gamma distribution procedure.
95% Adjusted Gamma KM-UCL = Calculated using Kaplan-Meier Adjusted Gamma distribution procedure.
95% Chebyshev (Mean, Sd) UCL = Calculated using Chebyshev inequality non-parametric procedure.
95% KM (t) UCL = Calculated using 95% Kaplan-Meier (Student's t approximation) non-parametric procedure.
95% KM (Chebyshev) UCL = Calculated using 95% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
97.5% KM (Chebyshev) UCL = Calculated using 97.5% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
95% H-UCL (KM -Log) = UCL based upon Land's H-statistic, KM mean andsd on logged data.

(5) The UCL recommended by ProUCL is used (where mulitple values are recommended, the higher is used), unless otherwise noted, as below.
(a) Maximum detected concentration used for EPC due to the low number of detections (less than 6) or small sample size (less than 10).
(b) ProUCL recommended two UCLs. Because the bootstrap method UCL exceeds the max, the adjusted gamma UCL has been used, consistent with the technical guidance.

TABLE 3.1.CTE
EXPOSURE POINT CONCENTRATION SUMMARY - SOIL
CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)		Maximum Concentration (Qualifier) (3)		Exposure Point Concentration			
										Value	Units	Statistic (4)	Rationale (5)
Fire Training Area Surface Soil	**Metals**												
Soil Exposure Area 1	ALUMINUM	7429-90-5	mg/kg	10 / 10	1.22E+04	1.48E+04	N	1.70E+04		1.48E+04	mg/kg	95% Student's-t UCL	
	ARSENIC	7440-38-2	mg/kg	10 / 10	6.80E+00	8.11E+00	N	1.20E+01	J	8.11E+00	mg/kg	95% Student's-t UCL	
	COBALT	7440-48-4	mg/kg	10 / 10	1.14E+01	1.50E+01	G	2.42E+01	J	1.50E+01	mg/kg	95% Adjusted Gamma UCL	
	IRON	7439-89-6	mg/kg	10 / 10	1.89E+04	2.21E+04	ND	2.48E+04	J	2.21E+04	mg/kg	95% Student's-t UCL	
	MANGANESE	7439-96-5	mg/kg	10 / 10	1.70E+03	5.23E+03	N	8.60E+03	J	5.23E+03	mg/kg	95% Chebyshev (Mean, Sd) UCL	
	THALLIUM	7440-28-0	mg/kg	10 / 10	7.70E-02	8.61E-02	N	1.00E-01	J	8.61E-02	mg/kg	95% Student's-t UCL	
	VANADIUM	7440-62-2	mg/kg	10 / 10	3.03E+01	3.47E+01	N	4.27E+01		3.47E+01	mg/kg	95% Student's-t UCL	
	PCBs												
	TOTAL AROCLORS	RATotAroclors	mg/kg	6 / 10	2.76E-01	7.67E-01	G	8.70E-01		7.67E-01	mg/kg	95% Gamma Adjusted KM-UCL	(b)
	SVOCs												
	BENZO(A)PYRENE	50-32-8	mg/kg	3 / 10	2.30E-02	NC		3.70E-02		2.30E-02	mg/kg	Average Concentration	(a)
Fire Training Area Surface Soil	**Metals**												
Soil Exposure Area 2	ALUMINUM	7429-90-5	mg/kg	27 / 27	1.37E+04	1.45E+04	N	1.97E+04		1.45E+04	mg/kg	95% Student's-t UCL	
	ARSENIC	7440-38-2	mg/kg	27 / 27	7.90E+00	8.50E+00	N	1.13E+01	J	8.50E+00	mg/kg	95% Student's-t UCL	
	COBALT	7440-48-4	mg/kg	27 / 27	1.11E+01	1.17E+01	N	1.52E+01		1.17E+01	mg/kg	95% Student's-t UCL	
	IRON	7439-89-6	mg/kg	27 / 27	2.31E+04	2.43E+04	N	3.20E+04		2.43E+04	mg/kg	95% Student's-t UCL	
	MANGANESE	7439-96-5	mg/kg	27 / 27	4.98E+02	5.29E+02	N	6.86E+02		5.29E+02	mg/kg	95% Student's-t UCL	
	THALLIUM	7440-28-0	mg/kg	27 / 27	8.08E-02	8.88E-02	G	1.40E-01		8.88E-02	mg/kg	95% Adjusted Gamma UCL	
	VANADIUM	7440-62-2	mg/kg	27 / 27	3.46E+01	3.66E+01	N	4.70E+01		3.66E+01	mg/kg	95% Student's-t UCL	
	Pesticides												
	DIELDRIN	60-57-1	mg/kg	11 / 27	6.76E-02	1.18E-01	G	4.80E-01	J	1.18E-01	mg/kg	Gamma Adjusted KM-UCL	
	ENDRIN KETONE	53494-70-5	mg/kg	22 / 27	3.74E-01	7.74E-01	G	3.00E+00	J	7.74E-01	mg/kg	Gamma Adjusted KM-UCL	
	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	3 / 27	3.15E-02	NC		8.70E-02	J	3.15E-02	mg/kg	Average Concentration	(a)
	PCBs												
	TOTAL AROCLORS	RATotAroclors	mg/kg	97 / 97	1.96E+01	5.19E+01	LN	6.10E+02		5.19E+01	mg/kg	95% H-UCL	
	SVOCs												
	BENZO[A]ANTHRACENE	56-55-3	mg/kg	16 / 27	4.46E-01	1.81E+00	LN	6.60E+00		1.81E+00	mg/kg	97.5% KM (Chebyshev) UCL	
	BENZO[A]PYRENE	50-32-8	mg/kg	12 / 27	3.92E-01	8.86E-01	LN	4.30E+00		8.86E-01	mg/kg	95% KM (Chebyshev) UCL	
	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	14 / 27	4.83E-01	1.68E+00	LN	6.10E+00		1.68E+00	mg/kg	97.5% KM (Chebyshev) UCL	
	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	3 / 27	8.27E-01	NC		2.30E+00		8.27E-01	mg/kg	Average Concentration	(a)
	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	6 / 27	1.65E-01	2.02E-01	LN	9.20E-01	J	2.02E-01	mg/kg	95% KM (Chebyshev) UCL	
	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	14 / 27	3.71E-01	9.64E-01	LN	4.70E+00	J	9.64E-01	mg/kg	95% KM (Chebyshev) UCL	

TABLE 3.1.CTE
EXPOSURE POINT CONCENTRATION SUMMARY - SOIL
CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale (5)
Fire Training Area Subsurface Soil	**Metals**										
Soil Exposure Area 1	ALUMINUM	7429-90-5	mg/kg	11 / 11	1.35E+04	1.61E+04 N	1.91E+04	1.61E+04	mg/kg	95% Student's-t UCL	
	ARSENIC	7440-38-2	mg/kg	11 / 11	8.11E+00	9.77E+00 N	1.29E+01 J	9.77E+00	mg/kg	95% Student's-t UCL	
	COBALT	7440-48-4	mg/kg	11 / 11	1.03E+01	1.25E+01 N	1.58E+01	1.25E+01	mg/kg	95% Student's-t UCL	
	IRON	7439-89-6	mg/kg	11 / 11	2.21E+04	2.74E+04 N	3.47E+04 J	2.74E+04	mg/kg	95% Student's-t UCL	
	MANGANESE	7439-96-5	mg/kg	11 / 11	5.88E+02	8.02E+02 G	1.46E+03 J	8.02E+02	mg/kg	95% Adjusted Gamma UCL	
	THALLIUM	7440-28-0	mg/kg	10 / 11	9.40E-02	1.09E-01 N	1.50E-01	1.09E-01	mg/kg	95% KM (t) UCL	
	VANADIUM	7440-62-2	mg/kg	11 / 11	3.34E+01	3.88E+01 ND	4.24E+01	3.88E+01	mg/kg	95% Student's-t UCL	
	VOCs										
	VINYL CHLORIDE	75-01-4	mg/kg	1 / 13	8.30E-02	NC	8.30E-02 J	8.30E-02	mg/kg	Average Concentration	(a)
Fire Training Area Subsurface Soil	**Metals**										
Soil Exposure Area 2	ALUMINUM	7429-90-5	mg/kg	43 / 43	1.50E+04	1.59E+04 ND	2.62E+04	1.59E+04	mg/kg	95% Modified-t UCL	
	ARSENIC	7440-38-2	mg/kg	43 / 43	1.09E+01	1.21E+01 ND	2.51E+01	1.21E+01	mg/kg	95% Modified-t UCL	
	COBALT	7440-48-4	mg/kg	43 / 43	1.22E+01	1.29E+01 LN	2.08E+01	1.29E+01	mg/kg	95% Modified-t UCL	
	IRON	7439-89-6	mg/kg	43 / 43	2.60E+04	2.75E+04 LN	4.38E+04	2.75E+04	mg/kg	95% Modified-t UCL	
	MANGANESE	7439-96-5	mg/kg	43 / 43	5.95E+02	6.54E+02 ND	1.53E+03	6.54E+02	mg/kg	95% Modified-t UCL	
	THALLIUM	7440-28-0	mg/kg	42 / 43	1.05E-01	1.16E-01 N	2.60E-01	1.16E-01	mg/kg	95% KM (t) UCL	
	VANADIUM	7440-62-2	mg/kg	43 / 43	3.69E+01	3.90E+01 G	6.44E+01	3.90E+01	mg/kg	95% Adjusted Gamma UCL	
	PCBs										
	TOTAL AROCLORS	RATotAroclors	mg/kg	63 / 104	2.60E+00	6.64E+00 LN	8.30E+01	6.64E+00	mg/kg	95% H-UCL (KM -Log)	
	SVOCs										
	BENZO[A]PYRENE	50-32-8	mg/kg	3 / 42	3.93E-02	NC	1.00E-01	3.93E-02	mg/kg	Average Concentration	(a)
	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	3 / 42	8.93E-03	NC	2.10E-02	8.93E-03	mg/kg	Average Concentration	(a)

See notes on following page.

TABLE 3.1.CTE
EXPOSURE POINT CONCENTRATION SUMMARY - SOIL
CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale (5)

Notes:

CAS = Chemical Abstracts Service.

CTE = Central Tendency Exposure.

EPC = Exposure point concentration.

mg/kg = milligrams per kilogram.

RME = Reasonable Maximum Exposure.

PCBs = Polychlorinated biphenyls.

SVOCs = Semivolatile organic compounds.

UCL = Upper confidence limit.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds.

(1) Arithmetic means were calculated using detected concentrations only.

(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated.

(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

(4) Indicates the statistic on which the exposure point concentration is based.
Average Concentration = Arithmetic Mean detected concentration.
Maximum Concentration = Maximum detected concentration.
95% Student's-t UCL = Calculated using a normal Student's t approximation procedure.
95% Modified-t UCL = Calculated using a modified t approximation procedure.
95% Adjusted Gamma UCL = Calculated using Adjusted Gamma distribution procedure.
95% Adjusted Gamma KM-UCL = Calculated using Kaplan-Meier Adjusted Gamma distribution procedure.
95% Chebyshev (Mean, Sd) UCL = Calculated using Chebyshev inequality non-parametric procedure.
95% KM (t) UCL = Calculated using 95% Kaplan-Meier (Student's t approximation) non-parametric procedure.
95% KM (Chebyshev) UCL = Calculated using 95% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
97.5% KM (Chebyshev) UCL = Calculated using 97.5% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
95% H-UCL (KM -Log) = UCL based upon Land's H-statistic, KM mean andsd on logged data.

(5) The UCL recommended by ProUCL is used (where mulitple values are recommended, the higher is used), unless otherwise noted, as below.
(a) When the maximum detected concentration is selected as the RME EPC, the arithmetic mean concentration is selected as the CTE EPC.
(b) ProUCL recommended two UCLs. Because the bootstrap method UCL exceeds the mean, the adjusted gamma UCL has been used, consistent with the technical guidance.

TABLE 3.2.RME
EXPOSURE POINT CONCENTRATION SUMMARY - GROUNDWATER
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)		Maximum Concentration (Qualifier) (3)		Exposure Point Concentration Value	Exposure Point Concentration Units	Exposure Point Concentration Statistic (4)	Exposure Point Concentration Rationale (5)
Fire Training Area Groundwater	**Metals**												
	ALUMINUM	7429-90-5	ug/L	22 / 28	3.74E+02	4.26E+02	LN	3.08E+03		4.26E+02	ug/L	95% H-UCL (KM -Log)	
	ARSENIC	7440-38-2	ug/L	17 / 28	5.50E+00	5.77E+00	G	1.60E+01		5.77E+00	ug/L	95% Adjusted Gamma KM UCL	
	CADMIUM	7440-43-9	ug/L	12 / 28	3.05E-01	4.87E-01	ND	1.60E+00		4.87E-01	ug/L	95% KM (Chebyshev) UCL	
	COBALT	7440-48-4	ug/L	28 / 28	1.96E+00	3.00E+00	G	8.02E+00		3.00E+00	ug/L	95% Adjusted Gamma UCL	
	IRON	7439-89-6	ug/L	25 / 28	1.52E+03	1.79E+03	N	4.10E+03		1.79E+03	ug/L	95% KM (t) UCL	
	MANGANESE	7439-96-5	ug/L	28 / 28	9.40E+02	1.54E+03	G	3.85E+03		1.54E+03	ug/L	95% Adjusted Gamma UCL	
	THALLIUM	7440-28-0	ug/L	3 / 28	8.50E-02	NC		1.40E-01	J	1.40E-01	ug/L	Maximum Concentration	(a)
	PFASs												
	PFOS	1763-23-1	ug/L	13 / 22	7.80E-02	1.24E-01	LN	2.50E-01		1.24E-01	ug/L	95% KM (Chebyshev) UCL	
	PFOA	335-67-1	ug/L	20 / 22	1.10E-01	2.47E-01	ND	4.50E-01		2.47E-01	ug/L	95% KM (Chebyshev) UCL	
	SVOCs												
	1,1-BIPHENYL	92-52-4	ug/L	4 / 18	1.50E-01	NC		2.10E-01	J	2.10E-01	ug/L	Maximum Concentration	(a)
	HEXACHLOROCYCLOPENTADIE	77-47-4	ug/L	1 / 18	1.10E-01	NC		1.10E-01	J	1.10E-01	ug/L	Maximum Concentration	(a)
	VOCs												
	CIS-1,2-DICHLOROETHENE	156-59-2	ug/L	13 / 30	7.00E+00	9.31E+00	ND	2.60E+01		9.31E+00	ug/L	95% KM (Chebyshev) UCL	
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC		1.00E+01		1.00E+01	ug/L	Maximum Concentration	(a)
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01	ND	8.40E-01		3.47E-01	ug/L	95% KM (Chebyshev) UCL	

TABLE 3.2.RME

EXPOSURE POINT CONCENTRATION SUMMARY - GROUNDWATER

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale (5)

Notes:
CAS = Chemical Abstracts Service.
EPC = Exposure point concentration.
RME = Reasonable Maximum Exposure.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOA = Perfluorooctanoic Acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
SVOCs = Semivolatile organic compounds.
UCL = Upper confidence limit.
ug/L = Micrograms per liter.
USEPA = United States Environmental Protection Agency.
VOCs = Volatile organic compounds.
(1) Arithmetic means were calculated using detected concentrations only.
(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated.
(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
(4) Indicates the statistic on which the exposure point concentration is based.
Maximum Concentration = Maximum detected concentration.
95% BCA Bootstrap UCL = Calculated using 95% bias-corrected procedure.
95% Student's-t UCL = Calculated using a normal Student's t approximation procedure.
95% Adjusted Gamma UCL = Calculated using Adjusted Gamma distribution procedure.
95% Adjusted Gamma KM-UCL = Calculated using Kaplan-Meier Adjusted Gamma distribution procedure.
95% KM (t) UCL = Calculated using 95% Kaplan-Meier (Student's t approximation) non-parametric procedure.
95% KM (Chebyshev) UCL = Calculated using 95% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
99% KM (Chebyshev) UCL = Calculated using 99% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
(5) The UCL recommended by ProUCL is used (where mulitple values are recommended, the higher is used).
(a) Maximum detected concentration used for EPC due to the low number of detections (less than 6) or small sample size (less than 10).

TABLE 3.2.CTE
EXPOSURE POINT CONCENTRATION SUMMARY - GROUNDWATER
CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)		Maximum Concentration (Qualifier) (3)		Exposure Point Concentration Value	Units	Statistic (4)	Rationale (5)
Fire Training Area Groundwater	**Metals**												
	ALUMINUM	7429-90-5	ug/L	22 / 28	3.74E+02	4.26E+02	LN	3.08E+03		4.26E+02	ug/L	95% H-UCL (KM -Log)	
	ARSENIC	7440-38-2	ug/L	17 / 28	5.50E+00	5.77E+00	G	1.60E+01		5.77E+00	ug/L	95% Adjusted Gamma KM UCL	
	CADMIUM	7440-43-9	ug/L	12 / 28	3.05E-01	4.87E-01	ND	1.60E+00		4.87E-01	ug/L	95% KM (Chebyshev) UCL	
	COBALT	7440-48-4	ug/L	28 / 28	1.96E+00	3.00E+00	G	8.02E+00		3.00E+00	ug/L	95% Adjusted Gamma UCL	
	IRON	7439-89-6	ug/L	25 / 28	1.52E+03	1.79E+03	N	4.10E+03		1.79E+03	ug/L	95% KM (t) UCL	
	MANGANESE	7439-96-5	ug/L	28 / 28	9.40E+02	1.54E+03	G	3.85E+03		1.54E+03	ug/L	95% Adjusted Gamma UCL	
	THALLIUM	7440-28-0	ug/L	3 / 28	8.50E-02	NC		1.40E-01	J	8.50E-02	ug/L	Arithmetic Mean Concentration	(a)
	PFASs												
	PFOS	1763-23-1	ug/L	13 / 22	7.80E-02	1.24E-01	LN	2.50E-01		1.24E-01	ug/L	95% KM (Chebyshev) UCL	
	PFOA	335-67-1	ug/L	20 / 22	1.10E-01	2.47E-01	ND	4.50E-01		2.47E-01	ug/L	95% KM (Chebyshev) UCL	
	SVOCs												
	1,1-BIPHENYL	92-52-4	ug/L	4 / 18	1.50E-01	NC		2.10E-01	J	1.50E-01	ug/L	Arithmetic Mean Concentration	(a)
	HEXACHLOROCYCLOPENTADIEN	77-47-4	ug/L	1 / 18	1.10E-01	NC		1.10E-01	J	1.10E-01	ug/L	Maximum Concentration	(b)
	VOCs												
	CIS-1,2-DICHLOROETHENE	156-59-2	ug/L	13 / 30	7.00E+00	9.31E+00	ND	2.60E+01		9.31E+00	ug/L	95% KM (Chebyshev) UCL	
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC		1.00E+01		8.20E+00	ug/L	Arithmetic Mean Concentration	(a)
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01	ND	8.40E-01		3.47E-01	ug/L	95% KM (Chebyshev) UCL	

TABLE 3.2.CTE

EXPOSURE POINT CONCENTRATION SUMMARY - GROUNDWATER

CENTRAL TENDENCY EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale (5)

Notes:

CAS = Chemical Abstracts Service.

CTE = Central Tendency Exposure.

EPC = Exposure point concentration.

PFASs = Poly- and Perfluoroalkyl Substances.

PFOA = Perfluorooctanoic Acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

RME = Reasonable Maximum Exposure.

SVOCs = Semivolatile organic compounds.

UCL = Upper confidence limit.

ug/L = Micrograms per liter.

USEPA = United States Environmental Protection Agency.

VOCs = Volatile organic compounds

(1) Arithmetic means were calculated using detected concentrations only.

(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated.

(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

(4) Indicates the statistic on which the exposure point concentration is based.
Average Concentration = Arithmetic Mean detected concentration.
Maximum = Maximum detected concentration.
95% BCA Bootstrap UCL = Calculated using 95% bias-corrected non-parametric procedure.
95% Student's-t UCL = Calculated using a normal Student's t approximation procedure.
95% Adjusted Gamma UCL = Calculated using Adjusted Gamma distribution procedure.
95% Adjusted Gamma KM-UCL = Calculated using Kaplan-Meier Adjusted Gamma distribution procedure.
95% KM (t) UCL = Calculated using 95% Kaplan-Meier (Student's t approximation) non-parametric procedure.
95% KM (Chebyshev) UCL = Calculated using 95% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
99% KM (Chebyshev) UCL = Calculated using 99% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.

(5) The UCL recommended by ProUCL is used (where mulitple values are recommended, the higher is used).
(a) When the maximum detected concentration is selected as the RME EPC, the arithmetic mean concentration is selected as the CTE EPC.
(b) Arithmetic mean concentration equals the maximum detected concentration, therefore, the maximum detected concentration is used as the CTE EPC.

TABLE 3.3.RME/CTE
EXPOSURE POINT CONCENTRATION SUMMARY - WETLAND SURFACE WATER
REASONABLE MAXIMUM EXPOSURE/CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale (5)
Fire Training Area Wetland Surface Water	**Metals**										
	ARSENIC	7440-38-2	ug/L	9 / 14	4.97E+00	5.20E+00 N	7.90E+00	5.20E+00	ug/L	95% KM (t) UCL	
	MANGANESE	7439-96-5	ug/L	14 / 14	4.07E+02	8.48E+02 G	1.19E+03	8.48E+02	ug/L	95% Adjusted Gamma UCL	
	THALLIUM	7440-28-0	ug/L	1 / 14	3.20E-01	NC	3.20E-01 J	3.20E-01	ug/L	Maximum Concentration	(a)
	PCBs										
	TOTAL AROCLORS	RATotAroclors	ug/L	1 / 6	3.80E-01	NC	3.80E-01	3.80E-01	ug/L	Maximum Concentration	(a)
	SVOCs										
	1,2,4,5-TETRACHLOROBENZENE	95-94-3	ug/L	1 / 14	1.10E-01	NC	1.10E-01 J	1.10E-01	ug/L	Maximum Concentration	(a)
	BENZO(A)ANTHRACENE	56-55-3	ug/L	1 / 14	6.50E-02	NC	6.50E-02 J	6.50E-02	ug/L	Maximum Concentration	(a)
	BENZO(A)PYRENE	50-32-8	ug/L	1 / 14	7.60E-02	NC	7.60E-02 J	7.60E-02	ug/L	Maximum Concentration	(a)
	BENZO(K)FLUORANTHENE	207-08-9	ug/L	1 / 14	5.20E-02	NC	5.20E-02 J	5.20E-02	ug/L	Maximum Concentration	(a)
	BIS(2-CHLOROETHYL)ETHER	111-44-4	ug/L	1 / 14	4.40E-02	NC	4.40E-02 J	4.40E-02	ug/L	Maximum Concentration	(a)
	INDENO(1,2,3-CD)PYRENE	193-39-5	ug/L	4 / 14	1.40E-01	NC	1.60E-01 J	1.60E-01	ug/L	Maximum Concentration	(a,b)

Notes:

CAS = Chemical Abstracts Service.

CTE = Central Tendency Exposure.

EPC = Exposure point concentration.

RME = Reasonable Maximum Exposure.

PCBs = Polychlorinated biphenyls.

SVOCs = Semivolatile organic compounds.

UCL = Upper confidence limit.

ug/L = Micrograms per liter.

USEPA = United States Environmental Protection Agency.

(1) Arithmetic means were calculated using detected concentrations only.

(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; G = Gamma; NC = Not calculated.

(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

(4) Indicates the statistic on which the exposure point concentration is based.
Maximum Concentration = Maximum detected concentration.
95% Adjusted Gamma UCL = Calculated using Adjusted Gamma distribution procedure.
95% KM (t) UCL = Calculated using 95% Kaplan-Meier (Student's t approximation) non-parametric procedure.

(5) The UCL recommended by ProUCL is used (where mulitple values are recommended, the higher is used).
(a) Maximum detected concentration used for EPC due to the low number of detections (less than 6) or small sample size (less than 10).
(b) The arithmetic mean concentration is essentially equal to the maximum detected concentration. Therefore, the maximum detected concentration is used as the CTE EPC.

TABLE 3.4.RME/CTE
EXPOSURE POINT CONCENTRATION SUMMARY - WETLAND SEDIMENT
REASONABLE MAXIMUM EXPOSURE/CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)		Maximum Concentration (Qualifier) (3)		Exposure Point Concentration			
										Value	Units	Statistic (4)	Rationale (5)
Fire Training Area Wetland Sediment	**Metals**												
	ARSENIC	7440-38-2	mg/kg	16 / 16	6.64E+00	8.34E+00	N	1.90E+01		8.34E+00	mg/kg	95% Student's-t UCL	
	COBALT	7440-48-4	mg/kg	16 / 16	7.57E+00	9.36E+00	N	1.90E+01		9.36E+00	mg/kg	95% Student's-t UCL	
	IRON	7439-89-6	mg/kg	16 / 16	1.53E+04	1.74E+04	N	2.56E+04		1.74E+04	mg/kg	95% Student's-t UCL	
	PCBs												
	TOTAL AROCLORS	RATotAroclors	mg/kg	15 / 16	6.50E-01	8.80E-01	N	2.10E+00		8.80E-01	mg/kg	95% KM (t) UCL	
	SVOCs												
	BENZO(A)ANTHRACENE	56-55-3	mg/kg	14 / 16	3.70E-01	1.71E+00	LN	3.60E+00		1.71E+00	mg/kg	99% KM (Chebyshev) UCL	
	BENZO(A)PYRENE	50-32-8	mg/kg	15 / 16	2.40E-01	1.14E+00	LN	2.40E+00		1.14E+00	mg/kg	99% KM (Chebyshev) UCL	
	BENZO(B)FLUORANTHENE	205-99-2	mg/kg	13 / 16	3.95E-01	1.18E+00	LN	3.20E+00		1.18E+00	mg/kg	95% KM (Chebyshev) UCL	
	DIBENZ(A,H)ANTHRACENE	53-70-3	mg/kg	7 / 16	9.40E-02	2.48E-01	LN	5.10E-01	J	2.48E-01	mg/kg	95% KM (Chebyshev) UCL	
	INDENO(1,2,3-CD)PYRENE	193-39-5	mg/kg	13 / 16	2.80E-01	8.70E-01	LN	2.40E+00		8.70E-01	mg/kg	95% KM (Chebyshev) UCL	

Notes:
CAS = Chemical Abstracts Service.
CTE = Central Tendency Exposure.
EPC = Exposure point concentration.
mg/kg = milligrams per kilogram.
RME = Reasonable Maximum Exposure.
PCBs = Polychlorinated biphenyls.
SVOCs = Semivolatile organic compounds.
UCL = Upper confidence limit.
USEPA = United States Environmental Protection Agency.
(1) Arithmetic means were calculated using detected concentrations only.
(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal
(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
(4) Indicates the statistic on which the exposure point concentration is based.
95% Student's-t UCL = Calculated using a normal Student's t approximation procedure.
95% KM (t) UCL = Calculated using 95% Kaplan-Meier (Student's t approximation) non-parametric procedure.
95% KM (Chebyshev) UCL = Calculated using 95% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
99% KM (Chebyshev) UCL = Calculated using 99% Kaplan-Meier (Chebyshev inequality) non-parametric procedure.
(5) The UCL recommended by ProUCL is used (where mulitple values are recommended, the higher is used).

TABLE 3.5.RME

EXPOSURE POINT CONCENTRATION SUMMARY - TRENCH AIR

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Trench Air

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale
Fire Training Area Groundwater	**SVOCs**										
	1,1-BIPHENYL	92-52-4	ug/L	4 / 18	1.50E-01	NC	2.10E-01 J	3.01E-03	ug/m3	Volatilization model	See Attachment D
	HEXACHLOROCYCLOPENTADIEN	77-47-4	ug/L	1 / 18	1.10E-01	NC	1.10E-01 J	1.60E-03	ug/m3	Volatilization model	See Attachment D
	VOCs										
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC	1.00E+01	2.06E-01	ug/m3	Volatilization model	See Attachment D
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01 ND	8.40E-01	8.41E-03	ug/m3	Volatilization model	See Attachment D

Notes:

CAS = Chemical Abstracts Service.

COPC = Chemical of potential concern.

EPC = Exposure point concentration.

HHRA = Human Health Risk Assessment.

RME = Reasonable Maximum Exposure.

UCL = Upper confidence limit.

ug/L = micrograms per liter.

ug/m3 = micrograms per cubic meter.

USEPA = United States Environmental Protection Agency.

SVOCs = Semivolatile organic compounds.

VOCs = Volatile organic compounds.

(1) Arithmetic means were calculated using detected concentrations only.

(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated.

(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

(4) Trench air EPCs were estimated based on the groundwater EPC using an attenuation factor calcluated using a trench air model,as discussed in the HHRA report text.

TABLE 3.5.CTE

EXPOSURE POINT CONCENTRATION SUMMARY - TRENCH AIR

CENTRAL TENDENCY EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Trench Air

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale
Fire Training Area Groundwater	**SVOCs**										
	1,1-BIPHENYL	92-52-4	ug/L	4 / 18	1.50E-01	NC	2.10E-01 J	3.01E-03	ug/m3	Volatilization model	See Attachment D
	HEXACHLOROCYCLOPENTADIEN	77-47-4	ug/L	1 / 18	1.10E-01	NC	1.10E-01 J	1.60E-03	ug/m3	Volatilization model	See Attachment D
	VOCs										
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC	1.00E+01	2.06E-01	ug/m3	Volatilization model	See Attachment D
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01 ND	8.40E-01	8.41E-03	ug/m3	Volatilization model	See Attachment D

Notes:

CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
CTE = Central Tendency Exposure.
EPC = Exposure point concentration.
HHRA = Human Health Risk Assessment.
UCL = Upper confidence limit.
ug/L = micrograms per liter.
ug/m3 = micrograms per cubic meter.
USEPA = United States Environmental Protection Agency.
SVOCs = Semivolatile organic compounds.
VOCs = Volatile organic compounds.

(1) Arithmetic means were calculated using detected concentrations only.

(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated.

(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.

(4) Trench air EPCs were estimated based on the groundwater EPC using an attenuation factor calcluated using a trench air model,as discussed in the HHRA report text.

TABLE 3.6.RME

EXPOSURE POINT CONCENTRATION SUMMARY - HYPOTHETICAL FUTURE RESIDENTIAL SCENARIO - SHOWER AIR

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Shower Air

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale
Fire Training Area Groundwater	**SVOCs**										
	1,1-BIPHENYL	92-52-4	ug/L	4 / 18	1.50E-01	NC	2.10E-01 J	1.60E+00	ug/m3	Volatilization model	See Attachment D
	HEXACHLOROCYCLOPENTADIE	77-47-4	ug/L	1 / 18	1.10E-01	NC	1.10E-01 J	1.08E+00	ug/m3	Volatilization model	See Attachment D
	VOCs										
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC	1.00E+01	1.30E+02	ug/m3	Volatilization model	See Attachment D
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01 ND	8.40E-01	5.97E+00	ug/m3	Volatilization model	See Attachment D

Notes:
CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
EPC = Exposure point concentration.
HHRA = Human Health Risk Assessment.
RME = Reasonable Maximum Exposure.
SVOCs = Semivolatile organic compounds.
UCL = Upper confidence limit.
ug/L = micrograms per liter.
ug/m3 = micrograms per cubic meter.
USEPA = United States Environmental Protection Agency.
VOCs = Volatile organic compounds.
(1) Arithmetic means were calculated using detected concentrations only.
(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated
(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only
(4) Shower air EPCs were estimated based on the groundwater EPC using an attenuation factor calcluated using a trench air model,as discussed in the HHRA report text

TABLE 3.6.CTE

EXPOSURE POINT CONCENTRATION SUMMARY - HYPOTHETICAL FUTURE RESIDENTIAL SCENARIO - SHOWER AIR

CENTRAL TENDENCY EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Shower Air

Exposure Point	Chemical of Potential Concern	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale
Fire Training Area Groundwater	**SVOCs**										
	1,1-BIPHENYL	92-52-4	ug/L	4 / 18	1.50E-01	NC	2.10E-01 J	1.14E+00	ug/m3	Volatilization model	See Attachment D
	HEXACHLOROCYCLOPENTADIE	77-47-4	ug/L	1 / 18	1.10E-01	NC	1.10E-01 J	1.08E+00	ug/m3	Volatilization model	See Attachment D
	VOCs										
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC	1.00E+01	1.07E+02	ug/m3	Volatilization model	See Attachment D
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01 ND	8.40E-01	5.97E+00	ug/m3	Volatilization model	See Attachment D

Notes:
CAS = Chemical Abstracts Service.
CTE = Central Tendency Exposure.
COPC = Chemical of potential concern.
EPC = Exposure point concentration.
HHRA = Human Health Risk Assessment.
SVOCs = Semivolatile organic compounds.
UCL = Upper confidence limit.
ug/L = micrograms per liter.
ug/m3 = micrograms per cubic meter.
USEPA = United States Environmental Protection Agency.
VOCs = Volatile organic compounds.
(1) Arithmetic means were calculated using detected concentrations only.
(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted.
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated.
(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
(4) Shower air EPCs were estimated based on the groundwater EPC using an attenuation factor calcluated using a trench air model,as discussed in the HHRA report text.

TABLE 3.7.RME/CTE
EXPOSURE POINT CONCENTRATION SUMMARY - HYPOTHETICAL FUTURE RESIDENTIAL SCENARIO - INDOOR AIR
REASONABLE MAXIMUM EXPOSURE/CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Indoor Air

Exposure Point	Chemical of Potential Concern (5)	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale
Fire Training Area Groundwater	**SVOCs**										
	HEXACHLOROCYCLOPENTADIENE	77-47-4	ug/L	1 / 18	1.10E-01	NC	1.10E-01 J	3.59E-03	ug/m3	JE Model	See Attachment D
	VOCs										
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC	1.00E+01	9.70E-01	ug/m3	JE Model	See Attachment D
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01 ND	8.40E-01	1.64E-01	ug/m3	JE Model	See Attachment D

Notes:
CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
EPC = Exposure point concentration.
HHRA = Human Health Risk Assessment.
RME = Reasonable Maximum Exposure.
SVOCs = Semivolatile organic compounds.
UCL = Upper confidence limit.
ug/L = micrograms per liter.
ug/m3 = micrograms per cubic meter.
USEPA = United States Environmental Protection Agency.
VOCs = Volatile organic compounds.
(1) Arithmetic means were calculated using detected concentrations only.
(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated
(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only
(4) The indoor air EPC is estimated based on the groundwater EPC using the USEPA Johnson and Ettinger Model (JE Model) Spreadsheets as discussed in the HHRA report text

TABLE 3.8.RME/CTE
EXPOSURE POINT CONCENTRATION SUMMARY - FUTURE INDUSTRIAL SCENARIO - INDOOR AIR
REASONABLE MAXIMUM EXPOSURE/CENTRAL TENDENCY EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Indoor Air

Exposure Point	Chemical of Potential Concern (5)	CAS Number	Units	Frequency of Detection	Arithmetic Mean (1)	UCL (Distribution) (2)	Maximum Concentration (Qualifier) (3)	Exposure Point Concentration			
								Value	Units	Statistic (4)	Rationale
Fire Training Area Groundwater	**SVOCs**										
	HEXACHLOROCYCLOPENTADIE	77-47-4	ug/L	1 / 18	1.10E-01	NC	1.10E-01 J	8.97E-04	ug/m3	JE Model	(5)
	VOCs										
	TRICHLOROETHENE	79-01-6	ug/L	4 / 30	8.20E+00	NC	1.00E+01	2.42E-01	ug/m3	JE Model	(5)
	VINYL CHLORIDE	75-01-4	ug/L	7 / 20	2.70E-01	3.47E-01 ND	8.40E-01	4.09E-02	ug/m3	JE Model	(5)

Notes:
CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
EPC = Exposure point concentration.
HHRA = Human Health Risk Assessment.
RME = Reasonable Maximum Exposure.
SVOCs = Semivolatile organic compounds.
UCL = Upper confidence limit.
ug/L = micrograms per liter.
ug/m3 = micrograms per cubic meter.
USEPA = United States Environmental Protection Agency.
VOCs = Volatile organic compounds.
(1) Arithmetic means were calculated using detected concentrations only.
(2) UCL calculations were performed using USEPA's ProUCL software version 5.1.00. For data sets with multiple detection limits for non-detects, the use of the Kaplan-Meier non-parametric test procedure is recommended and used to calculate an appropriate UCL. For the Kaplan-Meier test procedure, the type of data distribution was determined using a series of tests (Shapiro-Wilk, Kolmogorov-Smirnov, Anderson-Darling) for normal, lognormal, or gamma data distributions. The results of these distribution tests determined which UCL calculation was performed. The UCL suggested by ProUCL is used, unless otherwise noted. In cases where more than one UCL is suggested, the higher UCL is used, unless otherwise noted
N = Normal; LN = Lognormal; G = Gamma; ND = Not Discernable; NC = Not calculated
(3) Equal to the maximum detected concentration.
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only
(4) The indoor air EPC is estimated based on the groundwater EPC using the USEPA Johnson and Ettinger Model (JE Model) Spreadsheets as discussed in the HHRA report text
(5) The only difference between the residential and industrial indoor air modeling is the air exchange rate, which is 0.25/hour for residential and 1/hour for industrial
Therefore, the industrial indoor air EPCs were derived by dividing the residential indoor air EPCs by 4.

TABLE 4.1.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	330	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	250	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				FI	Fraction Ingested from Site	1	unitless	(1)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.3	mg/cm^2-day	MEDEP, 2013	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	250	days/yr	MEDEP, 2013	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Inhalation of fugitive dust	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	8	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	250	days/yr	MEDEP, 2013	PEF x AT x CF1
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				PEF	Particulate Emission Factor	9.40E+05	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	

TABLE 4.1.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

RME - Reasonable Maximum Exposure.

Sources:

1 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2016: USEPA Regional Screening Level (RSL) Calculator. May 2016 Version. Based on site-specific assumption of 140 days with at least 0.01 inches of precipitation based on Exhibit 5-2 from USEPA, 2002.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [(ug/m^3)(kg/mg)] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	2.02E-08	Cancer Dermal Intake =	6.47E-08	Cancer Inhalation Intake =	1.73E-06
Noncancer Ingestion Intake =	2.83E-06	Noncancer Dermal Intake =	9.06E-06	Noncancer Inhalation Intake =	2.43E-04

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.1.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	165	mg/day	(1)	$\frac{CS \times IR \times EF \times ED \times CF \times FI}{BW \times AT}$
				EF	Exposure Frequency	125	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				FI	Fraction Ingested from Site	1	unitless	(2)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	$\frac{CS \times SA \times AF \times ABS \times EV \times EF \times ED \times CF}{BW \times AT}$
				AF	Adherence Factor	0.1	mg/cm^2-day	USEPA, 2004	
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	125	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Inhalation of fugitive dust	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	8	hrs/day	MEDEP, 2013	$\frac{CS \times ET \times EF \times ED \times CF2}{PEF \times AT \times CF1}$
				EF	Exposure Frequency	125	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				PEF	Particulate Emission Factor	9.40E+05	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	

TABLE 4.1.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

2 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2016: USEPA Regional Screening Level (RSL) Calculator. May 2016 Version. Based on site-specific assumption of 140 days with at least 0.01 inches of precipitation based on Exhibit 5-2 from USEPA, 2002.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [(ug/m^3)(kg/mg)] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	5.05E-09	Cancer Dermal Intake =	1.29E-08	Cancer Inhalation Intake =	8.67E-07
Noncancer Ingestion Intake =	7.06E-07	Noncancer Dermal Intake =	1.81E-06	Noncancer Inhalation Intake =	1.21E-04

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.2.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(1)	$\frac{CW \times IR \times EF \times ED \times CF}{BW \times AT}$
				EF	Exposure Frequency	26	days/yr	MEDEP, 2013	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	0.001	mg/ug		
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	$\frac{DA \times SA \times EV \times EF \times ED}{BW \times AT}$
				ET	Event Time	4	hours/event	(2)	
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	26	days/yr	MEDEP, 2013	Inorganics:
				ED	Exposure Duration	0.5	years	MEDEP, 2013	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	$\frac{CW \times SA \times PC \times ET \times EV \times EF \times ED \times CF1 \times CF2}{BW \times AT}$
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
				CF1	Conversion Factor 1	0.001	L/cm^3	- -	
				CF2	Conversion Factor 2	0.001	mg/ug	- -	

TABLE 4.2.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

RME - Reasonable Maximum Exposure.

1 - Value is assumed to be one-tenth of that assumed to occur during a swimming event via incidental ingestion (based on MEDEP's (2013)) recommended ingestion rate during a swimming event). Assumes drinking water is obtained offsite.

2 - Construction worker is assumed to contact groundwater in an excavation trench for half of a typical 8-hour workday.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	3.18E-11	Cancer Dermal Intake =	2.24E-08
Noncancer Ingestion Intake =	4.45E-09	Noncancer Dermal Intake =	3.14E-06

Cancer risk from ingestion = Groundwater concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Groundwater concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Groundwater concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Groundwater concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.2.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0	liters/day	(2)	$\frac{CW \times IR \times EF \times ED \times CF}{BW \times AT}$
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	0.001	mg/ug	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	$\frac{DA \times SA \times EV \times EF \times ED}{BW \times AT}$
				ET	Event Time	2	hours/event	(1)	
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	13	days/yr	(1)	Inorganics:
				ED	Exposure Duration	0.5	years	MEDEP, 2013	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	$\frac{CW \times SA \times PC \times ET \times EV \times EF \times ED \times CF1 \times CF2}{BW \times AT}$
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
				CF1	Conversion Factor 1	0.001	L/cm^3	- -	
				CF2	Conversion Factor 2	0.001	mg/ug	- -	

TABLE 4.2.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Professional judgment. Assumes one-half of that assumed for the RME scenario.

2 - Assumes incidental ingestion of groundwater is trivial.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	0.00E+00	Cancer Dermal Intake =	1.12E-08
Noncancer Ingestion Intake =	0.00E+00	Noncancer Dermal Intake =	1.57E-06

Cancer risk from ingestion = Groundwater concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Groundwater concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Groundwater concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Groundwater concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.3.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - TRENCH AIR

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Trench Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	Fire Training Area	CA	Chemical Concentration in Trench Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	4	hrs/day	(1)	$\frac{CA \times ET \times EF \times ED}{AT \times CF}$
				EF	Exposure Frequency	26	days/yr	MEDEP, 2013	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	

Notes:

RME - Reasonable Maximum Exposure.

1 - Construction worker is assumed to contact groundwater in an excavation trench for half of a typical 8-hour workday.

Sources:

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Cancer Inhalation Intake =	8.48E-05
Noncancer Inhalation Intake =	1.19E-02

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.3.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - TRENCH AIR

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Groundwater
Exposure Medium:	Trench Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	Fire Training Area	CA	Chemical Concentration in Trench Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	2	hrs/day	(1)	$\frac{CA \times ET \times EF \times ED}{AT \times CF}$
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Professional judgment. Assumes one-half of that assumed for the RME scenario.

Sources:

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Cancer Inhalation Intake =	2.12E-05
Noncancer Inhalation Intake =	2.97E-03

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.4.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(2)	$\frac{CW \times IR \times EF \times ED \times CF}{BW \times AT}$
				EF	Exposure Frequency	30	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	0.001	mg/ug	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	$\frac{DA \times SA \times EV \times EF \times ED \times CF1 \times CF2}{BW \times AT}$
				ET	Event Time	2.6	hour/event	MEDEP, 2013	
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	30	days/yr	(1)	Inorganics:
				ED	Exposure Duration	0.5	years	MEDEP, 2013	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	$\frac{CW \times SA \times PC \times ET \times EV \times EF \times ED \times CF1 \times CF2}{BW \times AT}$
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
				CF1	Conversion Factor 1	0.001	L/cm^3	- -	
				CF2	Conversion Factor 2	0.001	mg/ug	- -	

TABLE 4.4.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

RME - Reasonable Maximum Exposure.

1 - Professional judgment. Exposure frequency is equivalent to 5 days per week for 6 weeks based on the limited construction work expected to occur in the wetland area.

2 - Value is assumed to be one-tenth of that assumed to occur during a swimming event via incidental ingestion (based on MEDEP's (2013)) recommended ingestion rate during a swimming event).

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	3.67E-11	Cancer Dermal Intake =	2.59E-08
Noncancer Ingestion Intake =	5.14E-09	Noncancer Dermal Intake =	3.62E-06

Cancer risk from ingestion = Surface water concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Surface water concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Surface water concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Surface water concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.4.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0	liters/day	(2)	$\frac{CW \times IR \times EF \times ED \times CF}{BW \times AT}$
				EF	Exposure Frequency	15	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	0.001	mg/ug		
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	$\frac{DA \times SA \times EV \times EF \times ED \times CF1 \times CF2}{BW \times AT}$
				ET	Event Time	2.6	hour/event	MEDEP, 2013	
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	15	days/yr	(1)	Inorganics:
				ED	Exposure Duration	0.5	years	MEDEP, 2013	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	$\frac{CW \times SA \times PC \times ET \times EV \times EF \times ED \times CF1 \times CF2}{BW \times AT}$
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
				CF1	Conversion Factor 1	0.001	L/cm^3	- -	
				CF2	Conversion Factor 2	0.001	mg/ug	- -	

TABLE 4.4.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Professional judgment. Exposure frequency is equivalent to 2.5 days per week for 6 weeks (one-half of the RME scenario) based on the limited construction work expected to occur in the wetland area.

2 - Assumes incidental ingestion of groundwater is trivial.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	0.00E+00	Cancer Dermal Intake =	1.29E-08
Noncancer Ingestion Intake =	0.00E+00	Noncancer Dermal Intake =	1.81E-06

Cancer risk from ingestion = Surface water concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Surface water concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Surface water concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Surface water concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.5.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	330	mg/day	MEDEP, 2013	$\frac{CS \times IR \times EF \times ED \times CF \times FI}{BW \times AT}$
				EF	Exposure Frequency	30	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				FI	Fraction Ingested from Site	1	unitless	(2)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	$\frac{CS \times SA \times AF \times ABS \times EV \times EF \times ED \times CF}{BW \times AT}$
				AF	Adherence Factor	0.3	mg/cm^2-day	MEDEP, 2013	
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	30	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	

TABLE 4.5.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - CONSTRUCTION WORKER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

RME - Reasonable Maximum Exposure.

1 - Professional judgment. Exposure frequency is equivalent to 5 days per week for 6 weeks based on the limited construction work expected to occur in the wetland area.

2 - Professional judgment; conservatively assumes 100 percent of sediment ingested is from the Site.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Cancer Ingestion Intak	2.42E-09	Cancer Dermal Intake =	7.76E-09
Noncancer Ingestion Ir	3.39E-07	Noncancer Dermal Intake =	1.09E-06

Cancer risk from ingestion = sediment concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = sediment concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = sediment concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = sediment concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.5.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	165	mg/day	(2)	$\frac{CS \times IR \times EF \times ED \times CF \times FI}{BW \times AT}$
				EF	Exposure Frequency	15	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	
Dermal	Construction Worker	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	$\frac{CS \times SA \times AF \times ABS \times EV \times EF \times ED \times CF}{BW \times AT}$
				AF	Adherence Factor	0.1	mg/cm^2-day	USEPA, 2004	
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	15	days/yr	(1)	
				ED	Exposure Duration	0.5	years	MEDEP, 2013	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	182.5	days	USEPA, 2014	

TABLE 4.5.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - CONSTRUCTION WORKER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Professional judgment. Exposure frequency is equivalent to 2.5 days per week for 6 weeks (one-half of the RME scenario) based on the limited construction work expected to occur in the wetland area.

2 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

3 - Professional judgment; conservatively assumes 100 percent of sediment ingested is from the Site.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Cancer Ingestion Intake	6.05E-10	Cancer Dermal Intake =	1.29E-09
Noncancer Ingestion Int	8.48E-08	Noncancer Dermal Intake =	1.81E-07

Cancer risk from ingestion = sediment concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = sediment concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = sediment concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = sediment concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.6.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	200	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	90	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.2	mg/cm^2-day	MEDEP, 2013	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	90	days/yr	MEDEP, 2013	
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Inhalation of fugitive dust	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	2	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	90	days/yr	MEDEP, 2013	PEF x AT x CF1
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	

TABLE 4.6.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	90	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.07	mg/cm^2-day	MEDEP, 2013	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	90	days/yr	MEDEP, 2013	
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg		
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Inhalation of fugitive dust	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	2	hrs/day	USEPA, 2014	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	90	days/yr	MEDEP, 2013	PEF x AT x CF1
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	

TABLE 4.6.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

USEPA - United States Environmental Protection Agency.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2016: USEPA Regional Screening Level (RSL) Calculator. May 2016 Version. Default values for Portland, Maine.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [(ug/m^3)(kg/mg)] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	2.82E-07	Cancer Dermal Intake =	6.69E-07	Cancer Inhalation Intake =	2.72E-09
	Noncancer Ingestion Intake =	3.29E-06	Noncancer Dermal Intake =	7.80E-06	Noncancer Inhalation Intake =	3.18E-08
Adult:	Cancer Ingestion Intake =	8.81E-08	Cancer Dermal Intake =	3.72E-07	Cancer Inhalation Intake =	9.07E-09
	Noncancer Ingestion Intake =	3.08E-07	Noncancer Dermal Intake =	1.30E-06	Noncancer Inhalation Intake =	3.18E-08

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.6.CTE
VALUES USED FOR DAILY INTAKE CALCULATIONS
CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SOIL
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	USEPA, 1993	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	45	days/yr	(4)	BW x AT
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.04	mg/cm^2-day	USEPA, 2004	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	45	days/yr	(4)	
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Inhalation of fugitive dust	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	2	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	45	days/yr	(4)	PEF x AT x CF1
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	

TABLE 4.6.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	50	mg/day	USEPA, 1993	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	45	days/yr	(4)	BW x AT
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.01	mg/cm^2-day	USEPA, 2004	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	45	days/yr	(4)	
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg		
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Inhalation of fugitive dust	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	2	hrs/day	USEPA, 2014	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	45	days/yr	(4)	PEF x AT x CF1
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	

TABLE 4.6.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

4 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

Sources:

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2015: USEPA Regional Screening Level (RSL) Calculator. November 2015 Version. Default values for Portland, Maine.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [(ug/m^3)(kg/mg)] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	2.35E-08	Cancer Dermal Intake =	2.23E-08	Cancer Inhalation Intake =	4.54E-10
	Noncancer Ingestion Intake =	8.22E-07	Noncancer Dermal Intake =	7.80E-07	Noncancer Inhalation Intake =	1.59E-08
Adult:	Cancer Ingestion Intake =	7.71E-09	Cancer Dermal Intake =	9.30E-09	Cancer Inhalation Intake =	1.59E-09
	Noncancer Ingestion Intake =	7.71E-08	Noncancer Dermal Intake =	9.30E-08	Noncancer Inhalation Intake =	1.59E-08

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.7.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	26	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	Inorganics:
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	Intake (mg/kg-day) =
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.7.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	26	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED x CF1 x CF2
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	Inorganics:
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.7.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day a week for six months during the warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Value is assumed to be one-tenth of that assumed to occur during a swimming event via incidental ingestion (based on MEDEP's (2013)) recommended ingestion rate during a swimming event).

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	2.04E-09	Cancer Dermal Intake =	9.66E-07
	Noncancer Ingestion Intake =	2.37E-08	Noncancer Dermal Intake =	1.13E-05
Adult:	Cancer Ingestion Intake =	1.27E-09	Cancer Dermal Intake =	1.53E-06
	Noncancer Ingestion Intake =	4.45E-09	Noncancer Dermal Intake =	5.37E-06

Cancer risk from ingestion = Surface water concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Surface water concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Surface water concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Surface water concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.7.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	13	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	Inorganics:
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	Intake (mg/kg-day) =
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.7.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	13	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED x CF1 x CF2
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	Inorganics:
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.7.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day every other week in warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Value is assumed to be one-tenth of that assumed to occur during a swimming event via incidental ingestion (based on MEDEP's (2013)) recommended ingestion rate during a swimming event).

Sources:

USEPA, 1989: Risk Assessment Guidance for Superfund. Vol 1: Human Health Evaluation Manual, Part A. EPA/540/1-86/060.

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	3.39E-10	Cancer Dermal Intake =	1.61E-07
	Noncancer Ingestion Intake =	1.19E-08	Noncancer Dermal Intake =	5.63E-06
Adult:	Cancer Ingestion Intake =	2.23E-10	Cancer Dermal Intake =	2.69E-07
	Noncancer Ingestion Intake =	2.23E-09	Noncancer Dermal Intake =	2.69E-06

Cancer risk from ingestion = Surface water concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Surface water concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Surface water concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Surface water concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	200	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	26	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.2	mg/cm^2-day	MEDEP, 2013	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	26	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.07	mg/cm^2-day	MEDEP, 2013	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day a week for six months during the warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Professional judgment; conservatively assumes 100 percent of sediment ingested is from the Site.

Sources:

USEPA, 1989: Risk Assessment Guidance for Superfund. Vol 1: Human Health Evaluation Manual, Part A.

USEPA, 1991: Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. OSWER Directive 9285.6-03.

USEPA, 2002a: Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites. OSWER 9285.6-10, December.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	8.14E-08	Cancer Dermal Intake =	1.93E-07
	Noncancer Ingestion Intake =	9.50E-07	Noncancer Dermal Intake =	2.25E-06
Adult:	Cancer Ingestion Intake =	2.54E-08	Cancer Dermal Intake =	1.07E-07
	Noncancer Ingestion Intake =	8.90E-08	Noncancer Dermal Intake =	3.76E-07

Cancer risk from ingestion = sediment concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = sediment concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = sediment concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = sediment concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.8.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	USEPA, 1993	$\frac{CS \times IR \times EF \times ED \times CF \times FI}{BW \times AT}$
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Child	Fire Training Area	CS	Chemical Concentration in Sediment	See Table 3s	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	$\frac{CS \times SA \times AF \times ABS \times EV \times EF \times ED \times CF}{BW \times AT}$
				AF	Adherence Factor	0.04	mg/cm^2-day	USEPA, 2004	
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	

TABLE 4.8.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	50	mg/day	USEPA, 1993	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	13	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Dermal	Recreational User/ Trespasser	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.01	mg/cm^2-day	USEPA, 2004	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	

TABLE 4.8.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - ON-SITE RECREATIONAL USER/TRESPASSER - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day every other week in warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Professional judgment; conservatively assumes 100 percent of sediment ingested is from the Site.

Sources:

USEPA, 1991: Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors. OSWER Directive 9285.6-03.

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2002a: Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites. OSWER 9285.6-10, December.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	6.78E-09	Cancer Dermal Intake =	6.44E-09
	Noncancer Ingestion Intake =	2.37E-07	Noncancer Dermal Intake =	2.25E-07
Adult:	Cancer Ingestion Intake =	2.23E-09	Cancer Dermal Intake =	2.69E-09
	Noncancer Ingestion Intake =	2.23E-08	Noncancer Dermal Intake =	2.69E-08

Cancer risk from ingestion = sediment concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = sediment concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = sediment concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = sediment concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.9.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - OUTDOOR INDUSTRIAL WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Outdoor Industrial Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration	25	years	MEDEP, 2013	
				FI	Fraction Ingested from Site	1	unitless	(1)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	9,125	days	USEPA, 2014	
Dermal	Outdoor Industrial Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Dermal Absorbed Dose (mg/kg/day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.12	mg/cm^2-day	USEPA, 2014	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	
				ED	Exposure Duration	25	years	USEPA, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	9,125	days	USEPA, 2014	
Inhalation of fugitive dust	Outdoor Industrial Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Chronic Daily Intake (CDI) (ug/m^3) =
				ET	Exposure Time	8	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	PEF x AT x CF1
				ED	Exposure Duration	25	years	MEDEP, 2013	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	9,125	days	USEPA, 2014	

Notes:

1 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

TABLE 4.9.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - OUTDOOR INDUSTRIAL WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2016: USEPA Regional Screening Level (RSL) Calculator. May 2016 Version. Default values for Portland, Maine.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [(ug/m^3)(kg/mg)] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	1.83E-07	Cancer Dermal Intake =	7.76E-07	Cancer Inhalation Intake =	7.56E-08
Noncancer Ingestion Intake =	5.14E-07	Noncancer Dermal Intake =	2.17E-06	Noncancer Inhalation Intake =	2.12E-07

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.9.CTE
VALUES USED FOR DAILY INTAKE CALCULATIONS
CENTRAL TENDENCY EXPOSURE - OUTDOOR INDUSTRIAL WORKER - SOIL
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Outdoor Industrial Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	50	mg/day	USEPA, 1993	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration	9	years	USEPA, 1993	
				FI	Fraction Ingested from Site	1	unitless	(1)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	3,285	days	USEPA, 2014	
Dermal	Outdoor Industrial Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Dermal Absorbed Dose (mg/kg/day) =
				SA	Surface Area	3,527	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.02	mg/cm^2-day	USEPA, 2004	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	
				ED	Exposure Duration	9	years	USEPA, 1993	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	3,285	days	USEPA, 2014	
Inhalation of fugitive dust	Outdoor Industrial Worker	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Chronic Daily Intake (CDI) (ug/m^3) =
				ET	Exposure Time	8	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	PEF x AT x CF1
				ED	Exposure Duration	9	years	USEPA, 1993	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	3,285	days	USEPA, 2014	

Notes:

1 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

TABLE 4.9.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - OUTDOOR INDUSTRIAL WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Sources:

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2016: USEPA Regional Screening Level (RSL) Calculator. May 2016 Version. Default values for Portland, Maine.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [$(ug/m^3)(kg/mg)$] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Cancer Ingestion Intake =	3.30E-08	Cancer Dermal Intake =	4.66E-08	Cancer Inhalation Intake =	2.72E-08
Noncancer Ingestion Intake =	2.57E-07	Noncancer Dermal Intake =	3.62E-07	Noncancer Inhalation Intake =	2.12E-07

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.10.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - INDOOR INDUSTRIAL WORKER - INDOOR AIR

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Indoor Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Indoor Industrial Worker	Adult	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) = $\frac{CA \times ET \times EF \times ED}{AT \times CF}$
				ET	Exposure Time	8	hrs/day	MEDEP, 2013	
				EF	Exposure Frequency	250	days/yr	MEDEP, 2013	
				ED	Exposure Duration	25	years	MEDEP, 2013	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	9,125	days	USEPA, 2014	

Notes:

RME - Reasonable Maximum Exposure.

Sources:

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Cancer Inhalation Intake =	8.15E-02
Noncancer Inhalation Intake =	2.28E-01

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.10.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - INDOOR INDUSTRIAL WORKER - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Indoor Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Indoor Industrial Worker	Adult	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) = $\frac{CA \times ET \times EF \times ED}{AT \times CF}$
				ET	Exposure Time	8	hrs/day	MEDEP, 2013	
				EF	Exposure Frequency	125	days/yr	(1)	
				ED	Exposure Duration	25	years	MEDEP, 2013	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	9,125	days	USEPA, 2014	

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

Sources:

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Cancer Inhalation Intake =	4.08E-02
Noncancer Inhalation Intake =	1.14E-01

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.11.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	200	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Dermal	Resident	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.2	mg/cm^2-day	MEDEP, 2013	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Inhalation of fugitive dust	Resident	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	PEF x AT x CF1
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	

TABLE 4.11.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	MEDEP, 2013	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Dermal	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.07	mg/cm^2-day	MEDEP, 2013	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg		
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Inhalation of fugitive dust	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	150	days/yr	MEDEP, 2013	PEF x AT x CF1
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	

TABLE 4.11.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

USEPA - United States Environmental Protection Agency.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2016: USEPA Regional Screening Level (RSL) Calculator. May 2016 Version. Default values for Portland, Maine.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [$(ug/m^3)(kg/mg)$] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	4.70E-07	Cancer Dermal Intake =	1.11E-06	Cancer Inhalation Intake =	5.44E-08
	Noncancer Ingestion Intake =	5.48E-06	Noncancer Dermal Intake =	1.30E-05	Noncancer Inhalation Intake =	6.35E-07
Adult:	Cancer Ingestion Intake =	1.47E-07	Cancer Dermal Intake =	6.20E-07	Cancer Inhalation Intake =	1.81E-07
	Noncancer Ingestion Intake =	5.14E-07	Noncancer Dermal Intake =	2.17E-06	Noncancer Inhalation Intake =	6.35E-07

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.11.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	USEPA, 1993	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	75	days/yr	(4)	BW x AT
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Dermal	Resident	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.04	mg/cm^2-day	USEPA, 2004	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	75	days/yr	(4)	
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Inhalation of fugitive dust	Resident	Child	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	75	days/yr	(4)	PEF x AT x CF1
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	

TABLE 4.11.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	50	mg/day	USEPA, 1993	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	75	days/yr	(4)	BW x AT
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(3)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Dermal	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.01	mg/cm^2-day	USEPA, 2004	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	75	days/yr	(4)	
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg		
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Inhalation of fugitive dust	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Soil	Chemical Specific	mg/kg	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CS x ET x EF x ED x CF2
				EF	Exposure Frequency	75	days/yr	(4)	PEF x AT x CF1
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				PEF	Particulate Emission Factor	6.47E+08	m^3/kg	See Attachment C	
				CF1	Conversion Factor 1	24	hrs/day	- -	
				CF2	Conversion Factor 2	1000	ug/mg	- -	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	

TABLE 4.11.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SOIL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Soil
Exposure Medium:	Surface/Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

USEPA - United States Environmental Protection Agency.

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Professional judgment; conservatively assumes 100 percent of soil ingested is from the Site.

4 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

Sources:

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

USEPA, 2016: USEPA Regional Screening Level (RSL) Calculator. May 2016 Version. Default values for Portland, Maine.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Inhalation Intake [(ug/m^3)(kg/mg)] =(ET x EF x ED x CF2)/(PEF x AT x CF1) [CS is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	3.91E-08	Cancer Dermal Intake =	3.72E-08	Cancer Inhalation Intake =	9.07E-09	
	Noncancer Ingestion Intake =	1.37E-06	Noncancer Dermal Intake =	1.30E-06	Noncancer Inhalation Intake =	3.18E-07	
Adult:	Cancer Ingestion Intake =	1.28E-08	Cancer Dermal Intake =	1.55E-08	Cancer Inhalation Intake =	3.18E-08	
	Noncancer Ingestion Intake =	1.28E-07	Noncancer Dermal Intake =	1.55E-07	Noncancer Inhalation Intake =	3.18E-07	

Cancer risk from ingestion = Soil concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Soil concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Soil concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Soil concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.12.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.78	liters/day	USEPA, 2014	CW x IR x EF x ED x CF
				EF	Exposure Frequency	350	days/yr	MEDEP, 2013	BW x AT
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Dermal - showering	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	6,365	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED
				ET	Event Time	0.54	hour/event	USEPA, 2014	BW x AT
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	350	days/yr	USEPA, 2014	
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	Inorganics:
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	Intake (mg/kg-day) =
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.12.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	2.5	liters/day	USEPA, 2014	CW x IR x EF x ED x CF
				EF	Exposure Frequency	350	days/yr	USEPA, 2014	BW x AT
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Dermal - showering	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg/day) =
				SA	Surface Area	19,652	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED x CF1 x CF2
				ET	Event Time	0.71	hour/event	USEPA, 2014	BW x AT
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	350	days/year	USEPA, 2004	
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	Inorganics:
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				BW	Body Weight	80	kg	USEPA, 2014	Intake (mg/kg/day) =
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.12.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Inhalation Intake = (K x EF x ED)/(AT)

Child:	Cancer Ingestion Intake =	4.27E-06	Cancer Dermal Intake =	3.49E-05
	Noncancer Ingestion Intake =	4.99E-05	Noncancer Dermal Intake =	4.07E-04
Adult:	Cancer Ingestion Intake =	8.56E-06	Cancer Dermal Intake =	6.73E-05
	Noncancer Ingestion Intake =	3.00E-05	Noncancer Dermal Intake =	2.36E-04

Cancer risk from ingestion = Groundwater concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Groundwater concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Groundwater concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Groundwater concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.12.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.78	liters/day	USEPA, 2014	CW x IR x EF x ED x CF
				EF	Exposure Frequency	175	days/yr	(3)	BW x AT
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Dermal - showering	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	6,378	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED
				ET	Event Time	0.54	hour/event	USEPA, 2014	BW x AT
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	175	days/yr	(3)	
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	Inorganics:
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	Intake (mg/kg-day) =
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.12.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	2.5	liters/day	USEPA, 2014	CW x IR x EF x ED x CF
				EF	Exposure Frequency	175	days/yr	(3)	BW x AT
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Dermal - showering	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg/day) =
				SA	Surface Area	20,900	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED x CF1 x CF2
				ET	Event Time	0.71	hour/event	USEPA, 2014	BW x AT
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	175	days/year	(3)	
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	Inorganics:
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				BW	Body Weight	80	kg	USEPA, 2014	Intake (mg/kg/day) =
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.12.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - GROUNDWATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

Sources:

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Inhalation Intake = (K x EF x ED)/(AT)

Child:	Cancer Ingestion Intake =	7.12E-07	Cancer Dermal Intake =	5.82E-06
	Noncancer Ingestion Intake =	2.49E-05	Noncancer Dermal Intake =	2.04E-04
Adult:	Cancer Ingestion Intake =	1.50E-06	Cancer Dermal Intake =	1.25E-05
	Noncancer Ingestion Intake =	1.50E-05	Noncancer Dermal Intake =	1.25E-04

Cancer risk from ingestion = Groundwater concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Groundwater concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Groundwater concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Groundwater concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.13.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SHOWER AIR

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Shower Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Child	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	0.54	hrs/day	USEPA, 2014	CA x ET x EF x ED / AT x CF
				EF	Exposure Frequency	350	days/yr	MEDEP, 2013	
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 1989	
Inhalation	Resident	Adult	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	0.71	hrs/day	USEPA, 2014	CA x ET x EF x ED / AT x CF
				EF	Exposure Frequency	350	days/yr	MEDEP, 2013	
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	

Notes:

RME - Reasonable Maximum Exposure.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

Sources:

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Child:	Cancer Inhalation Intake =	1.85E-03
	Noncancer Inhalation Intake =	2.16E-02
Adult:	Cancer Inhalation Intake =	8.11E-03
	Noncancer Inhalation Intake =	2.84E-02

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.13.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SHOWER AIR

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Shower Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Child	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) = $\frac{CA \times ET \times EF \times ED}{AT \times CF}$
				ET	Exposure Time	0.54	hrs/day	USEPA, 2014	
				EF	Exposure Frequency	175	days/yr	(3)	
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Inhalation	Resident	Adult	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) = $\frac{CA \times ET \times EF \times ED}{AT \times CF}$
				ET	Exposure Time	0.71	hrs/day	USEPA, 2014	
				EF	Exposure Frequency	175	days/yr	(3)	
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

Sources:

USEPA, 1989: Risk Assessment Guidance for Superfund. Vol 1: Human Health Evaluation Manual, Part A.

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Child:	Cancer Inhalation Intake =	3.08E-04
	Noncancer Inhalation Intake =	1.08E-02
Adult:	Cancer Inhalation Intake =	1.42E-03
	Noncancer Inhalation Intake =	1.42E-02

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.14.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - INDOOR AIR

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Indoor Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Child	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CA x ET x EF x ED
				EF	Exposure Frequency	350	days/yr	MEDEP, 2013	AT x CF
				ED	Exposure Duration (Age 0-2)	2	years	(1) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(1) USEPA, 2005, 2014	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Inhalation	Resident	Adult	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CA x ET x EF x ED
				EF	Exposure Frequency	350	days/yr	MEDEP, 2013	AT x CF
				ED	Exposure Duration (Age 7-16)	10	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	

Notes:

RME - Reasonable Maximum Exposure.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

Sources:

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Child:	Cancer Inhalation Intake =	8.22E-02
	Noncancer Inhalation Intake =	9.59E-01
Adult:	Cancer Inhalation Intake =	2.74E-01
	Noncancer Inhalation Intake =	9.59E-01

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.14.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - INDOOR AIR

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Groundwater
Exposure Medium:	Indoor Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Child	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CA x ET x EF x ED
				EF	Exposure Frequency	175	days/yr	(3)	AT x CF
				ED	Exposure Duration (Age 0-2)	1	years	(1) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(1) USEPA, 1993, 2005	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Inhalation	Resident	Adult	Fire Training Area	CA	Chemical Concentration in Indoor Air	Chemical Specific	ug/m^3	See Table 3s	Intake (ug/m^3) =
				ET	Exposure Time	24	hrs/day	MEDEP, 2013	CA x ET x EF x ED
				EF	Exposure Frequency	175	days/yr	(3)	AT x CF
				ED	Exposure Duration (Age 7-16)	2	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	24	hrs/day	--	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

1 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

2 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Professional judgment. For some factors, CTE is assumed to be 50 percent of RME.

Sources:

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Inhalation Intake [unitless] =(ET x EF x ED) / (AT x CF) [CA is factored into the risk calculation in Table 7s]

Child:	Cancer Inhalation Intake =	1.37E-02
	Noncancer Inhalation Intake =	4.79E-01
Adult:	Cancer Inhalation Intake =	4.79E-02
	Noncancer Inhalation Intake =	4.79E-01

Cancer risk from inhalation = Air concentration x Cancer Inhalation Intake x Inhalation Unit Risk

Hazard Index from inhalation = Air concentration x Noncancer Inhalation Intake / Inhalation Reference Concentration

TABLE 4.15.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SURFACE WATER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	26	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Dermal	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	Inorganics:
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	Intake (mg/kg-day) =
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.15.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	26	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Dermal	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED x CF1 x CF2
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	Inorganics:
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.15.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day a week for six months during the warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Value is assumed to be one-tenth of that assumed to occur during a swimming event via incidental ingestion (based on MEDEP's (2013)) recommended ingestion rate during a swimming event).

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	2.04E-09	Cancer Dermal Intake =	9.66E-07
	Noncancer Ingestion Intake =	2.37E-08	Noncancer Dermal Intake =	1.13E-05
Adult:	Cancer Ingestion Intake =	1.27E-09	Cancer Dermal Intake =	1.53E-06
	Noncancer Ingestion Intake =	4.45E-09	Noncancer Dermal Intake =	5.37E-06

Cancer risk from ingestion = Surface water concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Surface water concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Surface water concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Surface water concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.15.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	13	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Dermal	Resident	Child	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	Inorganics:
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	Intake (mg/kg-day) =
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.15.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	0.005	liters/day	(4)	CW x IR x EF x ED x CF
				EF	Exposure Frequency	13	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	
				CF	Conversion Factor	0.001	mg/ug	--	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Dermal	Resident	Adult	Fire Training Area	CW	Chemical Concentration in Water	Chemical Specific	ug/L	See Table 3s	Organics:
				DA	Dose Absorbed per Unit Area per Event	Chemical Specific	mg/cm^2-event	USEPA, 2004	Intake (mg/kg-day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	
				PC	Permeability Constant	Chemical Specific	cm/hr	See Attachment C	DA x SA x EV x EF x ED x CF1 x CF2
				ET	Event Time	2.6	hour/event	MEDEP, 2013	BW x AT
				EV	Event Frequency	1	event/day	MEDEP, 2013	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	Inorganics:
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	Intake (mg/kg-day) =
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	CW x SA x PC x ET x EV x EF x ED x CF1 x CF2
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	BW x AT
				CF1	Conversion Factor 1	0.001	L/cm^3	--	
				CF2	Conversion Factor 2	0.001	mg/ug	--	

TABLE 4.15.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day every other week in warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Value is assumed to be one-tenth of that assumed to occur during a swimming event via incidental ingestion (based on MEDEP's (2013)) recommended ingestion rate during a swimming event).

Sources:

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(L/ug)]= (IR x EF x ED x CF)/(BW x AT) [CW is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(L/ug)(event/cm)]= (SA x EV x EF x ED x CF1 x CF2)/(BW x AT) [DA (including CW, PC, and ET) is factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	3.39E-10	Cancer Dermal Intake =	1.61E-07
	Noncancer Ingestion Intake =	1.19E-08	Noncancer Dermal Intake =	5.63E-06
Adult:	Cancer Ingestion Intake =	2.23E-10	Cancer Dermal Intake =	2.69E-07
	Noncancer Ingestion Intake =	2.23E-09	Noncancer Dermal Intake =	2.69E-06

Cancer risk from ingestion = Surface water concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = Surface water concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = Surface water concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = Surface water concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.16.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	200	mg/day	MEDEP, 2013	$\frac{CS \times IR \times EF \times ED \times CF \times FI}{BW \times AT}$
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	
Dermal	Resident	Child	Fire Training Area	CS	Chemical Concentration in Sediment	See Table 3s	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	$\frac{CS \times SA \times AF \times ABS \times EV \times EF \times ED \times CF}{BW \times AT}$
				AF	Adherence Factor	0.2	mg/cm^2-day	MEDEP, 2013	
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	2	years	(2) USEPA, 2005, 2014	
				ED	Exposure Duration (Age 2-6)	4	years	(2) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,190	days	USEPA, 2014	

TABLE 4.16.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	MEDEP, 2013	$\frac{CS \times IR \times EF \times ED \times CF \times FI}{BW \times AT}$
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	
Dermal	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	$\frac{CS \times SA \times AF \times ABS \times EV \times EF \times ED \times CF}{BW \times AT}$
				AF	Adherence Factor	0.07	mg/cm^2-day	MEDEP, 2013	
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	26	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	10	years	(3) USEPA, 2005, 2014	
				ED	Exposure Duration (16-26)	10	years	(3) USEPA, 2005, 2014	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	7,300	days	USEPA, 2014	

TABLE 4.16.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day a week for six months during the warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Professional judgment; conservatively assumes 100 percent of sediment ingested is from the Site.

Sources:

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

MEDEP, 2013: Guidance for Human Health Risk Assessments for Hazardous Substances Sites in Maine. Standard Default Exposure Assumptions Table 1, Revised October 2013.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	8.14E-08	Cancer Dermal Intake =	1.93E-07
	Noncancer Ingestion Intake =	9.50E-07	Noncancer Dermal Intake =	2.25E-06
Adult:	Cancer Ingestion Intake =	2.54E-08	Cancer Dermal Intake =	1.07E-07
	Noncancer Ingestion Intake =	8.90E-08	Noncancer Dermal Intake =	3.76E-07

Cancer risk from ingestion = sediment concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = sediment concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = sediment concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = sediment concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 4.16.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Child	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	100	mg/day	USEPA, 1993	$\frac{CS \times IR \times EF \times ED \times CF \times FI}{BW \times AT}$
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	
Dermal	Resident	Child	Fire Training Area	CS	Chemical Concentration in Sediment	See Table 3s	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	2,373	cm^2	USEPA, 2014	$\frac{CS \times SA \times AF \times ABS \times EV \times EF \times ED \times CF}{BW \times AT}$
				AF	Adherence Factor	0.04	mg/cm^2-day	USEPA, 2004	
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 0-2)	1	years	(2) USEPA, 1993, 2005	
				ED	Exposure Duration (Age 2-6)	1	years	(2) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	15	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	730	days	USEPA, 2014	

TABLE 4.16.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				IR	Ingestion Rate	50	mg/day	USEPA, 1993	CS x IR x EF x ED x CF x FI
				EF	Exposure Frequency	13	days/yr	(1)	BW x AT
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	
				FI	Fraction Ingested from Site	1	unitless	(4)	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	
Dermal	Resident	Adult	Fire Training Area	CS	Chemical Concentration in Sediment	Chemical Specific	mg/kg	See Table 3s	Intake (mg/kg/day) =
				SA	Surface Area	6,032	cm^2	USEPA, 2014	CS x SA x AF x ABS x EV x EF x ED x CF
				AF	Adherence Factor	0.01	mg/cm^2-day	USEPA, 2004	BW x AT
				ABS	Dermal absorption fraction	Chemical Specific	unitless	See Attachment C	
				EV	Event Frequency	1	event/day	USEPA, 2004	
				EF	Exposure Frequency	13	days/yr	(1)	
				ED	Exposure Duration (Age 7-16)	2	years	(3) USEPA, 1993, 2005	
				ED	Exposure Duration (16-26)	5	years	(3) USEPA, 1993, 2005	
				CF	Conversion Factor	1.00E-06	kg/mg	- -	
				BW	Body Weight	80	kg	USEPA, 2014	
				ATc	Averaging Time - cancer	25,550	days	USEPA, 2014	
				ATnc	Averaging Time - noncancer	2,555	days	USEPA, 2014	

TABLE 4.16.CTE

VALUES USED FOR DAILY INTAKE CALCULATIONS

CENTRAL TENDENCY EXPOSURE - HYPOTHETICAL FUTURE ON-SITE RESIDENT - SEDIMENT

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe:	Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

CTE - Central Tendency Exposure.

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

1 - Professional judgment. Assumes one day every other week in warm weather months.

2 - Children will be evaluated as one age group (0-6 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

3 - Adults will be evaluated as one age group (7-26 years) for non-mutagenic chemicals in accordance with USEPA's Supplemental Guidance of Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, 2005).

4 - Professional judgment; conservatively assumes 100 percent of sediment ingested is from the Site.

Sources:

USEPA, 1993: Superfund's Standard Default Exposure Factors for the Central Tendency and Reasonable Maximum Exposure.

USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005.

USEPA, 2014: Human Health Evaluation Manual, Supplemental Guidance: Update of Standard Default Exposure Factors. February 6, 2014. Corrected September 2015.

Unit Intake Calculations

Incidental Ingestion Intake [(mg/kg-day)(kg/mg)] = (IR x EF x ED x CF x FI)/(BW x AT) [CS is factored into the risk calculation in Table 7s]

Dermal Intake [(mg/kg-day)(kg/mg)] = (SA x AF x EF x ED x CF)/(BW x AT) [CS and ABS are factored into the risk calculation in Table 7s]

Child:	Cancer Ingestion Intake =	6.78E-09	Cancer Dermal Intake =	6.44E-09
	Noncancer Ingestion Intake =	2.37E-07	Noncancer Dermal Intake =	2.25E-07
Adult:	Cancer Ingestion Intake =	2.23E-09	Cancer Dermal Intake =	2.69E-09
	Noncancer Ingestion Intake =	2.23E-08	Noncancer Dermal Intake =	2.69E-08

Cancer risk from ingestion = sediment concentration x Cancer Ingestion Intake x Oral Cancer Slope Factor

Cancer risk from dermal contact = sediment concentration x Cancer Dermal Intake x Absorption Factor x Dermal Cancer Slope Factor

Hazard Index from ingestion = sediment concentration x Noncancer Ingestion Intake / Oral Reference Dose

Hazard Index from dermal contact = sediment concentration x Noncancer Dermal Intake x Absorption Factor / Dermal Reference Dose

TABLE 5.1
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Chronic/ Subchronic (2)	Oral RfD		Oral Absorption Efficiency for Dermal (3)	Absorbed RfD for Dermal (4)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD:Target Organ(s)	
			Value	Units		Value	Units			Source(s)	Date(s) (MM/YYYY)
CHRONIC TOXICITY VALUES											
Metals											
ALUMINUM	7429-90-5	Chronic	1.0E+00	mg/kg-day	N/A	1.0E+00	mg/kg-day	Nervous System	100	PPRTV	10/2006
ARSENIC	7440-38-2	Chronic	3.0E-04	mg/kg-day	N/A	3.0E-04	mg/kg-day	Skin, Vascular	3	IRIS	2/2017
CADMIUM	7440-43-9	Chronic	5.0E-04	mg/kg-day	0.05	2.5E-05	mg/kg-day	Kidney	10	IRIS	2/2017
COBALT	7440-48-4	Chronic	3.0E-04	mg/kg-day	N/A	3.0E-04	mg/kg-day	Thyroid	3,000	PPRTV	8/2008
IRON	7439-89-6	Chronic	7.0E-01	mg/kg-day	N/A	7.0E-01	mg/kg-day	Gastrointestinal	1.5	PPRTV	9/2006
MANGANESE	7439-96-5	Chronic	2.4E-02	mg/kg-day	0.04	9.6E-04	mg/kg-day	Nervous System	3	IRIS	2/2017
THALLIUM	7440-28-0	Chronic	1.0E-05	mg/kg-day	N/A	1.0E-05	mg/kg-day	Hair	3,000	PPRTV Appendix	10/2012
VANADIUM	7440-62-2	Chronic	5.0E-03	mg/kg-day	0.026	1.3E-04	mg/kg-day	Hair	100	IRIS	2/2017
Pesticides											
DIELDRIN	60-57-1	Chronic	5.0E-05	mg/kg-day	N/A	5.0E-05	mg/kg-day	Liver	100	IRIS	2/2017
HEPTACHLOR EPOXIDE	1024-57-3	Chronic	1.3E-05	mg/kg-day	N/A	1.3E-05	mg/kg-day	Liver	1000	IRIS	2/2017
ENDRIN KETONE	53494-70-5	Chronic	3.0E-04	mg/kg-day	N/A	3.0E-04	mg/kg-day	Liver	100	IRIS	2/2017
PCBs											
TOTAL PCBs	RATotAroclors	Chronic	2.0E-05	mg/kg-day	N/A	2.0E-05	mg/kg-day	Eye, Nails, Immune	300	IRIS	2/2017
PFASs											
PFOS	1763-23-1	Chronic	2.0E-05	mg/kg-day	N/A	2.0E-05	mg/kg-day	Developmental	30	USEPA (5)	5/2016
PFOA	335-67-1	Chronic	2.0E-05	mg/kg-day	N/A	2.0E-05	mg/kg-day	Developmental	30	USEPA (5)	5/2016
SVOCs											
1,1-BIPHENYL	92-52-4	Chronic	5.0E-01	mg/kg-day	N/A	5.0E-01	mg/kg-day	Kidney	30	IRIS	2/2017
1,2,4,5-TETRACHLOROBENZENE	95-94-3	Chronic	3.0E-04	mg/kg-day	N/A	3.0E-04	mg/kg-day	Kidney	1,000	IRIS	2/2017
BENZO[A]ANTHRACENE	56-55-3	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[A]PYRENE	50-32-8	Chronic	3.0E-04	mg/kg-day	N/A	3.0E-04	mg/kg-day	Developmental	300	IRIS	2/2017
BENZO[B]FLUORANTHENE	205-99-2	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[K]FLUORANTHENE	207-08-9	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BIS(2-CHLOROETHYL)ETHER	111-44-4	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DIBENZ[A,H]ANTHRACENE	53-70-3	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HEXACHLOROCYCLOPENTADIEN	77-47-4	Chronic	6.0E-03	mg/kg-day	N/A	6.0E-03	mg/kg-day	None reported	1,000	IRIS	2/2017
INDENO[1,2,3-CD]PYRENE	193-39-5	Chronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOCs											
CIS-1,2-DICHLOROETHENE	156-59-2	Chronic	2.0E-03	mg/kg-day	N/A	2.0E-03	mg/kg-day	Increased relative kidney weights	3,000	IRIS	2/2017
TRICHLOROETHENE	79-01-6	Chronic	5.0E-04	mg/kg-day	N/A	5.0E-04	mg/kg-day	Thyroid, Developmental, Vascular	1,000	IRIS	2/2017
VINYL CHLORIDE	75-01-4	Chronic	3.0E-03	mg/kg-day	N/A	3.0E-03	mg/kg-day	Liver	30	IRIS	2/2017

TABLE 5.1
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Chronic/ Subchronic (2)	Oral RfD		Oral Absorption Efficiency for Dermal (3)	Absorbed RfD for Dermal (4)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD:Target Organ(s)	
			Value	Units		Value	Units			Source(s)	Date(s) (MM/YYYY)
SUBCHRONIC TOXICITY VALUES											
Metals											
ALUMINUM	7429-90-5	Subchronic	1.0E+00	mg/kg-day	N/A	1.0E+00	mg/kg-day	Nervous System	100	PPRTV	10/2006
ARSENIC	7440-38-2	Subchronic	3.0E-04	mg/kg-day	N/A	3.0E-04	mg/kg-day	Skin, Vascular	3	IRIS	2/2017
CADMIUM	7440-43-9	Subchronic	5.0E-04	mg/kg-day	0.05	2.5E-05	mg/kg-day	Kidney	10	IRIS	2/2017
COBALT	7440-48-4	Subchronic	3.0E-03	mg/kg-day	N/A	3.0E-03	mg/kg-day	Thyroid	300	PPRTV	8/2008
IRON	7439-89-6	Subchronic	7.0E-01	mg/kg-day	N/A	7.0E-01	mg/kg-day	Gastrointestinal	1.5	PPRTV	9/2006
MANGANESE	7439-96-5	Subchronic	2.4E-02	mg/kg-day	0.04	9.6E-04	mg/kg-day	Nervous System	9	IRIS	2/2017
THALLIUM	7440-28-0	Subchronic	4.0E-05	mg/kg-day	N/A	4.0E-05	mg/kg-day	Hair	1,000	PPRTV Appendix	10/2012
VANADIUM	7440-62-2	Subchronic	5.0E-03	mg/kg-day	0.026	1.3E-04	mg/kg-day	Hair	100	IRIS	2/2017
Pesticides											
ENDRIN KETONE	53494-70-5	Subchronic	2.0E-03	mg/kg-day	N/A	2.0E-03	mg/kg-day	Neurological	100	ATSDR	3/2016
DIELDRIN	60-57-1	Subchronic	5.0E-05	mg/kg-day	N/A	5.0E-05	mg/kg-day	Liver	100	IRIS	2/2017
HEPTACHLOR EPOXIDE	1024-57-3	Subchronic	1.3E-05	mg/kg-day	N/A	1.3E-05	mg/kg-day	Liver	1,000	IRIS	2/2017
PCBs											
TOTAL PCBs	RATotAroclors	Subchronic	6.0E-05	mg/kg-day	N/A	6.0E-05	mg/kg-day	Eye, Nails, Immune	100	IRIS	2/2017
PFASs											
PFOS	1763-23-1	Subchronic	2.0E-05	mg/kg-day	N/A	2.0E-05	mg/kg-day	Developmental	30	USEPA (5)	5/2016
PFOA	335-67-1	Subchronic	2.0E-05	mg/kg-day	N/A	2.0E-05	mg/kg-day	Developmental	30	USEPA (5)	5/2016
SVOCs											
1,1-BIPHENYL	92-52-4	Subchronic	1.0E-01	mg/kg-day	N/A	1.0E-01	mg/kg-day	Developmental	100	PPRTV	4/2011
1,2,4,5-TETRACHLOROBENZENE	95-94-3	Subchronic	3.0E-05	mg/kg-day	N/A	3.0E-05	mg/kg-day	Thyroid	300	PPRTV	9/2013
BENZO[A]ANTHRACENE	56-55-3	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[A]PYRENE	50-32-8	Subchronic	3.0E-04	mg/kg-day	N/A	3.0E-04	mg/kg-day	Developmental	300	IRIS	2/2017
BENZO[B]FLUORANTHENE	205-99-2	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[K]FLUORANTHENE	207-08-9	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BIS(2-CHLOROETHYL)ETHER	111-44-4	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DIBENZ[A,H]ANTHRACENE	53-70-3	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
HEXACHLOROCYCLOPENTADIEN	77-47-4	Subchronic	1.0E-01	mg/kg-day	N/A	1.0E-01	mg/kg-day	Renal	100	ATSDR	3/2016
INDENO[1,2,3-CD]PYRENE	193-39-5	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOCs											
CIS-1,2-DICHLOROETHENE	156-59-2	Subchronic	2.0E-02	mg/kg-day	N/A	2.0E-02	mg/kg-day	Increased relative kidney weights	300	IRIS	2/2017
TRICHLOROETHENE	79-01-6	Subchronic	5.0E-04	mg/kg-day	N/A	5.0E-04	mg/kg-day	Thyroid, Developmental, Vascular	1,000	IRIS	2/2017
VINYL CHLORIDE	75-01-4	Subchronic	3.0E-03	mg/kg-day	N/A	3.0E-03	mg/kg-day	Liver	30	IRIS	2/2017

See notes on following page.

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Chronic/ Subchronic (2)	Oral RfD		Oral Absorption Efficiency for Dermal (3)	Absorbed RfD for Dermal (4)		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD:Target Organ(s)	
			Value	Units		Value	Units			Source(s)	Date(s) (MM/YYYY)

Notes:

ATSDR - Agency for Toxic Substances and Disease Registry

CAS - Chemical Abstracts Service.

IRIS - Integrated Risk Information System.

N/A - Not Applicable/Not Available.

MECDC - Maine Center for Disease Control and Prevention.

mg/kg-day - milligrams per kilogram per day.

PCBs - Polychlorinated biphenyls.

PFASs - Poly- and Perfluoroalkyl Substances.

PFOA - Perfluorooctanoic acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

PPRTV - Provisional Peer Reviewed Toxicity Values.

RfD - Reference Dose.

SVOCs - Semi-volatile organic compounds.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

(1) The following surrogates were used for chemicals without toxicity values or multiple forms:

RfD for cadmium in water used for cadmium. Cadmium is not a COPC in soil or sediment.

RfD for hexavalent chromium used for chromium, total.

RfD for manganese, non-diet used.

When assessing exposure to manganese in soil or drinking water, IRIS recommends applying a modifying factor of 3 to the oral RfD of 0.14 mg/kg-day. The USEPA Regional Screening Level (RSL) User's Guide (2015) also indicates that the average dietary manganese content of the US diet (5 mg/day) be subtracted from the critical dose of 10 mg/day when assessing exposure to non-dietary manganese. Therefore, the RfD is (10 mg/day - 5 mg/day)/Modifying Factor (3) = 1.67 mg/day / 70 kg = 0.024 mg/kg-day.

RfD for thallium is based on thallium soluble salts. No PPRTVs were developed for thallium in the PPRTV document (USEPA, 2012) due to database deficiencies.

Appendix A of the PPRTV document indicates that it is inappropriate to derive provisional chronic or subchronic RfDs for thallium, but that information is available which, although insufficient to support derivation of a provisional toxicity value, under current guidelines, may be of limited use to risk assessors as a screening value. The use of this screening provisional value is highly uncertain but is the value used in the USEPA Regional Screening Level (RSL) Tables (USEPA, 2016).

RfD for vanadium is derived from the IRIS oral RfD for Vanadium Pentoxide.

The molecular weight (MW) of the oxide ion is factored out. Vanadium Pentoxide (V205) has a molecular weight of 181.88. The two atoms of Vanadium contribute 56% of the MW. Vanadium Pentoxide's oral RfD of 9E-03 mg/kg-day multiplied by 56% gives a Vanadium oral RfD of 5.04E-03 mg/kg-day.

RfD for endrin used for endrin keytone.

RfD for Aroclor 1254 used as a surrogate for Total PCBs.

(2) Published value where available. Where not available, when the chronic RfD is based on a subchronic study, a subchronic RfD has been developed by the elimination of the uncertainty factor for subchronic to chronic adjustment. If no subchronic data are available, the chronic RfD has been adopted as the subchronic RfD.

(3) Oral Absorption Efficiencies from Exhibit 4-1 (USEPA, 2004. Risk Assessment Guidance for Superfund, Part E).

(4) Calculated as: (oral RfD) x (oral to dermal adjustment factor).

(5) RfDs for PFOS and PFOA recommended by USEPA in the following documents published in May 2016: "Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS)" and "Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA)". [EPA 822-R- RfD used in USEPA Regional Screening Level Calculator (accessed March 2017).

TABLE 5.2
NON-CANCER TOXICITY DATA -- INHALATION
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Chronic/ Subchronic (2)	Inhalation RfC		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
			Value	Units			Source(s)	Date(s) (MM/YYYY)
CHRONIC TOXICITY VALUES								
Metals								
ALUMINUM	7429-90-5	Chronic	5.0E+00	ug/m^3	Nervous System	300	PPRTV	10/2006
ARSENIC	7440-38-2	Chronic	1.5E-02	ug/m^3	Developmental	30	CalEPA	9/2016
CADMIUM	7440-43-9	Chronic	1.0E-02	ug/m^3	Kidney	9	ATSDR	3/2016
COBALT	7440-48-4	Chronic	6.0E-03	ug/m^3	Respiratory	300	PPRTV	8/2008
IRON	7439-89-6	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
MANGANESE	7439-96-5	Chronic	5.0E-02	ug/m^3	Nervous System	1000	IRIS	2/2017
THALLIUM	7440-28-0	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
VANADIUM	7440-62-2	Chronic	1.0E-01	ug/m^3	Respiratory	30	ATSDR	10/2015
Pesticides								
DIELDRIN	60-57-1	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
ENDRIN KETONE	53494-70-5	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
HEPTACHLOR EPOXIDE	1024-57-3	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
PCBs								
TOTAL PCBs	RATotAroclors	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
PFASs								
PFOS	1763-23-1	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
PFOA	335-67-1	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
SVOCs								
1,1-BIPHENYL	92-52-4	Chronic	4.0E-01	ug/m^3	Liver, Kidney	N/A	PPRTV Screen	4/2011
1,2,4,5-TETRACHLOROBENZENE	95-94-3	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[A]ANTHRACENE	56-55-3	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[A]PYRENE	50-32-8	Chronic	2.0E-03	ug/m^3	Developmental	3000	IRIS	2/2017
BENZO[B]FLUORANTHENE	205-99-2	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[K]FLUORANTHENE	207-08-9	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
BIS(2-CHLOROETHYL)ETHER	111-44-4	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
DIBENZ[A,H]ANTHRACENE	53-70-3	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
HEXACHLOROCYCLOPENTADIENE	77-47-4	Chronic	2.0E-01	ug/m^3	Nasal	1	IRIS	2/2017
INDENO[1,2,3-CD]PYRENE	193-39-5	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
VOCs								
CIS-1,2-DICHLOROETHENE	156-59-2	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
TRICHLOROETHENE	79-01-6	Chronic	2.0E+00	ug/m^3	Thyroid, Vascular	100	IRIS	2/2017
VINYL CHLORIDE	75-01-4	Chronic	1.0E+02	ug/m^3	Liver	30	IRIS	2/2017

TABLE 5.2
NON-CANCER TOXICITY DATA -- INHALATION
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Chronic/ Subchronic (2)	Inhalation RfC		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
			Value	Units			Source(s)	Date(s) (MM/YYYY)
SUBCHRONIC TOXICITY VALUES								
Metals								
ALUMINUM	7429-90-5	Subchronic	5.0E+00	ug/m^3	Nervous System	300	PPRTV	10/2006
ARSENIC	7440-38-2	Subchronic	1.5E-02	ug/m^3	Developmental	30	CalEPA	9/2016
CADMIUM	7440-43-9	Subchronic	1.0E-02	ug/m^3	Kidney	9	ATSDR	3/2016
COBALT	7440-48-4	Subchronic	2.0E-02	ug/m^3	Respiratory	100	PPRTV	8/2008
IRON	7439-89-6	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
MANGANESE	7439-96-5	Subchronic	5.0E-02	ug/m^3	Nervous System	1000	IRIS	2/2017
THALLIUM	7440-28-0	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
VANADIUM	7440-62-2	Subchronic	1E-01	ug/m^3	Respiratory	30	ATSDR	3/2016
Pesticides								
DIELDRIN	60-57-1	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
ENDRIN KETONE	53494-70-5	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
HEPTACHLOR EPOXIDE	1024-57-3	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
PCBs								
TOTAL PCBs	RATotAroclors	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
PFASs								
PFOS	1763-23-1	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
PFOA	335-67-1	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
SVOCs								
1,1-BIPHENYL	92-52-4	Subchronic	4.0E-03	ug/m^3	Liver, Kidney	N/A	PPRTV Screen	4/2011
1,2,4,5-TETRACHLOROBENZENE	95-94-3	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[A]ANTHRACENE	56-55-3	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[A]PYRENE	50-32-8	Subchronic	2.0E-03	ug/m^3	Developmental	3000	IRIS	2/2017
BENZO[B]FLUORANTHENE	205-99-2	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
BENZO[K]FLUORANTHENE	207-08-9	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
BIS(2-CHLOROETHYL)ETHER	111-44-4	Subchronic	1.2E-01	ug/m^3	Body Weight	1000	ATSDR	3/2016
DIBENZ[A,H]ANTHRACENE	53-70-3	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
HEXACHLOROCYCLOPENTADIENE	77-47-4	Subchronic	1.1E-01	ug/m^3	Renal	1000	ATSDR	3/2016
INDENO[1,2,3-CD]PYRENE	193-39-5	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
VOCs								
CIS-1,2-DICHLOROETHENE	156-59-2	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
TRICHLOROETHENE	79-01-6	Subchronic	2.0E+00	ug/m^3	Thyroid, Vascular	100	IRIS	2/2017
VINYL CHLORIDE	75-01-4	Subchronic	1.0E+02	ug/m^3	Liver	30	IRIS	2/2017

See notes on following page.

TABLE 5.2
NON-CANCER TOXICITY DATA -- INHALATION
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Chronic/ Subchronic (2)	Inhalation RfC		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
			Value	Units			Source(s)	Date(s) (MM/YYYY)

Notes:

ATSDR - Agency for Toxic Substances and Disease Registry.

CalEPA - California Environmental Protection Agency. Office of Environmental Health Hazard Assessment (OEHHA) Toxicity Criteria Database. http://oehha.ca.gov/chemicals.

CAS - Chemical Abstracts Service.

IRIS - Integrated Risk Information System.

N/A - Not Applicable or Not Available.

PCBs - Polychlorinated biphenyls.

PFASs - Poly- and Perfluoroalkyl Substances.

PFOA - Perfluorooctanoic acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

PPRTV - Provisional Peer Reviewed Toxicity Value.

RfC - Reference concentration.

RfD - Reference dose.

SVOCs - Semi-volatile organic compounds.

ug/m^3 - micrograms per cubic meter.

VOCs - Volatile organic compounds.

(1) The following surrogates were used for chemicals without toxicity values or multiple forms:
RfC for hexavalent chromium used for chromium, total.

(2) Published value where available. Where not available, when the chronic RfC is based on a subchronic study, a subchronic RfC has been developed by the elimination of the uncertainty factor for subchronic to chronic adjustment. If no subchronic data are available, the chronic RfD has been adopted as the subchronic RfD.

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal	Absorbed Cancer Slope Factor for Dermal (3)		Weight of Evidence/ Cancer Guideline Description	Oral CSF		Mutagen?
		Value	Units		Value	Units		Source(s)	Date(s) (MM/YYYY)	
Metals										
ALUMINUM	7429-90-5	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
ARSENIC	7440-38-2	1.5E+00	$(mg/kg\text{-}day)^{-1}$	(2)	1.5E+00	$(mg/kg\text{-}day)^{-1}$	A	IRIS	2/2017	No
CADMIUM	7440-43-9	N/A	N/A	(2)	N/A	N/A	B1	IRIS	2/2017	No
COBALT	7440-48-4	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
IRON	7439-89-6	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
MANGANESE	7439-96-5	N/A	N/A	0.04	N/A	N/A	D	IRIS	2/2017	No
THALLIUM	7440-28-0	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
VANADIUM	7440-62-2	N/A	N/A	0.026	N/A	N/A	N/A	N/A	N/A	No
Pesticides										
DIELDRIN	60-57-1	1.6E+01	$(mg/kg\text{-}day)^{-1}$	(2)	1.6E+01	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2/2017	No
ENDRIN KETONE	53494-70-5	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
HEPTACHLOR EPOXIDE	1024-57-3	9.1E+00	$(mg/kg\text{-}day)^{-1}$	(2)	9.1E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2/2017	No
PCBs										
TOTAL PCBs	RATotAroclors	2.0E+00	$(mg/kg\text{-}day)^{-1}$	(2)	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS (7)	2/2017	No
PFASs										
PFOS	1763-23-1	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
PFOA	335-67-1	7.0E-02	$(mg/kg\text{-}day)^{-1}$	(2)	7.0E-02	$(mg/kg\text{-}day)^{-1}$	N/A	USEPA (3)	5/1/2016 (4)	No
SVOCs										
1,1-BIPHENYL	92-52-4	8.0E-03	$(mg/kg\text{-}day)^{-1}$	(2)	8.0E-03	$(mg/kg\text{-}day)^{-1}$	D	IRIS	2/2017	No
1,2,4,5-TETRACHLOROBENZENE	95-94-3	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
BENZO(A)ANTHRACENE	56-55-3	1.0E-01	$(mg/kg\text{-}day)^{-1}$	(2)	1.0E-01	$(mg/kg\text{-}day)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BENZO[A]PYRENE	50-32-8	1.0E+00	$(mg/kg\text{-}day)^{-1}$	(2)	1.0E+00	$(mg/kg\text{-}day)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BENZO(B)FLUORANTHENE	205-99-2	1.0E-01	$(mg/kg\text{-}day)^{-1}$	(2)	1.0E-01	$(mg/kg\text{-}day)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BENZO[K]FLUORANTHENE	207-08-9	1.0E-02	$(mg/kg\text{-}day)^{-1}$	(2)	1.0E-02	$(mg/kg\text{-}day)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BIS(2-CHLOROETHYL)ETHER	111-44-4	1.1E+00	$(mg/kg\text{-}day)^{-1}$	(2)	1.1E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	2/2017	No
DIBENZ(A,H)ANTHRACENE	53-70-3	1.0E+00	$(mg/kg\text{-}day)^{-1}$	(2)	1.0E+00	$(mg/kg\text{-}day)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
HEXACHLOROCYCLOPENTADIENE	77-47-4	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
INDENO(1,2,3-CD)PYRENE	193-39-5	1.0E-01	$(mg/kg\text{-}day)^{-1}$	(2)	1.0E-01	$(mg/kg\text{-}day)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
VOCs										
CIS-1,2-DICHLOROETHENE	156-59-2	N/A	N/A	(2)	N/A	N/A	N/A	N/A	N/A	No
TRICHLOROETHENE	79-01-6	4.6E-02	$(mg/kg\text{-}day)^{-1}$	(2)	4.6E-02	$(mg/kg\text{-}day)^{-1}$	A	IRIS	2/2017	Yes
VINYL CHLORIDE	75-01-4	1.4E+00	(mg/kg-day)-1	(2)	1.4E+00	(mg/kg-day)-1	A	IRIS (5)	2/2017	Yes (5)
VINYL CHLORIDE	75-01-4 (adult)	7.2E-01	$(mg/kg\text{-}day)^{-1}$	(2)	7.2E-01	$(mg/kg\text{-}day)^{-1}$	A	IRIS (6)	2/2017	Yes (6)

See Notes on following page.

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal	Absorbed Cancer Slope Factor for Dermal (3)		Weight of Evidence/ Cancer Guideline Description	Oral CSF		Mutagen?
		Value	Units		Value	Units		Source(s)	Date(s) (MM/YYYY)	

Notes:

CAS - Chemical Abstracts Service.
CSF - Cancer slope factor.
IRIS - Integrated Risk Information System.
mg/kg-day - milligrams per kilogram per day.
N/A - Not Applicable/Not Available.

PCBs - Polychlorinated biphenyls.
PFASs - Poly- and Perfluoroalkyl Substances.
PFOA - Perfluorooctanoic acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
SVOCs - Semi-volatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.

USEPA Group:

A - Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
D - Not classifiable as a human carcinogen (by the oral route)

(1) The following surrogates were used for chemicals without toxicity values or multiple forms:
(2) Oral absorption efficiency exceeds 50%. Therefore, no adjustment of the oral slope factor is necessary (USEPA, 2004. Exhibit 4-1).
(3) Calculated as: (oral slope factor) / (oral to dermal adjustment factor)
(4) CSF for PFOA derived in the USEPA in "Health Effects Support Document for Perfluorooctanoic Acid (PFOA)" published by the USEPA Office of Water in May 2016 [EPA 822-R-16-003] and utilized in USEPA's Regional Screening Level Calculator (accessed March 2017).
(5) Value for continuous lifetime exposure from birth. Because the CSF accounts for mutagenic action, age dependent adjustments factors are not applied.
(6) Value for continuous lifetime exposure during adulthood. Age dependent adjustments factors are not applicable to adult receptors.
(7) For PCBs, the Reasonable Maximum Exposure (RME) slope factor presented represents the upper-bound slope factor for high risk and persistence situations. The Central Tendency Exposure (CTE) slope factor is 1 per mg/kg-day and represents the central-estimate slope factor.

TABLE 6.2

CANCER TOXICITY DATA -- INHALATION

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Unit Risk		Weight of Evidence/ Cancer Guideline Description	Unit Risk		Mutagen
		Value	Units		Source(s)	Date(s) (MM/YYYY)	
Metals							
ALUMINUM	7429-90-5	N/A	N/A	N/A	N/A	N/A	No
ARSENIC	7440-38-2	4.3E-03	$(ug/m^3)^{-1}$	A	IRIS	2/2017	No
CADMIUM	7440-43-9	1.8E-03	$(ug/m^3)^{-1}$	B1	IRIS	2/2017	No
COBALT	7440-48-4	9.0E-03	$(ug/m^3)^{-1}$	B2	PPRTV	8/2008	No
IRON	7439-89-6	N/A	N/A	N/A	N/A	N/A	No
MANGANESE	7439-96-5	N/A	N/A	N/A	N/A	N/A	No
THALLIUM	7440-28-0	N/A	N/A	N/A	N/A	N/A	No
VANADIUM	7440-62-2	N/A	N/A	N/A	N/A	N/A	No
Pesticides							
DIELDRIN	60-57-1	4.6E-03	$(ug/m^3)^{-1}$	B2	IRIS	2/2017	No
ENDRIN KETONE	53494-70-5	N/A	N/A	N/A	N/A	N/A	No
HEPTACHLOR EPOXIDE	1024-57-3	2.6E-03	$(ug/m^3)^{-1}$	B2	IRIS	2/2017	No
PCBs							
TOTAL PCBs	RATotAroclors	5.7E-04	$(ug/m^3)^{-1}$	B2	IRIS (5)	2/2017	No
PFASs							
PFOS	1763-23-1	N/A	N/A	N/A	N/A	N/A	No
PFOA	335-67-1	N/A	N/A	N/A	N/A	N/A	No
SVOCs							
1,1-BIPHENYL	92-52-4	N/A	N/A	N/A	N/A	N/A	No
1,2,4,5-TETRACHLOROBENZENE	95-94-3	N/A	N/A	N/A	N/A	N/A	No
BENZO[A]ANTHRACENE	56-55-3	6.0E-05	$(ug/m^3)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BENZO[A]PYRENE	50-32-8	6.0E-04	$(ug/m^3)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BENZO[B]FLUORANTHENE	205-99-2	6.0E-05	$(ug/m^3)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BENZO[K]FLUORANTHENE	207-08-9	6.0E-06	$(ug/m^3)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
BIS(2-CHLOROETHYL)ETHER	111-44-4	3.3E-04	$(ug/m^3)^{-1}$	B2	IRIS	2/2017	No
DIBENZ[A,H]ANTHRACENE	53-70-3	6.0E-04	$(ug/m^3)^{-1}$	Carcinogenic	IRIS	2/2017	Yes
HEXACHLOROCYCLOPENTADIENE	77-47-4	N/A	N/A	N/A	N/A	N/A	No
INDENO[1,2,3-CD]PYRENE	193-39-5	6.0E-05	$(ug/m^3)^{-1}$	Carcinogenic	IRIS	2/2017	Yes

TABLE 6.2

CANCER TOXICITY DATA -- INHALATION

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Chemical of Potential Concern (1)	CAS Number	Unit Risk		Weight of Evidence/ Cancer Guideline Description	Unit Risk		Mutagen
		Value	Units		Source(s)	Date(s) (MM/YYYY)	
VOCs							
CIS-1,2-DICHLOROETHENE	156-59-2	N/A	NA	N/A	N/A	N/A	No
TRICHLOROETHENE	79-01-6	4.1E-06	$(ug/m^3)^{-1}$	A	IRIS	2/2017	Yes
VINYL CHLORIDE	75-01-4	8.8E-06	(ug/m3)-1	A	IRIS (3)	2/2017	Yes (3)
VINYL CHLORIDE	75-01-4 (adult)	4.4E-06	$(ug/m^3)^{-1}$	A	IRIS (4)	2/2017	Yes (4)

Notes:

CAS - Chemical Abstracts Service.

CalEPA - California Environmental Protection Agency. Office of Environmental Health Hazard Assessment(OEHHA) Toxicity Criteria Database. http://oehha.ca.gov/chemicals.

CSF - Cancer slope factor.

IRIS - Integrated Risk Information System.

N/A - Not Applicable/Not Available.

PCBs - Polychlorinated biphenyls.

PFASs - Poly- and Perfluoroalkyl Substances.

PFOA - Perfluorooctanoic acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

PPRTV - Provisional Peer Reviewed Toxicity Values.

SVOCs - Semi-volatile organic compounds.

ug/m^3 - micrograms per cubic meter.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

USEPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

D - Not classifiable as a human carcinogen (by the oral route)

(1) The following surrogates were used for chemicals without toxicity values or multiple forms:
Unit risk factor for hexavalent chromium used for chromium, total.

(3) Value for continuous lifetime exposure from birth. Because the CSF accounts for mutagenic action, age dependent adjustment factors are not applied.

(4) Value for continuous lifetime exposure during adulthood. Age dependent adjustment factors are not applicable to adult receptors.

(5) Consistent with the IRIS file for PCBs, for inhalation of dust containing PCBs, the high risk and persistence slope factors are used. The Reasonable Maximum Exposure (RME) unit risk factor presented represents the upper-bound slope factor. The Central Tendency Exposure (CTE) unit risk factor is based on the central-estimate slope factor.
The unit risk factors were converted from the slope factors as follows:
Upper-bound unit risk facor: [2 $(mg/kg\text{-}day)^{-1}$ x (20 m^3/day/70 kg) x 1 mg/1000 ug] = 0.00057 $(ug/m^3)^{-1}$

TABLES PRESENTED IN ATTACHMENT E:

Table 7s Calculation of Chemical Cancer Risks and Non-Cancer Hazards:

Table 7.1.RME – Current/Future Construction Worker
Table 7.2.RME – Current/Future Recreational User
Table 7.3.RME – Future Outdoor Industrial Worker
Table 7.4.RME – Future Indoor Industrial Worker
Table 7.5.RME – Hypothetical Future On-Site Resident
Table 7.1.CTE – Current/Future Construction Worker
Table 7.2.CTE – Current/Future Recreational User
Table 7.3.CTE – Future Outdoor Industrial Worker
Table 7.4.CTE – Future Indoor Industrial Worker
Table 7.5.CTE – Hypothetical Future On-Site Resident

RAGS Part D Table 8 – Not required. No radionuclides.

TABLES PRESENTED IN ATTACHMENT F:

Table 9s Summary of Receptor Risks and Hazards for COPCs:

Table 9.1.RME – Current/Future Construction Worker
Table 9.2.RME – Current/Future Recreational User
Table 9.3.RME – Future Outdoor Industrial Worker
Table 9.4.RME – Future Indoor Industrial Worker
Table 9.5.RME – Hypothetical Future On-Site Resident
Table 9.1.CTE – Current/Future Construction Worker
Table 9.2.CTE – Current/Future Recreational User
Table 9.3.CTE – Future Outdoor Industrial Worker
Table 9.4.CTE – Future Indoor Industrial Worker
Table 9.5.CTE – Hypothetical Future On-Site Resident

TABLE 10.1.RME

RISK SUMMARY - CURRENT/FUTURE CONSTRUCTION WORKER

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future

Receptor Population: Construction Worker

Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	FTA Soil	**Metals**									
		Exposure Area 1	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	6E-01	N/A	N/A	6E-01
			Chemical Total	N/A	N/A	N/A	N/A		6E-01	N/A	N/A	6E-01
Soil	Fugitive Dust from Surface Soil	FTA Soil	**Metals**									
		Exposure Area 1	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E+01	N/A	3E+01
			Chemical Total	N/A	N/A	N/A	N/A		N/A	3E+01	N/A	3E+01
		Exposure Point Total					**N/A**					**3E+01**
Soil	Surface Soil	FTA Soil	**Metals**									
		Exposure Area 2	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	6E-02	N/A	N/A	6E-02
			PCBs									
			TOTAL PCBs	2E-06	N/A	9E-07	3E-06	Eye, Nails, Immune	2E+00	N/A	1E+00	4E+00
			Chemical Total	2E-06	N/A	9E-07	3E-06		3E+00	N/A	1E+00	4E+00
Soil	Fugitive Dust from Surface Soil	FTA Soil	**Metals**									
		Exposure Area 2	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E+00	N/A	3E+00
			PCBs									
			TOTAL PCBs	N/A	5E-08	N/A	5E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	5E-08	N/A	5E-08		N/A	3E+00	N/A	3E+00
		Exposure Point Total					**3E-06**					**6E+00**
Soil	Subsurface Soil	FTA Soil	**Metals**									
		Exposure Area 1	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	9E-02	N/A	N/A	9E-02
			Chemical Total	N/A	N/A	N/A	N/A		9E-02	N/A	N/A	9E-02
Soil	Fugitive Dust from Subsurface soil	FTA Soil	**Metals**									
		Exposure Area 1	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	4E+00	N/A	4E+00
			Chemical Total	N/A	N/A	N/A	N/A		N/A	4E+00	N/A	4E+00
		Exposure Point Total					**N/A**					**4E+00**
Soil	Subsurface Soil	FTA Soil	**Metals**									
		Exposure Area 2	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	8E-02	N/A	N/A	8E-02
			Chemical Total	N/A	N/A	N/A	N/A		8E-02	N/A	N/A	8E-02
Soil	Fugitive Dust from Subsurface soil	FTA Soil	**Metals**									
		Exposure Area 2	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E+00	N/A	3E+00
			Chemical Total	N/A	N/A	N/A	N/A		N/A	3E+00	N/A	3E+00
		Exposure Point Total					**N/A**					**3E+00**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Soil Exposure Area 1							**Surface soil**	**N/A**				**Surface soil**	**3E+01**
							Subsurface soil	**N/A**				**Subsurface soil**	**4E+00**
Soil Exposure Area 3							**Surface soil**	**3E-06**				**Surface soil**	**6E+00**
							Subsurface soil	**N/A**				**Subsurface soil**	**3E+00**

TABLE 10.1.CTE

RISK SUMMARY - CURRENT/FUTURE CONSTRUCTION WORKER CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	FTA Soil Exposure Area 1	**Metals**									
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-01	N/A	N/A	2E-01
			Chemical Total	N/A	N/A	N/A	N/A		2E-01	N/A	N/A	2E-01
Soil	Fugitive Dust from Surface Soil	FTA Soil Exposure Area 1	**Metals**									
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	1E+01	N/A	1E+01
			Chemical Total	N/A	N/A	N/A	N/A		N/A	1E+01	N/A	1E+01
		Exposure Point Total					**N/A**					**1E+01**
Soil	Subsurface Soil	FTA Soil Exposure Area 1	**Metals**									
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			Chemical Total	N/A	N/A	N/A	N/A		2E-02	N/A	N/A	2E-02
Soil	Fugitive Dust from Subsurface soil	FTA Soil Exposure Area 1	**Metals**									
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E+00	N/A	2E+00
			Chemical Total	N/A	N/A	N/A	N/A		N/A	2E+00	N/A	2E+00
		Exposure Point Total					**N/A**					**2E+00**
Soil	Subsurface Soil	FTA Soil Exposure Area 2	**Metals**									
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			Chemical Total	N/A	N/A	N/A	N/A		2E-02	N/A	N/A	2E-02
Soil	Fugitive Dust from Subsurface soil	FTA Soil Exposure Area 2	**Metals**									
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E+00	N/A	2E+00
			Chemical Total	N/A	N/A	N/A	N/A		N/A	2E+00	N/A	2E+00
		Exposure Point Total					**N/A**					**2E+00**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Soil Exposure Area 1							**Surface soil**	**N/A**				**Surface soil**	**1E+01**
							Subsurface soil	**N/A**				**Subsurface soil**	**2E+00**
Soil Exposure Area 2							**Subsurface soil**	**N/A**				**Subsurface soil**	**2E+00**

Notes:

COPC - Chemical of potential concern.

CTE - Central Tendency Estimate.

HI - Hazard Index.

N/A - Not applicable.

TABLE 10.2.RME

RISK SUMMARY - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area - Area 2	**Metals**									
		[BKG]	*ARSENIC*	*3E-06*	*N/A*	*4E-07*	*3E-06*	*Skin, Vascular*	*6E-02*	*N/A*	*7E-03*	*6E-02*
			PCBs									
			TOTAL PCBs	4E-05	N/A	2E-05	5E-05	Eye, Nails, Immune	9E+00	N/A	3E+00	1E+01
			SVOCs									
			BENZO[A]PYRENE	1E-06	N/A	5E-07	2E-06	Developmental	1E-02	N/A	3E-03	1E-02
			Chemical Total	4E-05	N/A	2E-05	6E-05		9E+00	N/A	3E+00	1E+01
Soil	Fugitive Dust from Surface Soil	Fire Training Area - Area 2	**Metals**									
		[BKG]	*ARSENIC*	*N/A*	*4E-10*	*N/A*	*4E-10*	*Developmental*	*N/A*	*2E-05*	*N/A*	*2E-05*
			PCBs									
			TOTAL PCBs	N/A	3E-10	N/A	3E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	1E-11	N/A	1E-11	Developmental	N/A	1E-05	N/A	1E-05
			Chemical Total	N/A	8E-10	N/A	8E-10		N/A	3E-05	N/A	3E-05
		Exposure Point Total					**6E-05**					**1E+01**

TABLE 10.2.RME

RISK SUMMARY - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Total of Receptor Risks:								**Total of Receptor HI (see following table for sum by target endpoint):**				
Area 2		**Surface soil (a), surface water, sediment)**					**6E-05**	**Surface soil (a), surface water, sediment)**				**1E+01**

Notes:

BKG - Indicates risk drivers found to have concentrations in site media less than or consistent with concentrations in background and therefore not considered to be site-related.

COPC - Chemical of potential concern.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 10.2.CTE
RISK SUMMARY- CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
	Surface Soil	Fire Training Area 2	**PCBs**									
			TOTAL PCBs	2E-06	N/A	2E-07	2E-06	Eye, Nails, Immune	2E+00	N/A	3E-01	2E+00
			Chemical Total	2E-06	N/A	2E-07	2E-06		2E+00	N/A	3E-01	2E+00
	Fugitive Dust from Surface Soil	Fire Training Area 2	**PCBs**									
			TOTAL PCBs	N/A	3E-11	N/A	3E-11	N/A	N/A	N/A	N/A	N/A
		Exposure Point Total					**2E-06**					**2E+00**
						Total of Receptor Risks:						**Total of Receptor HI (see following table for sum by target endpoint):**
Area 2						**Surface soil**	**2E-06**				**Surface soil**	**2E+00**

Notes:
COPC - Chemical of potential concern.
CTE - Central Tendency Estimate.
HI - Hazard Index.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.

TABLE 10.3.RME

RISK SUMMARY - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Outdoor Industrial Worker

Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area - Area 2	**Metals**									
		[BKG]	*ARSENIC*	*1E-06*	*N/A*	*3E-07*	*2E-06*	*Skin, Vascular*	*9E-03*	*N/A*	*1.85E-03*	*1E-02*
			PCBs									
			TOTAL PCBs	2E-05	N/A	1E-05	3E-05	Eye, Nails, Immune	1E+00	N/A	7.89E-01	2E+00
			Chemical Total	2E-05	N/A	1E-05	3E-05		1E+00	N/A	8E-01	2E+00
Soil	Fugitive Dust from Surface Soil	Fire Training Area - Area 2	**Metals**									
		[BKG]	*ARSENIC*	*N/A*	*3E-09*	*N/A*	*3E-09*	*Developmental*	*N/A*	*1.20E-04*	*N/A*	*1E-04*
			PCBs									
			TOTAL PCBs	N/A	2E-09	N/A	2E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	5E-09	N/A	5E-09		N/A	2E-04	N/A	2E-04
		Exposure Point Total					**3E-05**					**2E+00**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Area 2							**Surface soil (a)** **3E-05**					**Surface soil (a)** **2E+00**

Notes:

BKG - Indicates risk driver found to have concentrations in site media less than or consistent with concentrations in background and therefore not considered to be site-related.

COPC - Chemical of potential concern.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area.

Table 10.3.CTE – Not required. No Risk Drivers
Table 10.4 RME/CTE – Not required. No Risk Drivers

TABLE 10.5.RME

RISK SUMMARY - HYPOTHETICAL FUTURE ON-SITE RESIDENT

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	FTA Soil Exposure Area 1	**Metals**									
		[BKG]	*ARSENIC*	*4E-06*	*N/A*	*6E-07*	*5E-06*	*Skin, Vascular*	*8.89E-02*	*N/A*	*1.05E-02*	*1E-01*
			Chemical Total	4E-06	N/A	6E-07	5E-06		9E-02	N/A	1E-02	1E-01
Soil	Fugitive Dust From Surface Soil	FTA Soil Exposure Area 1	**Metals**									
		[BKG]	*ARSENIC*	*N/A*	*8E-09*	*N/A*	*8E-09*	*Developmental*	*N/A*	*3.43E-04*	*N/A*	*3E-04*
			Chemical Total	N/A	8E-09	N/A	8E-09		N/A	3E-04	N/A	3E-04
		Exposure Point Total					**5E-06**					**1E-01**
Soil	Surface Soil	FTA Soil Exposure Area 2	**Metals**									
		[BKG]	*ARSENIC*	*5E-06*	*N/A*	*7E-07*	*5E-06*	*Skin, Vascular*	*9.32E-02*	*N/A*	*1.11E-02*	*1E-01*
			PCBs									
			TOTAL PCBs	6E-05	N/A	3E-05	9E-05	Eye, Nails, Immune	1.42E+01	N/A	4.72E+00	2E+01
			SVOCs									
			BENZO[A]PYRENE	2E-06	N/A	8E-07	3E-06	Developmental	1.62E-02	N/A	4.99E-03	2E-02
			Chemical Total	7E-05	N/A	3E-05	1E-04		1E+01	N/A	5E+00	2E+01
Soil	Fugitive Dust From Surface Soil	FTA Soil Exposure Area 2	**Metals**									
		[BKG]	*ARSENIC*	*N/A*	*9E-09*	*N/A*	*9E-09*	*Developmental*	*N/A*	*3.60E-04*	*N/A*	*4E-04*
			PCBs									
			TOTAL PCBs	N/A	7E-09	N/A	7E-09	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	2E-10	N/A	2E-10	Developmental	N/A	2.81E-04	N/A	3E-04
			Chemical Total	N/A	2E-08	N/A	2E-08		N/A	6E-04	N/A	6E-04
		Exposure Point Total					**1E-04**					**2E+01**

TABLE 10.5.RME
RISK SUMMARY - HYPOTHETICAL FUTURE ON-SITE RESIDENT
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	FTA Soil Exposure Area 1	**Metals**									
		[BKG]	*ARSENIC*	*5E-06*	*N/A*	*8E-07*	*6E-06*	*Skin, Vascular*	*1.07E-01*	*N/A*	*1.27E-02*	*1E-01*
			Chemical Total	5E-06	N/A	8E-07	6E-06		1E-01	N/A	1E-02	1E-01
Soil	Fugitive Dust from Subsurface Soil	FTA Soil Exposure Area 1	**Metals**									
		[BKG]	*ARSENIC*	*N/A*	*1E-08*	*N/A*	*1E-08*	*Developmental*	*N/A*	*4.14E-04*	*N/A*	*4E-04*
			Chemical Total	N/A	1E-08	N/A	1E-08		N/A	4E-04	N/A	4E-04
		Exposure Point Total					**6E-06**					**1E-01**
Soil	Subsurface Soil	FTA Soil Exposure Area 2	**Metals**									
			ARSENIC	7E-06	N/A	9E-07	8E-06	Skin, Vascular	1.33E-01	N/A	1.57E-02	1E-01
			PCBs									
			TOTAL PCBS	8E-06	N/A	3E-06	1E-05	Eye, Nails, Immune	1.82E+00	N/A	6.05E-01	2E+00
			Chemical Total	1E-05	N/A	4E-06	2E-05		2E+00	N/A	6E-01	3E+00
Soil	Fugitive Dust from Subsurface Soil	FTA Soil Exposure Area 2	**Metals**									
			ARSENIC	N/A	1E-08	N/A	1E-08	Developmental	N/A	5.12E-04	N/A	5E-04
			PCBs									
			TOTAL PCBs	N/A	9E-10	N/A	9E-10	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	1E-08	N/A	1E-08		N/A	5E-04	N/A	5E-04
		Exposure Point Total					**2E-05**					**3E+00**

TABLE 10.5.RME
RISK SUMMARY - HYPOTHETICAL FUTURE ON-SITE RESIDENT
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	FTA	**Metals**									
			ARSENIC	1E-04	N/A	6E-07	1E-04	Skin, Vascular	9.59E-01	N/A	4.23E-03	1E+00
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	3.20E+00	N/A	3.52E-01	4E+00
			VOCs									
			TRICHLOROETHENE	1E-05	N/A	2E-06	2E-05	Thyroid, Developmental, Vascular	9.97E-01	N/A	1.47E-01	1E+00
			VINYL CHLORIDE	6E-06	N/A	3E-07	7E-06	Liver	5.77E-03	N/A	2.61E-04	6E-03
			Chemical Total	1E-04	N/A	3E-06	1E-04		5E+00	N/A	5E-01	6E+00
Groundwater	Shower Air	FTA	**VOCs**									
			TRICHLOROETHENE	N/A	1E-05	N/A	1E-05	Thyroid, Vascular	N/A	1.40E+00	N/A	1E+00
			VINYL CHLORIDE	N/A	5E-07	N/A	5E-07	Liver	N/A	1.29E-03	N/A	1E-03
			Chemical Total	N/A	1E-05	N/A	1E-05		N/A	1E+00	N/A	1E+00
Groundwater	Indoor Air	FTA	**VOCs**									
			TRICHLOROETHENE	N/A	3E-06	N/A	3E-06	Thyroid, Vascular	N/A	4.65E-01	N/A	5E-01
			VINYL CHLORIDE	N/A	5E-07	N/A	5E-07	Liver	N/A	1.57E-03	N/A	2E-03
			Chemical Total	N/A	3E-06	N/A	3E-06		N/A	5E-01	N/A	5E-01
		Exposure Point Total					**1E-04**					**8E+00**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Soil Exposure Area 1							**Surface soil (a),Groundwater, surface water, sediment)**					**Surface soil (a), Groundwater, surface water, sediment)**
							2E-04					**8E+00**
							Subsurface soil (b), Groundwater, surface water, sediment)					**Subsurface soil (b), Groundwater, surface water, sediment)**
							2E-04					**8E+00**
Soil Exposure Area 2							**Surface soil (a), Groundwater, surface water, sediment)**					**Surface soil (a), Groundwater, surface water, sediment)**
							2E-04					**3E+01**
							Subsurface soil (b), Groundwater, surface water, sediment)					**Subsurface soil (b), Groundwater, surface water, sediment)**
							2E-04					**1E+01**

TABLE 10.5.RME

RISK SUMMARY - HYPOTHETICAL FUTURE ON-SITE RESIDENT

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

[BKG] Indicates risk driver found to have concentrations in site media less than or consistent with concentrations in background and therefore not considered to be site-related.

COPC - Chemical of potential concern.

HI - Hazard Index.

MECDC - Maine Center for Disease Control and Prevention.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 10.5.CTE
RISK SUMMARY - HYPOTHETICAL FUTURE ON-SITE RESIDENT
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area	**PCBs**									
		Soil Exposure Area 2	TOTAL PCBs	3E-06	N/A	4E-07	3E-06	Eye, Nails, Immune	3.55E+00	N/A	4.72E-01	4E+00
			Chemical Total	3E-06	N/A	4E-07	3E-06		4E+00	N/A	5E-01	4E+00
	Fugitive Dust from Surface Soil		**PCBs**									
			TOTAL PCBs	N/A	6E-10	N/A	6E-10	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	6E-10	N/A	6E-10		N/A	N/A	N/A	N/A
		Exposure Point Total					**3E-06**					**4E+00**
Groundwater	Groundwater	Fire Training Area	**Metals**									
			ARSENIC	2E-05	N/A	1E-07	2E-05	Skin, Vascular	4.79E-01	N/A	2.12E-03	5E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1.60E+00	N/A	1.76E-01	2E+00
			VOCs									
			TRICHLOROETHENE	2E-06	N/A	3E-07	2E-06	Thyroid, Developmental, Vascular	4.09E-01	N/A	6.02E-02	5E-01
			Chemical Total	2E-05	N/A	4E-07	2E-05		2E+00	N/A	2E-01	3E+00
Groundwater	Shower Air	Fire Training Area	**VOCs**									
			TRICHLOROETHENE	N/A	1E-06	N/A	1E-06	Thyroid, Vascular	N/A	5.75E-01	N/A	6E-01
			Chemical Total	N/A	1E-06	N/A	1E-06		N/A	6E-01	N/A	6E-01
Groundwater	Indoor Air	Fire Training Area	**VOCs**									
			TRICHLOROETHENE	N/A	5E-07	N/A	5E-07	Thyroid, Vascular	N/A	2.32E-01	N/A	2E-01
			Chemical Total	N/A	5E-07	N/A	5E-07		N/A	2E-01	N/A	2E-01
		Exposure Point Total					**2E-05**					**4E+00**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Soil Exposure Area 1			**Surface soil (a),Groundwater, surface water, sediment)**				**2E-05**	**Surface soil (a), Groundwater, surface water, sediment)**				**4E+00**
			Subsurface soil (b), Groundwater, surface water, sediment)				**2E-05**	**Subsurface soil (b), Groundwater, surface water, sediment)**				**4E+00**
Soil Exposure Area 2			**Surface soil (a), Groundwater, surface water, sediment)**				**3E-05**	**Surface soil (a), Groundwater, surface water, sediment)**				**8E+00**
			Subsurface soil (b), Groundwater, surface water, sediment)				**2E-05**	**Subsurface soil (b), Groundwater, surface water, sediment)**				**4E+00**

TABLE 10.5.CTE

RISK SUMMARY - HYPOTHETICAL FUTURE ON-SITE RESIDENT

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

COPC - Chemical of potential concern.

CTE - Central Tendency Estimate.

HI - Hazard Index.

MECDC - Maine Center for Disease Control and Prevention.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 11.1
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
CURRENT/FUTURE CONSTRUCTION WORKER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)
Current/ Future	Construction Worker	RME	Soil Exposure Area 1	Surface Soil	5E-07	**3E+01**	**3E+01**	Manganese (nc)
				Subsurface Soil	5E-07	**5E+00**	**5E+00**	Manganese (nc)
			Soil Exposure Area 2	Surface Soil	4E-06	**8E+00**	**4E+00**	Total PCBs (nc), Manganese (nc)
				Subsurface Soil	9E-07	**5E+00**	**4E+00**	Manganese (nc)
			Groundwater	Groundwater	5E-07	4E-02	2E-02	--
			Wetland	Surace Water	8E-10	1E-02	9E-03	--
				Sediment	3E-08	3E-02	8E-03	--
			Totals	**Area 1 - SS, GW, SW, SD**	1E-06	**3E+01**	**3E+01**	Drivers identified in soil. See above.
				Area 1 - SB, GW, SW, SD	1E-06	**6E+00**	**5E+00**	
				Area 2 - SS, GW, SW, SD	4E-06	**8E+00**	**4E+00**	
				Area 2 - SB, GW, SW, SD	1E-06	**5E+00**	**4E+00**	
		CTE	Soil Exposure Area 1	Surface Soil	2E-07	**1E+01**	**1E+01**	Manganese (nc)
				Subsurface Soil	2E-07	**3E+00**	**2E+00**	Manganese (nc)
			Soil Exposure Area 2	Surface Soil	6E-07	**3E+00**	**2E+00**	--
				Subsurface Soil	3E-07	**2E+00**	**2E+00**	Manganese (nc)
			Groundwater	Groundwater	1E-07	9E-03	5E-03	--
			Wetland	Surace Water	3E-10	7E-03	4E-03	--
				Sediment	7E-09	6E-03	2E-03	--
			Totals	**Area 1 - SS, GW, SW, SD**	3E-07	**1E+01**	**1E+01**	Drivers identified in soil. See above.
				Area 1 - SB, GW, SW, SD	3E-07	**3E+00**	**2E+00**	
				Area 2 - SS, GW, SW, SD	7E-07	**3E+00**	**2E+00**	
				Area 2 - SB, GW, SW, SD	4E-07	**2E+00**	**2E+00**	

TABLE 11.1
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
CURRENT/FUTURE CONSTRUCTION WORKER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)

Acronyms:
CTE - Central Tencency Exposure.
ELCR - Excess lifetime cancer risk.
HI - Hazard Index.
MEDEP - Maine Department of Environmental Protection.
RME - Reasonable Maximum Exposure.
USEPA - United States Environmental Protection Agency.

Media:
GW - Groundwater.
SB - Subsurface Soil.
SD - Sediment.
SS - Surface Soil.
SW - Surface Water.

Chemicals:
PCBs - Polychlorinated Biphenyls.

Risk Driver Basis:
ca - based on cancer.
nc - based on noncancer.

Notes:
BKG - Indicates risk drivers found to have concentrations in site media less than or consistent with concentrations in background and therefore not considered to be site-related
Green shading indicates an exceedance of MEDEP's target risk level of $1x10^{-5}$.
Yellow shading indicates an exceedance ofUSEPA's target risk range of 10^{-6} to 10^{-4} and/or MEDEP/USEPA's target HI of 1 per target organ, at one significant figure

(a) This table presents a summary of the total potential risk and hazard by exposure area and media.
Potential risk and hazard calculations are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 7.1.RME/CTE in Attachment E.
Summaries of total risk and hazard by chemical are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 9.1.RME/CTE in Attachment F.
(b) Risk drivers are identified where the total ELCR or HI per target endpoint are greater than target levels. A risk driver is then defined per exposure scenario (i.e., RME/CTE/receptor/medium) as a chemical with an individual ELCR greater than $1x10^{-6}$ and/or hazard quotient greater than 1, based on one significant figure

TABLE 11.2
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
CURRENT/FUTURE RECREATIONAL USER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)
Current/ Future	Recreational User (Adult/Child)	RME	Soil Exposure Area 1	Surface Soil	4E-06	1E+00	8E-01	--
				Subsurface Soil	4E-06	6E-01	2E-01	--
			Soil Exposure Area 2	Surface Soil	**6E-05**	**1E+01**	**1E+01**	Total PCBs (nc,ca), BAP (ca), *[BKG: Arsenic (ca)]*
				Subsurface Soil	1E-05	**2E+00**	1E+00	--
			Wetland	Surface Water	8E-08	3E-02	3E-02	--
				Sediment	2E-06	1E-01	6E-02	--
			Totals	**Area 1 - SS, SW, SD**	6E-06	1E+00	8E-01	Drivers identified in soil. See above.
				Area 1 - SB, SW, SD	6E-06	7E-01	2E-01	
				Area 2 - SS, SW, SD	**6E-05**	**1E+01**	**1E+01**	
				Area 2 - SB, SW, SD	1E-05	**2E+00**	**2E+00**	
		CTE	Soil Exposure Area 1	Surface Soil	3E-07	3E-01	2E-01	--
				Subsurface Soil	3E-07	1E-01	4E-02	--
			Soil Exposure Area 2	Surface Soil	2E-06	**3E+00**	**2E+00**	Total PCBs (nc)
				Subsurface Soil	6E-07	4E-01	3E-01	--
			Wetland	Surface Water	1E-08	2E-02	1E-02	--
				Sediment	2E-07	3E-02	1E-02	--
			Totals	**Area 1 - SS, SW, SD**	4E-07	4E-01	2E-01	Drivers identified in soil. See above.
				Area 1 - SB, SW, SD	5E-07	2E-01	5E-02	
				Area 2 - SS, SW, SD	3E-06	**3E+00**	**2E+00**	
				Area 2 - SB, SW, SD	8E-07	5E-01	3E-01	

TABLE 11.2
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
CURRENT/FUTURE RECREATIONAL USER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)

Acronyms:
CTE - Central Tencency Exposure.
ELCR - Excess lifetime cancer risk.
HI - Hazard Index.
MEDEP - Maine Department of Environmental Protection.
RME - Reasonable Maximum Exposure.
USEPA - United States Environmental Protection Agency.

Media:
SB - Subsurface Soil.
SD - Sediment.
SS - Surface Soil.
SW - Surface Water.

Chemicals:
BAP - benzo[a]pyrene.
PCBs - Polychlorinated Biphenyls.

Risk Driver Basis:
ca - based on cancer.
nc - based on noncancer.

Notes:
BKG - Indicates risk drivers found to have concentrations in site media less than or consistent with concentrations in background and therefore not considered to be site-related
Green shading indicates an exceedance of MEDEP's target risk level of $1x1ζ^{5}$ at one significant figure.
Yellow shading indicates an exceedance ofUSEPA's target risk range of 10^{-6} to 10^{-4} and/or MEDEP/USEPA's target HI of 1 per target organ, at one significant figure

(a) This table presents a summary of the total potential risk and hazard by exposure area and media.
Potential risk and hazard calculations are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 7.2.RME/CTE in Attachment E.
Summaries of total risk and hazard by chemical are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 9.2.RME/CTE in Attachment F.
(b) Risk drivers are identified where the total ELCR or HI per target endpoint are greater than target levels. A risk driver is then defined per exposure scenario (i.e., RME/CTE/receptor/medium) as a chemical with an individual ELCR greater than $1x1ζ^{6}$ and/or hazard quotient greater than 1, based on one significant figure

TABLE 11.3
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
FUTURE OUTDOOR INDUSTRIAL WORKER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)
Future	Outdoor Worker	RME	Soil Exposure Area 1	Surface Soil	2E-06	2E-01	1E-01	--
				Subsurface Soil	2E-06	9E-02	3E-02	--
			Soil Exposure Area 2	Surface Soil	**3E-05**	**2E+00**	**2E+00**	Total PCBs (ca, nc) *[BKG: Arsenic (ca)]*
				Subsurface Soil	6E-06	4E-01	3E-01	--
		CTE	Soil Exposure Area 1	Surface Soil	3E-07	1E-01	8E-02	--
				Subsurface Soil	3E-07	5E-02	2E-02	--
			Soil Exposure Area 2	Surface Soil	2E-06	8E-01	8E-01	--
				Subsurface Soil	7E-07	2E-01	1E-01	--

Acronyms:
CTE - Central Tencency Exposure.
ELCR - Excess lifetime cancer risk.
HI - Hazard Index.
MEDEP - Maine Department of Environmental Protection.
RME - Reasonable Maximum Exposure.
USEPA - United States Environmental Protection Agency.

Chemicals:
PCBs - Polychlorinated Biphenyls

Risk Driver Basis:
ca - based on cancer.
nc - based on noncancer.

Notes:
BKG - Indicates risk drivers found to have concentrations in site media less than or consistent with concentrations in background and therefore not considered to be site-related
Green shading indicates an exceedance of MEDEP's target risk level of 1x10^{-5}.
Yellow shading indicates an exceedance ofUSEPA's target risk range of 10^{-6} to 10^{-4} and/or MEDEP/USEPA's target HI of 1 per target organ, at one significant figure

(a) This table presents a summary of the total potential risk and hazard by exposure area and media.
Potential risk and hazard calculations are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 7.3.RME/CTE in Attachment E.
Summaries of total risk and hazard by chemical are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 9.3.RME/CTE in Attachment F.
(b) Risk drivers are identified where the total ELCR or HI per target endpoint are greater than target levels. A risk driver is then defined per exposure scenario (i.e., RME/CTE/receptor/medium) as a chemical with an individual ELCR greater than 1x10^{-6} and/or hazard quotient greater than 1, based on one significant figure

TABLE 11.4
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
FUTURE INDOOR WORKER - INDOOR WORKER
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)
Future	Indoor Worker	RME	Groundwater	Groundwater (to indoor air)	1E-07	3E-02	3E-02	--
		CTE	Groundwater	Groundwater (to indoor air)	5E-08	1E-02	1E-02	--

Acronyms:
CTE - Central Tencency Exposure.
ELCR - Excess lifetime cancer risk.
HI - Hazard Index.
MEDEP - Maine Department of Environmental Protection.
RME - Reasonable Maximum Exposure.
USEPA - United States Environmental Protection Agency.

Notes:
Green shading indicates an exceedance of MEDEP's target risk level of $1x10^{-5}$.
Yellow shading indicates an exceedance ofUSEPA's target risk range of 10^{-6} to 10^{-4} and/or MEDEP/USEPA's target HI of 1 per target organ, at one significant figure

(a) This table presents a summary of the total potential risk and hazard by exposure area and media.
Potential risk and hazard calculations are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 7.4.RME/CTE in Attachment E.
Summaries of total risk and hazard by chemical are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 9.4.RME/CTE in Attachment F.
(b) Risk drivers are identified where the total ELCR or HI per target endpoint are greater than target levels. A risk driver is then defined per exposure scenario (i.e., RME/CTE/receptor/medium)

TABLE 11.5
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
HYPOTHETICAL FUTURE ON-SITE RESIDENT
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)
Future	Hypothetical Future On Site Resident (Adult/Child)	RME	Soil Exposure Area 1	Surface Soil	7E-06	**2E+00**	1E+00	*[BKG: Arsenic (ca)]*
				Subsurface Soil	6E-06	9E-01	3E-01	*[BKG: Arsenic (ca)]*
			Soil Exposure Area 2	Surface Soil	**1E-04**	**2E+01**	**2E+01**	Total PCBs (nc, ca), BAP (ca) *[BKG: Arsenic (ca)]*
				Subsurface Soil	**2E-05**	**3E+00**	**2E+00**	Total PCBs (nc,ca), arsenic (ca)
			Groundwater	Groundwater	**1E-04**	**1E+01**	**4E+00**	TCE (c), VC (c), arsenic (ca), Manganese (nc)
			Wetland	Surface Water	8E-08	3E-02	3E-02	--
				Sediment	2E-06	1E-01	6E-02	--
			Totals	**Area 1 - SS, GW, SW, SD**	**2E-04**	**1E+01**	**5E+00**	Drivers identified in soil and groundwater. See above.
				Area 1 - SB, GW, SW, SD	**2E-04**	**1E+01**	**4E+00**	
				Area 2 - SS, GW, SW, SD	**3E-04**	**3E+01**	**2E+01**	
				Area 2 - SB, GW, SW, SD	**2E-04**	**1E+01**	**4E+00**	
		CTE	Soil Exposure Area 1	Surface Soil	5E-07	6E-01	4E-01	--
				Subsurface Soil	5E-07	2E-01	7E-02	--
			Soil Exposure Area 2	Surface Soil	4E-06	**4E+00**	**4E+00**	Total PCBs (nc,ca)
				Subsurface Soil	1E-06	8E-01	5E-01	--
			Groundwater	Groundwater	**2E-05**	**5E+00**	**2E+00**	TCE (ca), arsenic (ca), Manganese (nc)
			Wetland	Surface Water	1E-08	2E-02	1E-02	--
				Sediment	2E-07	3E-02	1E-02	--
			Totals	**Area 1 - SS, GW, SW, SD**	**3E-05**	**5E+00**	**2E+00**	Drivers identified in soil and groundwater. See above.
				Area 1 - SB, GW, SW, SD	**3E-05**	**5E+00**	**2E+00**	
				Area 2 - SS, GW, SW, SD	**3E-05**	**9E+00**	**4E+00**	
				Area 2 - SB, GW, SW, SD	**3E-05**	**6E+00**	**2E+00**	

TABLE 11.5
OVERALL SUMMARY OF POTENTIAL CANCER RISKS, NONCANCER HAZARDS AND RISK DRIVERS
HYPOTHETICAL FUTURE ON-SITE RESIDENT
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe	Receptor	Exposure Scenario	Exposure Area	Media	Potential ELCR (a)	Potential HI All Target Endpoints (a)	Maximum Potential HI Per Target Endpoint (a)	Risk Drivers (b)

Acronyms:
CTE - Central Tencency Exposure.
ELCR - Excess lifetime cancer risk.
HI - Hazard Index.
MEDEP - Maine Department of Environmental Protection.
RME - Reasonable Maximum Exposure.
USEPA - United States Environmental Protection Agency.

Media:
GW - Groundwater.
SB - Subsurface Soil.
SD - Sediment.
SS - Surface Soil.
SW - Surface Water.

Chemicals:
BAP - benzo[a]pyrene.
PCBs - Polychlorinated Biphenyls.
TCE - trichloroethene.
VC - vinyl chloride.

Risk Driver Basis:
ca - based on cancer.
nc - based on noncancer.

Notes:
BKG - Indicates risk drivers found to have concentrations in site media less than or consistent with concentrations in background and therefore not considered to be site-related
Green shading indicates an exceedance of MEDEP's target risk level of $1x1ζ^{5}$ at one significant figure.
Yellow shading indicates an exceedance ofUSEPA's target risk range of 10^{-6} to 10^{-4} and/or MEDEP/USEPA's target HI of 1 per target organ, at one significant figure

(a) This table presents a summary of the total potential risk and hazard by exposure area and media.
Potential risk and hazard calculations are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 7.5.RME/CTE in Attachment E.
Summaries of total risk and hazard by chemical are presented in Risk Assessment Guidance for Superfund (RAGS) Part D Table 9.5.RME/CTE in Attachment F.
(b) Risk drivers are identified where the total ELCR or HI per target endpoint are greater than target levels. A risk driver is then defined per exposure scenario (i.e., RME/CTE/receptor/medium) as a chemical with an individual ELCR greater than $1x1ζ^{6}$ and/or hazard quotient greater than 1, based on one significant figure

ATTACHMENT A

SAMPLE LISTS AND ANALYTICAL DATA SUMMARY TABLES

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TABLE A-1a
SOIL SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location Group	Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID	Depth Interval	Depth Interval Category
Area 1	FTA-SB-200	11/8/2012	FTA-SB-200-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-201	11/13/2012	FTA-SB-201-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-201	11/2/2016	FTA-SB-201-SS-N-110216	N		0 - 2 ft	Surface
Area 1	FTA-SB-202	11/7/2012	FTA-SB-202-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-203	11/7/2012	FTA-SB-203-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-203	11/2/2016	FTA-SB-203-SS-N-110216	N		0 - 2 ft	Surface
Area 1	FTA-SB-204	11/8/2012	FTA-SB-204-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-204	11/2/2016	FTA-SB-204-SS-N-110216	N		0 - 2 ft	Surface
Area 1	FTA-SB-205	11/8/2012	FTA-SB-205-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-205	11/8/2012	FTA-SB-205-0002-D	FD	FTA-SB-205-0002	0 - 2 ft	Surface
Area 1	FTA-SB-205	11/2/2016	FTA-SB-205-SS-N-110216	N		0 - 2 ft	Surface
Area 1	FTA-SB-208	11/6/2012	FTA-SB-208-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-208	11/2/2016	FTA-SB-208-SS-N-110216	N		0 - 2 ft	Surface
Area 1	FTA-SB-217	11/7/2012	FTA-SB-217-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-217	11/7/2012	FTA-SB-217-0002-D	FD	FTA-SB-217-0002	0 - 2 ft	Surface
Area 1	FTA-SB-218	11/7/2012	FTA-SB-218-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-219	11/8/2012	FTA-SB-219-0002	N		0 - 2 ft	Surface
Area 1	FTA-SB-200	11/8/2012	FTA-SB-200-0206	N		2 - 6 ft	Subsurface
Area 1	FTA-SB-200	11/8/2012	FTA-SB-200-0610	N		6 - 10 ft	Subsurface
Area 1	FTA-SB-201	11/13/2012	FTA-SB-201-0206	N		2 - 6 ft	Subsurface
Area 1	FTA-SB-201	11/13/2012	FTA-SB-201-0406	N		4 - 6 ft	Subsurface
Area 1	FTA-SB-202	11/7/2012	FTA-SB-202-0206	N		2 - 6 ft	Subsurface
Area 1	FTA-SB-203	11/7/2012	FTA-SB-203-0206	N		2 - 6 ft	Subsurface
Area 1	FTA-SB-204	11/8/2012	FTA-SB-204-0610	N		6 - 10 ft	Subsurface
Area 1	FTA-SB-205	11/8/2012	FTA-SB-205-0206	N		2 - 6 ft	Subsurface
Area 1	FTA-SB-208	11/6/2012	FTA-SB-208-0610	N		6 - 10 ft	Subsurface
Area 1	FTA-SB-217	11/7/2012	FTA-SB-217-0206	N		2 - 6 ft	Subsurface
Area 1	FTA-SB-218	11/7/2012	FTA-SB-218-0610	N		6 - 10 ft	Subsurface
Area 1	FTA-SB-219	11/8/2012	FTA-SB-219-0206	N		2 - 6 ft	Subsurface
Area 1	FTA-SS-23	5/16/2002	FTA-SS-23-1-3	N		1 - 3 ft	Subsurface
Area 1	FTA-SS-25	5/16/2002	FTA-SS-25-3-5	N		3 - 5 ft	Subsurface
Area 2	A31-SB01	10/26/2007	A31-SO-SB01-0002	N		0 - 2 ft	Surface
Area 2	A31-SB02	10/26/2007	A31-SO-SB02-0002	N		0 - 2 ft	Surface
Area 2	A31-SB03	10/26/2007	A31-SO-SB03-0002	N		0 - 2 ft	Surface
Area 2	A31-SB04	10/26/2007	A31-SO-SB04-0002	N		0 - 2 ft	Surface
Area 2	DDA-E-1E	7/15/2011	DDA-E-01E-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-N-5A	8/20/2010	DDA-N-5A-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-10D	7/15/2011	DDA-NE-10D-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-10D	7/15/2011	DDA-NE-10D-SO-0002-D	FD	DDA-NE-10D-SO-0002	0 - 2 ft	Surface
Area 2	DDA-NE-13I	7/15/2011	DDA-NE-13I-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-2I	7/14/2011	DDA-NE-02I-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-2I	7/14/2011	DDA-NE-02I-SO-0002-D	FD	DDA-NE-02I-SO-0002	0 - 2 ft	Surface
Area 2	DDA-NE-3E	7/13/2011	DDA-NE-3E-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-5C	8/19/2010	DDA-NE-5C-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-5D	8/20/2010	DDA-NE-5D-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-5E	7/13/2011	DDA-NE-05E-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-6C	8/20/2010	DDA-NE-6C-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-6D	8/20/2010	DDA-NE-6D-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-7D	7/12/2011	DDA-NE-07D-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-7I	7/15/2011	DDA-NE-07I-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NE-8B	7/13/2011	DDA-NE-08B-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-10E	7/14/2011	DDA-NW-10E-SO-0004	N		0 - 2 ft	Surface
Area 2	DDA-NW-10G	7/14/2011	DDA-NW-10G-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-10Q	7/14/2011	DDA-NW-10Q-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-2D	8/19/2010	DDA-NW-2D-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-2F	8/18/2010	DDA-NW-2F-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-2G	8/20/2010	DDA-NW-2G-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-2G	8/20/2010	DDA-NW-2G-SO-0002-D	FD	DDA-NW-2G-SO-0002	0 - 2 ft	Surface
Area 2	DDA-NW-2P	7/12/2011	DDA-NW-02P-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-3E	8/20/2010	DDA-NW-3E-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-3F	8/18/2010	DDA-NW-3F-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-3R	7/14/2011	DDA-NW-03R-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-4D	8/19/2010	DDA-NW-4D-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-4F	8/18/2010	DDA-NW-4F-SO-0001	N		0 - 1 ft	Surface

TABLE A-1a
SOIL SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location Group	Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID	Depth Interval	Depth Interval Category
Area 2	DDA-NW-4F	8/18/2010	DDA-NW-4F-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-4R	7/14/2011	DDA-NW-4R-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-4R	7/14/2011	DDA-NW-4R-0002-D	FD	DDA-NW-4R-0002	0 - 2 ft	Surface
Area 2	DDA-NW-4Y	7/15/2011	DDA-NW-04Y-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-5C	8/20/2010	DDA-NW-5C-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-5F	8/17/2010	DDA-NW-5F-SO-0001	N		0 - 1 ft	Surface
Area 2	DDA-NW-5F	8/17/2010	DDA-NW-5F-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-5G	8/20/2010	DDA-NW-5G-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-6B	8/17/2010	DDA-NW-6B-SO-0001	N		0 - 1 ft	Surface
Area 2	DDA-NW-6D	8/17/2010	DDA-NW-6D-SO-0001	N		0 - 1 ft	Surface
Area 2	DDA-NW-6D	8/17/2010	DDA-NW-6D-SO-0001-D	FD	DDA-NW-6D-SO-0001	0 - 1 ft	Surface
Area 2	DDA-NW-6E	8/17/2010	DDA-NW-6E-SO-0001	N		0 - 1 ft	Surface
Area 2	DDA-NW-6E	8/17/2010	DDA-NW-6E-SO-0001-D	FD	DDA-NW-6E-SO-0001	0 - 1 ft	Surface
Area 2	DDA-NW-6F	8/20/2010	DDA-NW-6F-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-6R	7/14/2011	DDA-NW-06R-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-6R	7/14/2011	DDA-NW-06R-SO-0002-D	FD	DDA-NW-06R-SO-0002	0 - 2 ft	Surface
Area 2	DDA-NW-7B	8/20/2010	DDA-NW-7B-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-7E	8/20/2010	DDA-NW-7E-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-8R	7/14/2011	DDA-NW-08R-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-9B	7/12/2011	DDA-NW-09B-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-9E	7/12/2011	DDA-NW-9E-0002	N		0 - 2 ft	Surface
Area 2	DDA-NW-9M	7/13/2011	DDA-NW-09M-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-SE-5B	7/12/2011	DDA-SE-05B-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-SW-2F	8/20/2010	DDA-SW-2F-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-SW-2I	7/13/2011	DDA-SW-02I-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-SW-3G	7/13/2011	DDA-SW-03G-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-W-1F	8/18/2010	DDA-W-1F-SO-0002	N		0 - 2 ft	Surface
Area 2	DDA-W-1G	8/20/2010	DDA-W-1G-SO-0002	N		0 - 2 ft	Surface
Area 2	FTA-ANOM1C-SO-SURF	9/25/2013	FTA-ANOM1C-SO-SURF	N		0 - 2 ft	Surface
Area 2	FTA-ANOM1D-SO-SURF	9/25/2013	FTA-ANOM1D-SO-SURF	N		0 - 2 ft	Surface
Area 2	FTA-ANOM1D-SO-SURF	9/25/2013	FTA-ANOM1D-SO-SURF-D	FD	FTA-ANOM1D-SO-SURF	0 - 2 ft	Surface
Area 2	FTA-ANOM1E-SO-SURF	9/26/2013	FTA-ANOM1E-SO-SURF	N		0 - 2 ft	Surface
Area 2	FTA-ANOM4-SO-SURF	9/25/2013	FTA-ANOM4-SO-SURF	N		0 - 2 ft	Surface
Area 2	FTA-AREAA-01	6/17/2014	FTA-AREAA-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAA-02	6/17/2014	FTA-AREAA-02-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAA-02	6/17/2014	FTA-AREAA-02-0002-D	FD	FTA-AREAA-02-0002	0 - 2 ft	Surface
Area 2	FTA-AREAA-02	11/2/2016	FTA-AREAA-02-SS-N-110216	N		0 - 2 ft	Surface
Area 2	FTA-AREAB-01	6/17/2014	FTA-AREAB-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAB-02	6/17/2014	FTA-AREAB-02-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAB-02	11/2/2016	FTA-AREAB-02-SS-D-110216	FD	FTA-AREAB-02-SS-N-110216	0 - 2 ft	Surface
Area 2	FTA-AREAB-02	11/2/2016	FTA-AREAB-02-SS-N-110216	N		0 - 2 ft	Surface
Area 2	FTA-AREAC-01	6/17/2014	FTA-AREAC-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAD-01	6/19/2014	FTA-AREAD-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAD-02	6/18/2014	FTA-AREAD-02-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAF-01	6/19/2014	FTA-AREAF-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAG-01	6/18/2014	FTA-AREAG-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAG-02	6/18/2014	FTA-AREAG-02-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAG-03	6/18/2014	FTA-AREAG-03-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAH-01	6/18/2014	FTA-AREAH-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-AREAI-01	6/17/2014	FTA-AREAI-01-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-206	11/6/2012	FTA-SB-206-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-206	11/6/2012	FTA-SB-206-0002-D	FD	FTA-SB-206-0002	0 - 2 ft	Surface
Area 2	FTA-SB-209	11/6/2012	FTA-SB-209-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-210	11/6/2012	FTA-SB-210-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-211	11/6/2012	FTA-SB-211-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-211	11/6/2012	FTA-SB-211-0002-D	FD	FTA-SB-211-0002	0 - 2 ft	Surface
Area 2	FTA-SB-212	11/5/2012	FTA-SB-212-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-212	11/2/2016	FTA-SB-212-SS-N-110216	N		0 - 2 ft	Surface
Area 2	FTA-SB-213	11/5/2012	FTA-SB-213-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-214	11/5/2012	FTA-SB-214-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-214	11/5/2012	FTA-SB-214-0002-D	FD	FTA-SB-214-0002	0 - 2 ft	Surface
Area 2	FTA-SB-214	11/1/2016	FTA-SB-214-SS-N-110216	N		0 - 2 ft	Surface
Area 2	FTA-SB-215	11/7/2012	FTA-SB-215-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-215	11/2/2016	FTA-SB-215-SS-D-110216	FD	FTA-SB-215-SS-N-110216	0 - 2 ft	Surface

TABLE A-1a
SOIL SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location Group	Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID	Depth Interval	Depth Interval Category
Area 2	FTA-SB-215	11/2/2016	FTA-SB-215-SS-N-110216	N		0 - 2 ft	Surface
Area 2	FTA-SB-216	11/6/2012	FTA-SB-216-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-220	11/6/2012	FTA-SB-220-0002	N		0 - 2 ft	Surface
Area 2	FTA-SB-220	11/2/2016	FTA-SB-220-SS-N-110216	N		0 - 2 ft	Surface
Area 2	PCBAREA1-003	9/18/2013	PCBAREA1-093	FD	PCBAREA1-003	2 - 2 ft	Surface
Area 2	PCBAREA1-003	9/18/2013	PCBAREA1-003	N		2 - 2 ft	Surface
Area 2	PCBAREA1-004	9/18/2013	PCBAREA1-004	N		2 - 2 ft	Surface
Area 2	PCBAREA1-005	9/18/2013	PCBAREA1-005	N		1 - 1 ft	Surface
Area 2	PCBAREA1-006	9/18/2013	PCBAREA1-006	N		1 - 1 ft	Surface
Area 2	PCBAREA1-009	9/18/2013	PCBAREA1-009	N		2 - 2 ft	Surface
Area 2	PCBAREA1-010	9/19/2013	PCBAREA1-010	N		2 - 2 ft	Surface
Area 2	PCBAREA1-011	9/19/2013	PCBAREA1-011	N		2 - 2 ft	Surface
Area 2	PCBAREA1-012	9/19/2013	PCBAREA1-012	N		2 - 2 ft	Surface
Area 2	PCBAREA1-013	9/19/2013	PCBAREA1-013	N		1 - 1 ft	Surface
Area 2	PCBAREA1-014	9/19/2013	PCBAREA1-014	N		1 - 1 ft	Surface
Area 2	PCBAREA1-017	9/19/2013	PCBAREA1-017	N		1 - 1 ft	Surface
Area 2	PCBAREA1-207	9/27/2013	PCBAREA1-207	N		1.5 - 1.5 ft	Surface
Area 2	PCBAREA1-208	9/27/2013	PCBAREA1-208	N		1.5 - 1.5 ft	Surface
Area 2	PCBAREA1-219	9/27/2013	PCBAREA1-219	N		1.5 - 1.5 ft	Surface
Area 2	PCBAREA1-220	9/27/2013	PCBAREA1-220	N		1 - 1 ft	Surface
Area 2	PCBAREA2-001	9/18/2013	PCBAREA2-091	FD	PCBAREA2-001	2 - 2 ft	Surface
Area 2	PCBAREA2-001	9/18/2013	PCBAREA2-001	N		2 - 2 ft	Surface
Area 2	PCBAREA2-002	9/18/2013	PCBAREA2-002	N		1 - 1 ft	Surface
Area 2	PCBAREA2-003	9/18/2013	PCBAREA2-003	N		1 - 1 ft	Surface
Area 2	PCBAREA2-004	9/18/2013	PCBAREA2-004	N		1 - 1 ft	Surface
Area 2	PCBAREA2-005	9/18/2013	PCBAREA2-005	N		1 - 1 ft	Surface
Area 2	A31-SB01	10/26/2007	A31-SO-SB01-0406	N		4 - 6 ft	Subsurface
Area 2	A31-SB02	10/26/2007	A31-SO-SB02-0507	N		5 - 7 ft	Subsurface
Area 2	A31-SB03	10/26/2007	A31-SO-SB03-0507	N		5 - 7 ft	Subsurface
Area 2	A31-SB04	10/27/2007	A31-SO-SB04-0507	N		5 - 7 ft	Subsurface
Area 2	DDA-E-1E	7/15/2011	DDA-E-01E-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-N-2A	8/16/2010	DDA-N-2A-SO-0507	N		5 - 7 ft	Subsurface
Area 2	DDA-N-3A	8/16/2010	DDA-N-3A-SO-0305	N		3 - 5 ft	Subsurface
Area 2	DDA-N-3A	8/20/2010	DDA-N-3A-SO-0709	N		7 - 9 ft	Subsurface
Area 2	DDA-N-5A	8/20/2010	DDA-N-5A-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-N-5A	8/20/2010	DDA-N-5A-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-NE-10D	7/15/2011	DDA-NE-10D-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-NE-3E	7/13/2011	DDA-NE-03E-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-NE-5C	8/19/2010	DDA-NE-5C-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NE-5D	8/20/2010	DDA-NE-5D-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NE-5E	7/13/2011	DDA-NE-05E-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NE-6C	8/20/2010	DDA-NE-6C-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NE-6E	7/13/2011	DDA-NE-06E-SO-0204-D	FD	DDA-NE-06E-SO-0204	2 - 4 ft	Subsurface
Area 2	DDA-NE-6E	7/13/2011	DDA-NE-06E-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NE-6E	7/13/2011	DDA-NE-06E-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NE-8B	7/13/2011	DDA-NE-08B-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NW-10G	7/14/2011	DDA-NW-10G-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-10Q	7/14/2011	DDA-NW-10Q-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NW-2D	8/19/2010	DDA-NW-2D-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-2F	8/18/2010	DDA-NW-2F-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-2G	8/20/2010	DDA-NW-2G-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-2P	7/12/2011	DDA-NW-02P-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NW-3B	8/16/2010	DDA-NW-3B-SO-0305	N		3 - 5 ft	Subsurface
Area 2	DDA-NW-3E	8/20/2010	DDA-NW-3E-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-3F	8/18/2010	DDA-NW-3F-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-3R	7/15/2011	DDA-NW-03R-SO-0810	N		8 - 10 ft	Subsurface
Area 2	DDA-NW-4D	8/19/2010	DDA-NW-4D-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-4P	7/12/2011	DDA-NW-4P-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NW-4Y	7/15/2011	DDA-NW-04Y-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-5C	8/20/2010	DDA-NW-5C-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-5G	8/20/2010	DDA-NW-5G-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-6B	8/17/2010	DDA-NW-6B-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-6C	8/17/2010	DDA-NW-6C-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-6D	8/17/2010	DDA-NW-6D-SO-0204	N		2 - 4 ft	Subsurface

TABLE A-1a
SOIL SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location Group	Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID	Depth Interval	Depth Interval Category
Area 2	DDA-NW-6E	8/17/2010	DDA-NW-6E-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-6F	8/20/2010	DDA-NW-6F-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-6R	7/14/2011	DDA-NW-06R-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NW-7D	8/20/2010	DDA-NW-7D-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-8I	7/13/2011	DDA-NW-08I-SO-0204-D	FD	DDA-NW-08I-SO-0204	2 - 4 ft	Subsurface
Area 2	DDA-NW-8I	7/13/2011	DDA-NW-08I-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-8R	7/14/2011	DDA-NW-08R-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-NW-9B	7/12/2011	DDA-NW-09B-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-NW-9M	7/14/2011	DDA-NW-09M-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-SE-2C	8/19/2010	DDA-SE-2C-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-SE-2D	8/20/2010	DDA-SE-2D-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-SE-3D	8/20/2010	DDA-SE-3D-SO-0810	N		8 - 10 ft	Subsurface
Area 2	DDA-SE-4C	8/19/2010	DDA-SE-4C-SO-0608	N		6 - 8 ft	Subsurface
Area 2	DDA-SE-4D	8/20/2010	DDA-SE-4D-SO-0810	N		8 - 10 ft	Subsurface
Area 2	DDA-SE-4D	7/11/2011	DDA-SE-04D-SO-0810	N		8 - 10 ft	Subsurface
Area 2	DDA-SE-5B	7/12/2011	DDA-SE-05B-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-SE-5C	8/20/2010	DDA-SE-5C-SO-0810	N		8 - 10 ft	Subsurface
Area 2	DDA-SE-5C	7/12/2011	DDA-SE-05C-SO-0810	N		8 - 10 ft	Subsurface
Area 2	DDA-SE-5D	7/12/2011	DDA-SE-05D-SO-0204-D	FD	DDA-SE-05D-SO-0204	2 - 4 ft	Subsurface
Area 2	DDA-SE-5D	7/12/2011	DDA-SE-05D-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-SE-5D	7/12/2011	DDA-SE-05D-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-SW-2F	8/20/2010	DDA-SW-2F-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-SW-3G	7/13/2011	DDA-SW-03G-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-SW-3N	7/13/2011	DDA-SW-03N-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-SW-5C	7/13/2011	DDA-SW-05C-SO-0406	N		4 - 6 ft	Subsurface
Area 2	DDA-W-1B	8/17/2010	DDA-W-1B-SO-0305	N		3 - 5 ft	Subsurface
Area 2	DDA-W-1F	8/18/2010	DDA-W-1F-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-W-1G	8/20/2010	DDA-W-1G-SO-0204	N		2 - 4 ft	Subsurface
Area 2	DDA-W-1L	7/13/2011	DDA-W-01L-SO-0406	N		4 - 6 ft	Subsurface
Area 2	FTA-ANOM1A-SO-DEEP	9/25/2013	FTA-ANOM1A-SO-DEEP	N		3 - 4.5 ft	Subsurface
Area 2	FTA-ANOM1B-SO-DEEP	9/25/2013	FTA-ANOM1B-SO-DEEP	N		3 - 4.5 ft	Subsurface
Area 2	FTA-ANOM1C-SO-INT	9/25/2013	FTA-ANOM1C-SO-INT	N		2 - 3.75 ft	Subsurface
Area 2	FTA-ANOM1D-SO-INT	9/25/2013	FTA-ANOM1D-SO-INT	N		2 - 4 ft	Subsurface
Area 2	FTA-ANOM1E-SO-INT	9/26/2013	FTA-ANOM1E-SO-INT	N		2 - 4 ft	Subsurface
Area 2	FTA-ANOM2-SO-DEEP	9/25/2013	FTA-ANOM2-SO-DEEP	N		6 - 7.5 ft	Subsurface
Area 2	FTA-ANOM2-SO-INT	9/25/2013	FTA-ANOM2-SO-INT	N		2 - 4 ft	Subsurface
Area 2	FTA-ANOM4-SO-DEEP	9/25/2013	FTA-ANOM4-SO-DEEP-D	FD	FTA-ANOM4-SO-DEEP	3 - 4 ft	Subsurface
Area 2	FTA-ANOM4-SO-DEEP	9/25/2013	FTA-ANOM4-SO-DEEP	N		3 - 4 ft	Subsurface
Area 2	FTA-ANOM4-SO-INT	9/25/2013	FTA-ANOM4-SO-INT	N		2 - 4 ft	Subsurface
Area 2	FTA-AREAA-01	6/17/2014	FTA-AREAA-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAA-02	6/17/2014	FTA-AREAA-02-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAB-01	6/17/2014	FTA-AREAB-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAB-01	6/17/2014	FTA-AREAB-01-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-AREAB-02	6/17/2014	FTA-AREAB-02-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAC-01	6/17/2014	FTA-AREAC-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAD-01	6/19/2014	FTA-AREAD-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAD-02	6/18/2014	FTA-AREAD-02-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAE-01	6/19/2014	FTA-AREAE-01-0610-D	FD	FTA-AREAE-01-0610	6 - 10 ft	Subsurface
Area 2	FTA-AREAE-01	6/19/2014	FTA-AREAE-01-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-AREAF-01	6/19/2014	FTA-AREAF-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAG-01	6/18/2014	FTA-AREAG-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAG-02	6/18/2014	FTA-AREAG-02-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAG-03	6/18/2014	FTA-AREAG-03-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAH-01	6/18/2014	FTA-AREAH-01-0206-D	FD	FTA-AREAH-01-0206	2 - 6 ft	Subsurface
Area 2	FTA-AREAH-01	6/18/2014	FTA-AREAH-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAI-01	6/17/2014	FTA-AREAI-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAJ-01	6/18/2014	FTA-AREAJ-01-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-AREAJ-01	6/18/2014	FTA-AREAJ-01-069.4	N		6 - 9.4 ft	Subsurface
Area 2	FTA-NPCB-SO-BOTPCB	9/25/2013	FTA-NPCB-SO-BOTPCB	N		2 - 3 ft	Subsurface
Area 2	FTA-SB-206	11/6/2012	FTA-SB-206-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-SB-209	11/6/2012	FTA-SB-209-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-SB-209	11/6/2012	FTA-SB-209-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-SB-210	11/6/2012	FTA-SB-210-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-SB-211	11/6/2012	FTA-SB-211-0206	N		2 - 6 ft	Subsurface

TABLE A-1a
SOIL SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location Group	Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID	Depth Interval	Depth Interval Category
Area 2	FTA-SB-211	11/6/2012	FTA-SB-211-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-SB-212	11/5/2012	FTA-SB-212-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-SB-212	11/8/2012	FTA-SB-212-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-SB-213	11/5/2012	FTA-SB-213-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-SB-214	11/5/2012	FTA-SB-214-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-SB-215	11/7/2012	FTA-SB-215-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-SB-216	11/6/2012	FTA-SB-216-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-SB-216	11/6/2012	FTA-SB-216-0610	N		6 - 10 ft	Subsurface
Area 2	FTA-SB-220	11/6/2012	FTA-SB-220-0206	N		2 - 6 ft	Subsurface
Area 2	FTA-WANOM1-SO-BOTPCB	9/25/2013	FTA-WANOM1-SO-BOTPCB	N		2 - 3 ft	Subsurface
Area 2	PCBAREA1-201	9/27/2013	PCBAREA1-201	N		3 - 3 ft	Subsurface
Area 2	PCBAREA1-202	9/27/2013	PCBAREA1-202	N		3 - 3 ft	Subsurface
Area 2	PCBAREA1-202	9/27/2013	PCBAREA1P-202	FD	PCBAREA1-202	3 - 3 ft	Subsurface

Notes:
FD - Field duplicate.
ft - feet.
N - Normal sample.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SS-23	FTA-SS-25	A31-SB01	A31-SB01	A31-SB02	A31-SB02	A31-SB03	A31-SB03	A31-SB04	A31-SB04	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM1C-SO-INT	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF
		sample_date	5/16/2002	5/16/2002	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/27/2007	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
		sys_sample_code	FTA-SS-23-1-3	FTA-SS-25-3-5	A31-SO-SB01-0002	A31-SO-SB01-0406	A31-SO-SB02-0002	A31-SO-SB02-0507	A31-SO-SB03-0002	A31-SO-SB03-0507	A31-SO-SB04-0002	A31-SO-SB04-0507	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM1C-SO-INT	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF-D	FTA-ANOM1D-SO-SURF
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
		depth_interval	1 - 3 ft	3 - 5 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	3 - 4.5 ft	3 - 4.5 ft	2 - 3.75 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																	
Metals																			
ALUMINUM	7429-90-5	mg/kg											16000	14800	26200	18600	12300	16700	13000
ANTIMONY	7440-36-0	mg/kg											0.13 J	0.1 J	0.18 J	0.17 J	0.13 J	0.08 J	0.08 J
ARSENIC	7440-38-2	mg/kg											11.8 J	7.2 J	18.2 J	11.3 J	10.4 J	8.3 J	7.1 J
BARIUM	7440-39-3	mg/kg											34.8	23	39.2	48.3	24.9	29.4	18.8
BERYLLIUM	7440-41-7	mg/kg											0.63	0.58	0.8 J	0.74 J	0.54	0.6	0.49
CADMIUM	7440-43-9	mg/kg											0.1	0.09	0.17	0.09	< 0.09 U	0.08	0.08
CALCIUM	7440-70-2	mg/kg											3290	3120	5600	2260	2970	3150	2420
CHROMIUM, TOTAL	7440-47-3	mg/kg											27.3 J	25.9 J	56.4 J	28.3 J	24.8 J	21 J	34.4 J
CHROMIUM III (c)	16065-83-1	mg/kg																	
CHROMIUM VI	18540-29-9	mg/kg																	
COBALT	7440-48-4	mg/kg											11.4	11.7	20.8	11.6	11.2	11.8	10.6
COPPER	7440-50-8	mg/kg											22.8	23.8	48.8	24.2	18.8	24.8	23.5
IRON	7439-89-6	mg/kg											25700	24700	43800	26800	21800	24400	23200
LEAD	7439-92-1	mg/kg											13.2 J	10.3 J	22.4 J	12.9 J	10.6 J	18.5 J	10.9 J
MAGNESIUM	7439-95-4	mg/kg											7200	7430	13000	6910	6320	6760	7500
MANGANESE	7439-96-5	mg/kg											599	486	1060	519	474	822 J	473 J
MERCURY	7439-97-6	mg/kg											0.008 J	0.006 J	0.01 J	0.02 J	0.008 J	0.007 J	0.006 J
NICKEL	7440-02-0	mg/kg											26.2 J	25.3 J	43.1 J	27.4 J	24 J	22.5 J	23.8 J
POTASSIUM	7440-09-7	mg/kg											1770 J	1100 J	1850 J	2330 J	1250 J	1060 J	783 J
SELENIUM	7782-49-2	mg/kg											0.23 J	0.17 J	0.25 J	0.31 J	0.29 J	0.23 J	0.13 J
SILVER	7440-22-4	mg/kg											0.09	0.04 J	0.07 J	0.05 J	0.04 J	0.08	0.03 J
SODIUM	7440-23-5	mg/kg											238	193	334	132 J	148	135	90.7 J
THALLIUM	7440-28-0	mg/kg											0.12	0.1	0.15 J	0.12	0.09 J	0.09	0.06 J
VANADIUM	7440-62-2	mg/kg											36.5 J	38.7 J	64.4 J	40.5 J	34.4 J	30 J	32.4 J
ZINC	7440-66-6	mg/kg											54.4 J	54.5 J	98.8 J	60.5 J	48.4 J	58.7 J	46.2 J
PCBs																			
AROCLOR-1016	12674-11-2	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 U	< 0.0095 U	< 0.0085 U	< 0.0088 U	< 0.0088 U
AROCLOR-1221	11104-28-2	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 U	< 0.0095 U	< 0.0085 U	< 0.0088 U	< 0.0088 U
AROCLOR-1232	11141-16-5	mg/kg											< 0.011 UJ	< 0.0092 UJ	< 0.017 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U
AROCLOR-1242	53469-21-9	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 U	< 0.0095 U	< 0.0085 U	< 0.0088 U	< 0.0088 U
AROCLOR-1248	12672-29-6	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 U	< 0.0095 U	< 0.0085 U	< 0.0088 U	< 0.0088 U
AROCLOR-1254	11097-69-1	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 U	< 0.0095 U	< 0.0085 U	< 0.0088 U	< 0.0088 U
AROCLOR-1260	11096-82-5	mg/kg											0.32 J	0.054 J	0.35	0.97	0.12	0.58	0.59
AROCLOR-1262	37324-23-5	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 U	< 0.0095 U	< 0.0085 U	< 0.0088 U	< 0.0088 U
AROCLOR-1268	11100-14-4	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 U	< 0.0095 U	< 0.0085 U	< 0.0088 U	< 0.0088 U
TOTAL AROCLORS (b)	RATotAroclors	mg/kg											0.32	0.054	0.35	0.97	0.12	0.58	0.59
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg											0.3947	0.1178	0.465	1.0475	0.1895	0.6516	0.6616
Pesticides																			
4,4-DDD	72-54-8	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
4,4-DDE	72-55-9	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
4,4-DDT	50-29-3	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
ALDRIN	309-00-2	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
ALPHA-BHC	319-84-6	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
ALPHA-CHLORDANE	5103-71-9	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
BETA-BHC	319-85-7	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
DELTA-BHC	319-86-8	mg/kg											< 0.00091 U	< 0.00078 U	< 0.0014 U	< 0.00095 U	< 0.00085 U	< 0.00088 U	< 0.00088 U
DIELDRIN	60-57-1	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
ENDOSULFAN I	959-98-8	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 UJ	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
ENDOSULFAN II	33213-65-9	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
ENDOSULFAN SULFATE	1031-07-8	mg/kg											< 0.0018 U	< 0.0015 U	< 0.0028 U	< 0.0018 U	< 0.0016 U	< 0.0017 U	< 0.0017 U
ENDRIN	72-20-8	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
ENDRIN ALDEHYDE	7421-93-4	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
ENDRIN KETONE	53494-70-5	mg/kg											< 0.0018 UJ	< 0.0015 UJ	< 0.0028 UJ	< 0.0018 U	< 0.0016 UJ	< 0.0017 U	< 0.0017 UJ
HEPTACHLOR	76-44-8	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
LINDANE	58-89-9	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ
METHOXYCHLOR	72-43-5	mg/kg											< 0.0091 UJ	< 0.0078 UJ	< 0.014 UJ	< 0.0095 U	< 0.0085 UJ	< 0.0088 U	< 0.0088 UJ
TOXAPHENE	8001-35-2	mg/kg											< 0.018 U	< 0.015 U	< 0.028 U	< 0.018 U	< 0.016 U	< 0.017 U	< 0.017 U
TRANS-CHLORDANE	5103-74-2	mg/kg											< 0.00091 UJ	< 0.00078 UJ	< 0.0014 UJ	< 0.00095 U	< 0.00085 UJ	< 0.00088 U	< 0.00088 UJ

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SS-23	FTA-SS-25	A31-SB01	A31-SB01	A31-SB02	A31-SB02	A31-SB03	A31-SB03	A31-SB04	A31-SB04	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM1C-SO-INT	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF
		sample_date	5/16/2002	5/16/2002	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/27/2007	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
		sys_sample_code	FTA-SS-23-1-3	FTA-SS-25-3-5	A31-SO-SB01-0002	A31-SO-SB01-0406	A31-SO-SB02-0002	A31-SO-SB02-0507	A31-SO-SB03-0002	A31-SO-SB03-0507	A31-SO-SB04-0002	A31-SO-SB04-0507	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM1C-SO-INT	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF-D	FTA-ANOM1D-SO-SURF
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
		depth_interval	1 - 3 ft	3 - 5 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	3 - 4.5 ft	3 - 4.5 ft	2 - 3.75 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																	
SVOCs																			
1,1-BIPHENYL	92-52-4	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	0.13	0.32	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg											< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
1,4-DIOXANE	123-91-1	mg/kg											< 0.052 UJ	< 0.05 UJ	< 0.083 UJ	< 0.057 UJ	< 0.049 UJ	< 0.051 UJ	< 0.052 UJ
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg			< 0.38 UJ	< 0.38 UJ	< 0.35 UJ	< 0.38 UJ	< 0.36 UJ	< 0.36 UJ	< 0.36 U	< 0.39 U	< 0.01 UJ	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0099 UJ	< 0.01 UJ	< 0.01 UJ
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg											< 0.052 U	< 0.05 U	< 0.083 U	< 0.057 U	< 0.049 U	< 0.051 U	< 0.052 U
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg			< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U	< 0.97 U	< 0.64 U	< 0.62 U	< 1 U	< 0.7 U	< 0.61 U	< 0.63 U	< 0.65 U
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.052 U	< 0.05 U	< 0.083 U	< 0.057 U	< 0.049 U	< 0.051 U	< 0.052 U
2,4-DICHLOROPHENOL	120-83-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 UJ	< 0.25 UJ	< 0.41 UJ	< 0.28 UJ	< 0.24 UJ	< 0.25 UJ	< 0.26 UJ
2,4-DIMETHYLPHENOL	105-67-9	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
2,4-DINITROPHENOL	51-28-5	mg/kg			< 0.96 UJ	< 0.94 UJ	< 0.88 UJ	< 0.94 UJ	< 0.88 UJ	< 0.9 UJ	< 0.88 UJ	< 0.97 UJ	< 0.077 UJ	< 0.075 UJ	< 0.12 UJ	< 0.086 UJ	< 0.074 UJ	< 0.076 U	< 0.079 UJ
2,4-DINITROTOLUENE	121-14-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 UJ	0.16	0.29	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
2,6-DINITROTOLUENE	606-20-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
2-CHLORONAPHTHALENE	91-58-7	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
2-CHLOROPHENOL	95-57-8	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.052 U	< 0.05 U	< 0.083 U	< 0.057 U	< 0.049 U	< 0.051 U	< 0.052 U
2-METHYLNAPHTHALENE	91-57-6	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
2-METHYLPHENOL	95-48-7	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
2-NITROANILINE	88-74-4	mg/kg			< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U	< 0.97 UJ	< 0.64 U	< 0.62 U	< 1 U	< 0.7 U	< 0.61 U	< 0.63 U	< 0.65 U
2-NITROPHENOL	88-75-5	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 UJ	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 UJ	< 0.01 UJ	< 0.016 UJ	UR	< 0.0099 UJ	< 0.01 U	< 0.01 UJ
3-NITROANILINE	99-09-2	mg/kg			< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U	< 0.97 UJ	< 0.64 U	< 0.62 U	< 1 U	< 0.7 U	< 0.61 U	< 0.63 U	< 0.65 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg			< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U	< 0.97 UJ	< 0.1 U	< 0.1 U	< 0.16 U	< 0.11 U	< 0.099 U	< 0.1 U	< 0.1 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
4-CHLOROANILINE	106-47-8	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.052 UJ	< 0.05 UJ	< 0.083 UJ	< 0.057 UJ	< 0.049 UJ	< 0.051 UJ	< 0.052 UJ
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
4-NITROANILINE	100-01-6	mg/kg			< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U	< 0.97 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
4-NITROPHENOL	100-02-7	mg/kg			< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U	< 0.97 UJ	< 0.64 U	< 0.62 U	< 1 U	< 0.7 U	< 0.61 U	< 0.63 U	< 0.65 U
ACENAPHTHENE	83-32-9	mg/kg											0.068 J	0.18 J	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
ACENAPHTHYLENE	208-96-8	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
ACETOPHENONE	98-86-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
ANTHRACENE	120-12-7	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
ATRAZINE	1912-24-9	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
BENZALDEHYDE	100-52-7	mg/kg			< 0.38 UJ	< 0.38 UJ	< 0.35 UJ	< 0.38 UJ	< 0.36 UJ	< 0.36 UJ	< 0.36 UJ	< 0.39 UJ	0.22 J	0.76 J	< 0.41 UJ	< 0.28 UJ	< 0.24 UJ	< 0.25 UJ	< 0.26 UJ
BENZO[A]ANTHRACENE	56-55-3	mg/kg											< 0.01 UJ	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0099 UJ	< 0.01 U	0.0037 J
BENZO[A]PYRENE	50-32-8	mg/kg											< 0.01 UJ	< 0.01 UJ	< 0.016 U	< 0.011 UJ	< 0.0099 U	< 0.01 U	< 0.01 U
BENZO[B]FLUORANTHENE	205-99-2	mg/kg											< 0.01 UJ	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0099 UJ	< 0.01 U	0.0072 J
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	0.31 J	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.052 UJ	< 0.05 UJ	< 0.083 U	< 0.057 U	< 0.049 U	< 0.051 U	< 0.052 U
CAPROLACTAM	105-60-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
CARBAZOLE	86-74-8	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
CHRYSENE	218-01-9	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											< 0.01 UJ	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0099 UJ	< 0.01 U	< 0.01 UJ
DIBENZOFURAN	132-64-9	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
DIETHYLPHTHALATE	84-66-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
DIMETHYL PHTHALATE	131-11-3	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	0.035 J	< 0.05 U	< 0.083 U	< 0.057 U	< 0.049 U	< 0.051 U	< 0.052 U
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
FLUORANTHENE	206-44-0	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
FLUORENE	86-73-7	mg/kg											0.089 J	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
HEXACHLOROBENZENE	118-74-1	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
HEXACHLOROBUTADIENE	87-68-3	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
HEXACHLOROETHANE	67-72-1	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											< 0.01 UJ	< 0.01 UJ	< 0.016 UJ	< 0.011 UJ	< 0.0099 UJ	< 0.01 U	< 0.01 UJ
ISOPHORONE	78-59-1	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
NAPHTHALENE	91-20-3	mg/kg											0.031	0.0066 J	< 0.016 U	< 0.011 U	< 0.0099 U	0.0027 J	< 0.01 U
NITROBENZENE	98-95-3	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.01 U	< 0.01 U	< 0.016 U	< 0.011 U	< 0.0099 U	< 0.01 U	< 0.01 U
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
PENTACHLOROPHENOL	87-86-5	mg/kg			< 0.96 U	< 0.94 U	< 0.88 U	< 0.94 U	< 0.88 U	< 0.9 U	< 0.88 U	< 0.97 UJ	< 0.052 U	< 0.05 U	< 0.083 U	< 0.057 U	< 0.049 U	< 0.051 U	< 0.052 U
PHENANTHRENE	85-01-8	mg/kg											0.35	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
PHENOL	108-95-2	mg/kg			< 0.38 U	< 0.38 U	< 0.35 U	< 0.38 U	< 0.36 U	< 0.36 U	< 0.36 U	< 0.39 U	< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
PYRENE	129-00-0	mg/kg											< 0.26 U	< 0.25 U	< 0.41 U	< 0.28 U	< 0.24 U	< 0.25 U	< 0.26 U
PAHs																			
2-METHYLNAPHTHALENE	91-57-6	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
ACENAPHTHENE	83-32-9	mg/kg											0.24	0.45	< 0.3 U	< 0.2 UJ	< 0.18 UJ	< 0.2 U	< 0.2 U
ACENAPHTHYLENE	208-96-8	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
ANTHRACENE	120-12-7	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
BENZO[A]ANTHRACENE	56-55-3	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
BENZO[A]PYRENE	50-32-8	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
BENZO[B]FLUORANTHENE	205-99-2	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
CHRYSENE	218-01-9	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
FLUORANTHENE	206-44-0	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
FLUORENE	86-73-7	mg/kg											0.24	0.27	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
NAPHTHALENE	91-20-3	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
PHENANTHRENE	85-01-8	mg/kg											0.7	1	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U
PYRENE	129-00-0	mg/kg											< 0.15 U	< 0.16 U	< 0.24 U	< 0.16 UJ	< 0.14 UJ	< 0.16 U	< 0.16 U

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SS-23	FTA-SS-25	A31-SB01	A31-SB01	A31-SB02	A31-SB02	A31-SB03	A31-SB03	A31-SB04	A31-SB04	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM1C-SO-INT	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF
		sample_date	5/16/2002	5/16/2002	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/26/2007	10/27/2007	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013
		sys_sample_code	FTA-SS-23-1-3	FTA-SS-25-3-5	A31-SO-SB01-0002	A31-SO-SB01-0406	A31-SO-SB02-0002	A31-SO-SB02-0507	A31-SO-SB03-0002	A31-SO-SB03-0507	A31-SO-SB04-0002	A31-SO-SB04-0507	FTA-ANOM1A-SO-DEEP	FTA-ANOM1B-SO-DEEP	FTA-ANOM1C-SO-INT	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-SURF-D	FTA-ANOM1D-SO-SURF
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
		depth_interval	1 - 3 ft	3 - 5 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	0 - 2 ft	5 - 7 ft	3 - 4.5 ft	3 - 4.5 ft	2 - 3.75 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																	
VOCs																			
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.002 J	0.0023 J	0.0045 J	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 UJ	< 0.0024 UJ	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0051	< 0.0024 U	0.019	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg			0.004 J	0.002 J	0.002 J	0.009	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.034 J	< 0.0024 UJ	< 0.0038 U	0.0025 J	0.0097	0.00096 J	0.0022 J
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
1,2-DIBROMOETHANE	106-93-4	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
1,2-DICHLOROBENZENE	95-50-1	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.01 J	0.0025 J	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.004 U	< 0.005 U															
1,2-DICHLOROPROPANE	78-87-5	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
1,3-DICHLOROBENZENE	541-73-1	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0032 J	< 0.0024 UJ	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
1,4-DICHLOROBENZENE	106-46-7	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0024 J	< 0.0024 UJ	< 0.0038 U	0.00085 J	< 0.0025 U	< 0.0021 U	< 0.0021 U
2-BUTANONE	78-93-3	mg/kg	< 0.008 U	< 0.01 U	0.023 J	0.005 J	< 0.025 UJ	< 0.025 U	< 0.034 UJ	< 0.025 UJ	0.012 J	< 0.025 UJ							
2-HEXANONE	591-78-6	mg/kg	< 0.008 U	< 0.01 U	< 0.035 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.034 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.012 U	< 0.012 U	< 0.019 U	< 0.011 UJ	< 0.012 U	< 0.01 U	< 0.01 U
4-METHYL-2-PENTANONE	108-10-1	mg/kg	< 0.008 U	< 0.01 U	< 0.035 U	< 0.025 U	< 0.025 UJ	< 0.025 U	< 0.034 UJ	< 0.025 UJ	< 0.025 UJ	< 0.025 UJ							
ACETONE	67-64-1	mg/kg	0.056	0.022	0.18 J	0.066 J	< 0.025 UJ	< 0.025 UJ	< 0.034 UJ	< 0.025 UJ	0.13 J	< 0.025 UJ	< 0.029 U	< 0.046 U	< 0.035 U	< 0.093 U	< 0.012 U	< 0.054 U	0.13 J
BENZENE	71-43-2	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0021 J	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
BROMODICHLOROMETHANE	75-27-4	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
BROMOFORM	75-25-2	mg/kg	0.002 JB	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 UJ	< 0.005 U	< 0.007 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ							
BROMOMETHANE	74-83-9	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
CARBON DISULFIDE	75-15-0	mg/kg	< 0.004 U	< 0.005 U	0.038	0.003 J	0.008	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
CHLOROBENZENE	108-90-7	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
CHLOROETHANE	75-00-3	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0048 U	< 0.0075 U	< 0.0042 UJ	< 0.005 U	< 0.0042 U	< 0.0042 U
CHLOROFORM	67-66-3	mg/kg	0.0006 JB	0.0006 JB	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
CHLOROMETHANE	74-87-3	mg/kg	0.004 JB	0.004 JB	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0048 U	< 0.0075 U	< 0.0042 UJ	< 0.005 U	< 0.0042 U	< 0.0042 U
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
CYCLOHEXANE	110-82-7	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
DIBROMOCHLOROMETHANE	124-48-1	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.001 J	< 0.005 U	< 0.005 U	< 0.005 U							
ETHYLBENZENE	100-41-4	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.023	0.0056	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
ISOPROPYLBENZENE	98-82-8	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.021 J	0.0027 J	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 UJ
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg			< 0.014 U	< 0.01 U	< 0.01 U	< 0.01 U	0.037 J	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	0.046	0.0054 J	< 0.0075 U	< 0.0042 UJ	< 0.005 U	< 0.0042 U	< 0.0042 U
METHYL ACETATE	79-20-9	mg/kg			< 0.007 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	0.037 J	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ							
METHYL CYCLOHEXANE	108-87-2	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0073	0.0015 J	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.0073	0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.004 U	< 0.005 U	< 0.035 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.034 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.012 U	< 0.012 U	< 0.019 U	< 0.011 UJ	< 0.012 U	< 0.01 U	< 0.01 U
O-XYLENE	95-47-6	mg/kg			< 0.007 U	< 0.005 U	< 0.005 UJ	< 0.005 U	< 0.007 UJ	< 0.005 UJ	< 0.005 UJ	< 0.005 UJ	0.042 J	0.0074 J	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
STYRENE	100-42-5	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
TOLUENE	108-88-3	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	0.019	0.016	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
TRICHLOROETHENE	79-01-6	mg/kg	< 0.004 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0025 U	< 0.0024 U	< 0.0038 U	< 0.0021 UJ	< 0.0025 U	< 0.0021 U	< 0.0021 U
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg			< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U							
VINYL CHLORIDE	75-01-4	mg/kg	< 0.008 U	< 0.01 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.0048 U	< 0.0075 U	< 0.0042 UJ	< 0.005 U	< 0.0042 U	< 0.0042 U
XYLENES, TOTAL (a)	1330-20-7	mg/kg			< 0.014 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.014 U	< 0.01 U	< 0.01 U	< 0.01 U	0.088	0.013	< 0.0075 U	< 0.0042 U	< 0.005 U	< 0.0042 U	< 0.0042 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg			< 0.021 U	< 0.015 U	< 0.015 U	< 0.015 U	< 0.021 U	< 0.015 U	< 0.015 U	< 0.015 U	0.088	0.0128	< 0.0113 U	< 0.0063 U	< 0.0075 U	< 0.0063 U	< 0.0063 U
			32	32	99	99	99	99	99	99	99	99	174	174	174	174	174	174	174

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-ANOM1E-SO-INT	FTA-ANOM1E-SO-SURF	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-INT	FTA-ANOM4-SO-SURF	FTA-AREAA-01	FTA-AREAA-01	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAB-01
		sample_date	9/26/2013	9/26/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	6/17/2014	6/17/2014	11/2/2016	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014
		sys_sample_code	FTA-ANOM1E-SO-INT	FTA-ANOM1E-SO-SURF	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-ANOM4-SO-DEEP-D	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-INT	FTA-ANOM4-SO-SURF	FTA-AREAA-01-0002	FTA-AREAA-01-0206	FTA-AREAA-02-SS-N-110216	FTA-AREAA-02-0002-D	FTA-AREAA-02-0002	FTA-AREAA-02-0206	FTA-AREAB-01-0002	
		sample_type_code	N	N	N	N	FD	N	N	N	N	N	N	FD	N	N	N	
		depth_interval	2 - 4 ft	0 - 2 ft	6 - 7.5 ft	2 - 4 ft	3 - 4 ft	3 - 4 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	
Compound	CAS	Units																
Metals																		
ALUMINUM	7429-90-5	mg/kg	14600	19700	12500	14300	14800	15800	14600	14900	11500	16800		11700	10200	16200	13200	
ANTIMONY	7440-36-0	mg/kg	0.12 J	0.16 J	0.1 J	0.09 J	0.12 J	0.12 J	0.1 J	0.09 J	0.059 J	0.19 J		0.063 J	0.04 J	0.142 J	0.057 J	
ARSENIC	7440-38-2	mg/kg	9.5 J	11.3 J	7.8 J	7.2 J	9.5 J	11.2 J	8.8 J	9.8 J	6.33 J	10 J		7.07 J	6.01 J	15.9 J	7.4 J	
BARIUM	7440-39-3	mg/kg	32.9	52.7	26.5	26.9	24.3 J	43 J	26.4	23.4	24.4 J	46.7 J		18 J	26.9 J	43.1 J	22.9 J	
BERYLLIUM	7440-41-7	mg/kg	0.66	0.87	0.47	0.48	0.59	0.58	0.52	0.52	0.546 J	0.828 J		0.503 J	0.36 J	0.702 J	0.397 J	
CADMIUM	7440-43-9	mg/kg	0.09	0.1	0.1	0.12	0.09	0.11	0.08	0.1	0.0721 J	0.0831 J		0.0654 J	0.049 J	0.0607 J	0.126 J	
CALCIUM	7440-70-2	mg/kg	2310	2270	2550	3840	2500	3970	2950	2650	2510	5270		2920	2510	3630	2880	
CHROMIUM, TOTAL	7440-47-3	mg/kg	23.8 J	30.1 J	31.4 J	25 J	22.2 J	37 J	24.4 J	25.5 J	24.9 J	30.5 J	23.2 J	23.3 J	61.2 J	29 J	26.6 J	
CHROMIUM III (c)	16065-83-1	mg/kg											23					
CHROMIUM VI	18540-29-9	mg/kg											< 0.74 U					
COBALT	7440-48-4	mg/kg	10.4	11.8	12.8	10.5	9.8	14.2	10.7	11.7	8.97 J	12.5 J		9.5 J	8.39 J	11.8 J	10.4 J	
COPPER	7440-50-8	mg/kg	27.9	25.2	28.4	22.3	21.9	29.2	23.6	25.3	20.5 J	21 J		19 J	18.9 J	20 J	22.6 J	
IRON	7439-89-6	mg/kg	22400	28400	26300	22200	21500	31300	24100	24300	19100	29500		21600	19500	28600	22400	
LEAD	7439-92-1	mg/kg	12.8 J	13.6 J	13.5 J	12.4 J	10.9 J	13.1 J	10.9 J	13.8 J	11 J	14.5 J		8.72 J	86.2 J	13.3 J	10.5 J	
MAGNESIUM	7439-95-4	mg/kg	6570	7260	8930	7070	5940	9560	6800	7290	6000	8030		6760	6990	7450	7010	
MANGANESE	7439-96-5	mg/kg	570	584	549	495	463	625	483	503	365	617		503	393	523	685	
MERCURY	7439-97-6	mg/kg	0.02 J	0.01 J	0.006 J	0.01 J	0.006 J	0.01 J	0.008 J	0.01 J	0.0078 J	0.012 J		0.01 J	0.0052 J	0.013 J	0.011 J	
NICKEL	7440-02-0	mg/kg	25.2 J	29.1 J	29.7 J	23.8 J	22.1 J	30.5 J	24.6 J	23.6 J	23.4 J	31.1 J		21.4 J	24.9 J	29.7 J	25.6 J	
POTASSIUM	7440-09-7	mg/kg	1330 J	2790 J	1380 J	1060 J	918 J	1290 J	1320 J	1030 J	950 J	3120 J		642 J	472 J	2790 J	738 J	
SELENIUM	7782-49-2	mg/kg	0.17 J	0.18 J	0.22 J	0.2 J	0.12 J	0.2 J	0.25 J	0.19 J	< 0.23 U	< 0.27 U		< 0.23 U	0.13 J	0.22 J	0.056 J	
SILVER	7440-22-4	mg/kg	0.04 J	0.06 J	0.04 J	0.03 J	0.03 J	0.04 J	0.04 J	0.06 J	0.03 J	< 0.061 U		0.029 J	0.02 J	0.0464 J	0.042 J	
SODIUM	7440-23-5	mg/kg	99.9	157	134	125	155	225	202	113	149 J	244 J		117 J	84.1 J	212 J	122 J	
THALLIUM	7440-28-0	mg/kg	0.08	0.14	0.07	0.07 J	0.09	0.11	0.1	0.08	0.0766 J	0.151 J		0.052 J	0.053 J	0.125 J	0.067 J	
VANADIUM	7440-62-2	mg/kg	31.8 J	43.3 J	36.3 J	30.8 J	31.9 J	49.1 J	31.8 J	34.8 J	27.6 J	40.4 J		31 J	30.9 J	36.1 J	28.6 J	
ZINC	7440-66-6	mg/kg	55 J	60.6 J	44.8 J	45.3 J	52.3 J	56.9 J	47.1 J	52.4 J	44 J	65.4 J		46.8 J	39.6 J	58.4 J	48 J	
PCBs																		
AROCLOR-1016	12674-11-2	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.18 U	< 0.0082 U	< 0.011 U	< 0.0085 U	< 0.0093 U	< 0.0016 U	< 0.002 U		< 0.016 U	< 0.0016 U	< 0.002 U	< 0.035 U	
AROCLOR-1221	11104-28-2	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.18 U	< 0.0082 U	< 0.011 U	< 0.0085 U	< 0.0093 U	< 0.0016 U	< 0.002 U		< 0.016 U	< 0.0016 U	< 0.002 U	< 0.035 U	
AROCLOR-1232	11141-16-5	mg/kg	< 0.0098 U	< 0.01 U	< 0.011 U	< 0.21 U	< 0.0096 U	< 0.013 U	< 0.01 U	< 0.011 U	< 0.0018 U	< 0.0024 U		< 0.019 U	< 0.0019 U	< 0.0024 U	< 0.042 U	
AROCLOR-1242	53469-21-9	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.18 U	< 0.0082 U	< 0.011 U	< 0.0085 U	< 0.0093 U	< 0.0016 U	< 0.002 U		< 0.016 U	< 0.0016 U	< 0.002 U	< 0.035 U	
AROCLOR-1248	12672-29-6	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.18 U	< 0.0082 U	< 0.011 U	< 0.0085 U	< 0.0093 U	< 0.0016 U	< 0.002 U		< 0.016 U	< 0.0016 U	< 0.002 U	< 0.035 U	
AROCLOR-1254	11097-69-1	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.18 U	< 0.0082 U	< 0.011 U	< 0.0085 U	< 0.0093 U	< 0.0016 U	< 0.002 U		< 0.016 U	< 0.0016 U	< 0.002 U	< 0.035 U	
AROCLOR-1260	11096-82-5	mg/kg	0.15	0.075	1.2	12	< 0.0082 U	< 0.011 U	0.22	1.8	0.12	< 0.002 U		1.4 J	0.58 J	< 0.002 U	3.1	
AROCLOR-1262	37324-23-5	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.18 U	< 0.0082 U	< 0.011 U	< 0.0085 U	< 0.0093 U	< 0.0016 U	< 0.002 U		< 0.016 U	< 0.0016 U	< 0.002 U	< 0.035 U	
AROCLOR-1268	11100-14-4	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.18 U	< 0.0082 U	< 0.011 U	< 0.0085 U	< 0.0093 U	< 0.0016 U	< 0.002 U		< 0.016 U	< 0.0016 U	< 0.002 U	< 0.035 U	
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.15	0.075	1.2	12	< 0.0096 U	< 0.013 U	0.22	1.8	0.12	< 0.0024 U		1.4	0.58	< 0.0024 U	3.1	
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	0.2179	0.1452	1.2782	13.47	< 0.0752 U	< 0.101 U	0.2895	1.8761	0.133	< 0.0184 U		1.531	0.5931	< 0.0184 U	3.387	
Pesticides																		
4,4-DDD	72-54-8	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	< 0.00033 UJ	< 0.0004 UJ		< 0.00032 U	< 0.00036 UJ	< 0.00039 U	< 0.00031 UJ	
4,4-DDE	72-55-9	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	< 0.00033 UJ	< 0.0004 UJ		< 0.00032 U	< 0.00036 UJ	< 0.00039 U	< 0.00031 UJ	
4,4-DDT	50-29-3	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	< 0.00033 UJ	< 0.0004 UJ		0.073 J	< 0.0036 UJ	< 0.00039 U	0.15 J	
ALDRIN	309-00-2	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
ALPHA-BHC	319-84-6	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
BETA-BHC	319-85-7	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
DELTA-BHC	319-86-8	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 U	< 0.00082 U	< 0.0011 U	< 0.00085 U	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
DIELDRIN	60-57-1	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	0.0026 J	< 0.0004 UJ		0.026 J	0.0083 J	< 0.00039 U	0.045 J	
ENDOSULFAN I	959-98-8	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	0.00026 J	
ENDOSULFAN II	33213-65-9	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	< 0.00033 UJ	< 0.0004 UJ		0.02 J	< 0.00036 UJ	< 0.00039 U	< 0.00031 UJ	
ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 U	< 0.0016 U	< 0.0022 U	< 0.0016 U	< 0.0018 U	0.0025 J	< 0.0004 UJ		< 0.032 UJ	0.015 J	< 0.00039 U	0.15 J	
ENDRIN	72-20-8	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	< 0.00033 UJ	< 0.0004 UJ		< 0.00032 UJ	< 0.00036 UJ	< 0.00039 UJ	< 0.00031 UJ	
ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	< 0.00033 UJ	< 0.0004 UJ		< 0.00032 U	< 0.00036 UJ	< 0.00039 U	< 0.00031 UJ	
ENDRIN KETONE	53494-70-5	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0019 U	< 0.0017 UJ	< 0.0016 U	< 0.0022 UJ	< 0.0016 UJ	< 0.0018 U	0.01 J	< 0.0004 UJ		0.13 J	0.058 J	< 0.00039 U	0.29 J	
HEPTACHLOR	76-44-8	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
LINDANE	58-89-9	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	0.00018 J		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	
METHOXYCHLOR	72-43-5	mg/kg	< 0.0083 U	< 0.0086 U	< 0.0096 U	< 0.0088 UJ	< 0.0082 U	< 0.011 UJ	< 0.0085 UJ	< 0.0093 U	0.012 J	< 0.002 UJ		0.32 J	0.1 J	< 0.002 U	0.61 J	
TOXAPHENE	8001-35-2	mg/kg	< 0.016 U	< 0.017 U	< 0.019 U	< 0.017 U	< 0.016 U	< 0.022 U	< 0.016 U	< 0.018 U	< 0.0033 UJ	< 0.004 UJ		< 0.0032 U	< 0.0036 UJ	< 0.0039 U	< 0.0031 UJ	
TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00083 U	< 0.00086 U	< 0.00096 U	< 0.00088 UJ	< 0.00082 U	< 0.0011 UJ	< 0.00085 UJ	< 0.00093 U	< 0.00017 UJ	< 0.0002 UJ		< 0.00016 U	< 0.00018 UJ	< 0.0002 U	< 0.00016 UJ	

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	FTA-ANOM1E-SO-INT	FTA-ANOM1E-SO-SURF	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-INT	FTA-ANOM4-SO-SURF	FTA-AREAA-01	FTA-AREAA-01	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAB-01
			sample_date	9/26/2013	9/26/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	6/17/2014	6/17/2014	11/2/2016	6/17/2014	6/17/2014	6/17/2014	6/17/2014
			sys_sample_code	FTA-ANOM1E-SO-INT	FTA-ANOM1E-SO-SURF	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-ANOM4-SO-DEEP-D	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-INT	FTA-ANOM4-SO-SURF	FTA-AREAA-01-0002	FTA-AREAA-01-0206	FTA-AREAA-02-SS-N-110216	FTA-AREAA-02-0002-D	FTA-AREAA-02-0002	FTA-AREAA-02-0206	FTA-AREAB-01-0002
			sample_type_code	N	N	N	N	FD	N	N	N	N	N	N	FD	N	N	N
			depth_interval	2 - 4 ft	0 - 2 ft	6 - 7.5 ft	2 - 4 ft	3 - 4 ft	3 - 4 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft
Compound	CAS	Units																
SVOCs																		
1,1-BIPHENYL	92-52-4	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	0.022	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
1,4-DIOXANE	123-91-1	mg/kg	< 0.047 UJ	< 0.058 UJ	< 0.043 UJ	< 0.046 UJ	< 0.052 UJ	< 0.061 UJ	< 0.055 UJ	< 0.051 UJ	< 0.053 UJ	< 0.048 UJ		< 0.049 UJ	< 0.046 UJ	< 0.058 UJ	< 0.052 UJ
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.0095 UJ	< 0.012 UJ	< 0.0086 UJ	< 0.0093 UJ	< 0.01 UJ	< 0.012 UJ	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.0096 UJ		< 0.0098 UJ	< 0.0093 UJ	< 0.012 UJ	< 0.01 UJ
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.047 U	< 0.058 U	< 0.043 U	< 0.046 U	< 0.052 U	< 0.061 U	< 0.055 U	< 0.051 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.58 U	< 0.72 U	< 0.53 U	< 0.57 U	< 0.64 U	< 0.75 U	< 0.68 U	< 0.63 U	< 0.65 U	< 0.75 UJ		< 0.6 U	< 0.57 U	< 0.71 U	< 0.64 U
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.047 U	< 0.058 U	< 0.043 U	< 0.046 U	< 0.052 U	< 0.061 U	0.004 J	< 0.051 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.24 UJ	< 0.29 UJ	< 0.21 UJ	< 0.23 UJ	< 0.26 UJ	< 0.3 UJ	< 0.27 UJ	< 0.25 UJ	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.071 U	< 0.088 U	< 0.065 U	< 0.07 UJ	< 0.078 U	< 0.092 U	< 0.083 U	< 0.077 U	UR	UR		UR	UR	UR	UR
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.047 U	< 0.058 U	< 0.043 U	< 0.046 U	< 0.052 U	< 0.061 U	< 0.055 U	< 0.051 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
2-METHYLPHENOL	95-48-7	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
2-NITROANILINE	88-74-4	mg/kg	< 0.58 U	< 0.72 U	< 0.53 U	< 0.57 U	< 0.64 U	< 0.75 U	< 0.68 U	< 0.63 U	< 0.65 U	< 0.75 UJ		< 0.6 U	< 0.57 U	< 0.71 U	< 0.64 U
2-NITROPHENOL	88-75-5	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 UJ	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
3-NITROANILINE	99-09-2	mg/kg	< 0.58 U	< 0.72 U	< 0.53 U	< 0.57 U	< 0.64 U	< 0.75 U	< 0.68 U	< 0.63 U	< 0.65 U	< 0.75 UJ		< 0.6 U	< 0.57 U	< 0.71 U	< 0.64 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.095 U	< 0.12 U	< 0.086 U	< 0.093 U	< 0.1 U	< 0.12 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.096 U		< 0.098 U	< 0.093 U	< 0.12 U	< 0.1 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
4-CHLOROANILINE	106-47-8	mg/kg	< 0.047 UJ	< 0.058 UJ	< 0.043 UJ	< 0.046 UJ	< 0.052 UJ	< 0.061 UJ	< 0.055 UJ	< 0.051 UJ	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
4-NITROANILINE	100-01-6	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
4-NITROPHENOL	100-02-7	mg/kg	< 0.58 U	< 0.72 U	< 0.53 U	< 0.57 U	< 0.64 U	< 0.75 U	< 0.68 U	< 0.63 U	< 0.65 U	< 0.75 UJ		< 0.6 U	< 0.57 U	< 0.71 U	< 0.64 U
ACENAPHTHENE	83-32-9	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	0.0046 J
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
ACETOPHENONE	98-86-2	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U								
ANTHRACENE	120-12-7	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
ATRAZINE	1912-24-9	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
BENZALDEHYDE	100-52-7	mg/kg	< 0.24 UJ	< 0.29 UJ	< 0.21 UJ	< 0.23 UJ	< 0.26 UJ	< 0.3 UJ	< 0.27 UJ	< 0.25 UJ	< 0.26 UJ	< 0.3 UJ		< 0.24 UJ	< 0.23 UJ	< 0.29 UJ	< 0.26 UJ
BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	0.0061 J	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	0.019 J
BENZO[A]PYRENE	50-32-8	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	0.005 J	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	0.015 J
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 UJ	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	0.022
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	0.17 J	0.14 J	< 0.25 U	0.15 J	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.047 U	< 0.058 U	< 0.043 U	< 0.046 U	< 0.052 U	< 0.061 U	< 0.055 U	< 0.051 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
CAPROLACTAM	105-60-2	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
CARBAZOLE	86-74-8	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
CHRYSENE	218-01-9	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 UJ	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
DIBENZOFURAN	132-64-9	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.047 U	< 0.058 U	< 0.043 U	< 0.046 U	< 0.052 U	< 0.061 U	< 0.055 U	< 0.051 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
FLUORANTHENE	206-44-0	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
FLUORENE	86-73-7	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	0.0074 J	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 UJ	< 0.3 UJ		< 0.24 UJ	< 0.23 UJ	< 0.29 UJ	< 0.26 UJ
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	0.011 J	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	0.015 J
ISOPHORONE	78-59-1	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
NAPHTHALENE	91-20-3	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
NITROBENZENE	98-95-3	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 UJ	< 0.0096 UJ		< 0.0098 UJ	< 0.0093 UJ	< 0.012 UJ	< 0.01 U
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.0095 U	< 0.012 U	< 0.0086 U	< 0.0093 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.01 U	< 0.0096 U		< 0.0098 U	< 0.0093 U	< 0.012 U	< 0.01 U
PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.047 U	< 0.058 U	< 0.043 U	< 0.046 U	< 0.052 U	< 0.061 U	< 0.055 U	< 0.051 U	< 0.053 U	< 0.048 U		< 0.049 U	< 0.046 U	< 0.058 U	< 0.052 U
PHENANTHRENE	85-01-8	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
PHENOL	108-95-2	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
PYRENE	129-00-0	mg/kg	< 0.24 U	< 0.29 U	< 0.21 U	< 0.23 U	< 0.26 U	< 0.3 U	< 0.27 U	< 0.25 U	< 0.26 U	< 0.3 UJ		< 0.24 U	< 0.23 U	< 0.29 U	< 0.26 U
PAHs																		
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
ACENAPHTHENE	83-32-9	mg/kg	< 0.18 U	< 0.23 UJ	< 0.18 U	< 0.19 U	< 0.19 U	< 0.25 U	< 0.2 U	< 0.19 U								
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
ANTHRACENE	120-12-7	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
BENZO[A]PYRENE	50-32-8	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
CHRYSENE	218-01-9	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
FLUORANTHENE	206-44-0	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
FLUORENE	86-73-7	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
NAPHTHALENE	91-20-3	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
PHENANTHRENE	85-01-8	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	< 0.15 U	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								
PYRENE	129-00-0	mg/kg	< 0.14 U	< 0.18 UJ	< 0.14 U	0.39	< 0.15 U	< 0.19 U	< 0.15 U	< 0.15 U								

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	FTA-ANOM1E-SO-INT	FTA-ANOM1E-SO-SURF	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-INT	FTA-ANOM4-SO-SURF	FTA-AREAA-01	FTA-AREAA-01	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAB-01
			sample_date	9/26/2013	9/26/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	9/25/2013	6/17/2014	6/17/2014	11/2/2016	6/17/2014	6/17/2014	6/17/2014	6/17/2014
			sys_sample_code	FTA-ANOM1E-SO-INT	FTA-ANOM1E-SO-SURF	FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-INT	FTA-ANOM4-SO-DEEP-D	FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-INT	FTA-ANOM4-SO-SURF	FTA-AREAA-01-0002	FTA-AREAA-01-0206	FTA-AREAA-02-SS-N-110216	FTA-AREAA-02-0002-D	FTA-AREAA-02-0002	FTA-AREAA-02-0206	FTA-AREAB-01-0002
			sample_type_code	N	N	N	N	FD	N	N	N	N	N	N	FD	N	N	N
			depth_interval	2 - 4 ft	0 - 2 ft	6 - 7.5 ft	2 - 4 ft	3 - 4 ft	3 - 4 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft
Compound	CAS	Units																
VOCs																		
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	0.0013 J	0.00085 J	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	0.0021 J	0.001 J	0.0019 J	0.11	< 0.0022 U	< 0.003 U	< 0.0021 U	0.0018 J	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																
1,2-DIBROMOETHANE	106-93-4	mg/kg																
1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	0.0018 J	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																
1,2-DICHLOROPROPANE	78-87-5	mg/kg																
1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0022 U	< 0.0028 U	0.0017 J	0.029	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0022 U	< 0.0028 U	0.0025 J	0.024	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
2-BUTANONE	78-93-3	mg/kg																
2-HEXANONE	591-78-6	mg/kg	< 0.011 U	< 0.014 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.015 U	< 0.01 U	< 0.014 U	< 0.012 U	< 0.0085 U		< 0.0078 U	< 0.01 U	< 0.012 U	< 0.01 U
4-METHYL-2-PENTANONE	108-10-1	mg/kg																
ACETONE	67-64-1	mg/kg	0.14	< 0.06 U	< 0.08 U	< 0.039 U	< 0.011 U	< 0.015 U	< 0.042 U	< 0.11 U	< 0.056 U	< 0.0088 U		< 0.077 U	0.087	< 0.026 U	< 0.061 U
BENZENE	71-43-2	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
BROMODICHLOROMETHANE	75-27-4	mg/kg																
BROMOFORM	75-25-2	mg/kg																
BROMOMETHANE	74-83-9	mg/kg																
CARBON DISULFIDE	75-15-0	mg/kg																
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
CHLOROBENZENE	108-90-7	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
CHLOROETHANE	75-00-3	mg/kg	< 0.0044 U	< 0.0055 U	< 0.0044 U	< 0.0044 U	< 0.0045 U	< 0.006 U	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0034 U		< 0.0031 U	< 0.0041 U	< 0.0047 U	< 0.0041 U
CHLOROFORM	67-66-3	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
CHLOROMETHANE	74-87-3	mg/kg	< 0.0044 U	< 0.0055 U	< 0.0044 U	< 0.0044 U	< 0.0045 U	< 0.006 U	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0034 U		< 0.0031 U	< 0.0041 U	< 0.0047 U	< 0.0041 U
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0022 U	< 0.0028 U	0.0045	0.0013 J	< 0.0022 U	< 0.003 U	< 0.0021 U	0.0019 J	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																
CYCLOHEXANE	110-82-7	mg/kg																
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																
ETHYLBENZENE	100-41-4	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 UJ	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0044 U	< 0.0055 U	< 0.0044 U	< 0.0044 U	< 0.0045 U	< 0.006 U	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0034 U		< 0.0031 U	< 0.0041 U	< 0.0047 U	< 0.0041 U
METHYL ACETATE	79-20-9	mg/kg																
METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.011 U	< 0.014 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.015 U	< 0.01 U	< 0.014 U	< 0.012 U	< 0.0085 U		< 0.0078 U	< 0.01 U	< 0.012 U	< 0.01 U
O-XYLENE	95-47-6	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
STYRENE	100-42-5	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
TOLUENE	108-88-3	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0022 U	< 0.0028 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.003 U	< 0.0021 U	< 0.0028 U	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																
TRICHLOROETHENE	79-01-6	mg/kg	< 0.0022 U	< 0.0028 U	0.0031 J	0.0006 J	0.0027 J	0.0039 J	0.007	0.0078	< 0.0025 U	< 0.0017 U		< 0.0016 U	< 0.002 U	< 0.0024 U	< 0.002 U
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																
VINYL CHLORIDE	75-01-4	mg/kg	< 0.0044 U	< 0.0055 U	< 0.0044 U	< 0.0044 U	< 0.0045 U	< 0.006 U	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0034 U		< 0.0031 U	< 0.0041 U	< 0.0047 U	< 0.0041 U
XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0044 U	< 0.0055 U	< 0.0044 U	< 0.0044 U	< 0.0045 U	< 0.006 U	< 0.0042 U	< 0.0055 U	< 0.005 U	< 0.0034 U		< 0.0031 U	< 0.0041 U	< 0.0047 U	< 0.0041 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0066 U	< 0.0083 U	< 0.0066 U	< 0.0066 U	< 0.0067 U	< 0.009 U	< 0.0063 U	< 0.0083 U	< 0.0075 U	< 0.0051 U		< 0.0047 U	< 0.0061 U	< 0.0071 U	< 0.0061 U
			174	174	174	174	174	174	174	174	156	156	3	156	156	156	156

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrati For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-AREAB-01	FTA-AREAB-01	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01	FTA-AREAC-01	FTA-AREAD-01	FTA-AREAD-01	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAE-01	FTA-AREAE-01	FTA-AREAF-01	FTA-AREAF-01
		sample_date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	11/2/2016	11/2/2016	6/17/2014	6/17/2014	6/19/2014	6/19/2014	6/18/2014	6/18/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014
		sys_sample_code	FTA-AREAB-01-0206	FTA-AREAB-01-0610	FTA-AREAB-02-0002	FTA-AREAB-02-0206	FTA-AREAB-02-SS-D-110216	FTA-AREAB-02-SS-N-110216	FTA-AREAC-01-0002	FTA-AREAC-01-0206	FTA-AREAD-01-0002	FTA-AREAD-01-0206	FTA-AREAD-02-0002	FTA-AREAD-02-0206	FTA-AREAE-01-0610-D	FTA-AREAE-01-0610	FTA-AREAF-01-0002	FTA-AREAF-01-0206
		sample_type_code	N	N	N	N	FD	N	N	N	N	N	N	N	FD	N	N	N
		depth_interval	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Compound	CAS	Units																
Metals																		
ALUMINUM	7429-90-5	mg/kg	15000	14900	13600	16100			12800	11300	14200	9940	14200	11100	11400	12400	9720	12600
ANTIMONY	7440-36-0	mg/kg	0.11 J	0.121 J	0.079 J	0.11 J			0.067 J	0.064 J	0.099 J	0.059 J	0.061 J	0.062 J	0.083 J	0.093 J	0.078 J	0.089 J
ARSENIC	7440-38-2	mg/kg	13.4 J	14.5 J	7.85 J	21.4 J			8.31 J	8.84 J	9.61 J	7.46 J	8.5 J	7.68 J	7.23 J	9.26 J	7.63 J	9.86 J
BARIUM	7440-39-3	mg/kg	41.5 J	42.2 J	29.6 J	41.9 J			20.9 J	18 J	32 J	17.6 J	31.2 J	24.4 J	21.8 J	23.5 J	16 J	26.2 J
BERYLLIUM	7440-41-7	mg/kg	0.627 J	0.6 J	0.463 J	0.68 J			0.443 J	0.338 J	0.544 J	0.383 J	0.537 J	0.426 J	0.432 J	0.497 J	0.377 J	0.502 J
CADMIUM	7440-43-9	mg/kg	0.0687 J	0.0854 J	0.166 J	0.0738 J			0.0799 J	0.0795 J	0.0817 J	0.0528 J	0.0814 J	0.0788 J	0.0753 J	0.0795 J	0.05 J	0.0749 J
CALCIUM	7440-70-2	mg/kg	3700	3270	2700	3740			2560	2420	1720	1770	2470	2190	3300	3490	2370	3140
CHROMIUM, TOTAL	7440-47-3	mg/kg	27 J	27.4 J	32.1 J	29.2 J	29.8 J	23.6 J	22.9 J	21.6 J	28 J	18.2 J	27.6 J	21.4 J	22.5 J	29.8 J	18.4 J	24.6 J
CHROMIUM III (c)	16065-83-1	mg/kg					30	24										
CHROMIUM VI	18540-29-9	mg/kg					< 0.69 U	< 0.72 U										
COBALT	7440-48-4	mg/kg	11 J	13.7 J	10.6 J	12.4 J			11.8 J	10.5 J	10.2 J	8.08 J	11.2 J	10.4 J	9.3 J	10.9 J	8.09 J	10.6 J
COPPER	7440-50-8	mg/kg	18.9 J	24.2 J	20.1 J	20.7 J			24 J	20.5 J	20.2 J	15.9 J	18.7 J	17.8 J	17.4 J	18.2 J	16.6 J	19.3 J
IRON	7439-89-6	mg/kg	26300	29100	24200	28000			25000	21900	22500	16800	22800	19100	20100	22200	18000	21900
LEAD	7439-92-1	mg/kg	11.6 J	14 J	10.8 J	12.3 J			13.6 J	10.1 J	16.7 J	7.34 J	9.47 J	9.11 J	8.4 J	9.36 J	10.9 J	10 J
MAGNESIUM	7439-95-4	mg/kg	7170	7620	7560	7750			6150	6190	6150	5070	6380	4940	5900	6850	4770	6370
MANGANESE	7439-96-5	mg/kg	615	617	481	584			548	485	392	354	497	445	419	491	386	446
MERCURY	7439-97-6	mg/kg	0.0086 J	0.0064 J	0.012 J	0.0061 J			0.0049 J	0.0058 J	< 0.017 U	< 0.016 U	< 0.018 U	< 0.018 U	< 0.012 U	< 0.018 U	< 0.015 U	0.0042 J
NICKEL	7440-02-0	mg/kg	26.1 J	30.3 J	26.3 J	31.5 J			25 J	22.6 J	23.4 J	18.6 J	26.1 J	22.2 J	22.9 J	24.6 J	17.7 J	23.8 J
POTASSIUM	7440-09-7	mg/kg	2400 J	1640 J	1120 J	2330 J			889 J	744 J	897 J	655 J	1380 J	1120 J	1030 J	1120 J	755 J	1290 J
SELENIUM	7782-49-2	mg/kg	0.23 J	< 0.345 U	0.068 J	< 0.21 U			0.1 J	< 0.24 U	< 0.27 U	< 0.15 U	0.22 J	0.27 J	< 0.28 U	< 0.21 U	< 0.21 U	< 0.23 U
SILVER	7440-22-4	mg/kg	0.049 J	0.0379 J	0.043 J	0.043 J			0.042 J	0.03 J	0.038 J	0.023 J	0.027 J	0.03 J	0.037 J	0.045 J	0.033 J	0.063 J
SODIUM	7440-23-5	mg/kg	218 J	165 J	103 J	188 J			154 J	109 J	87 J	89 J	101 J	110 J	147 J	188 J	104 J	183 J
THALLIUM	7440-28-0	mg/kg	0.123 J	0.103 J	0.0822 J	0.115 J			0.0666 J	0.052 J	0.078 J	0.044 J	0.0891 J	0.0988 J	0.064 J	0.0789 J	0.057 J	0.088 J
VANADIUM	7440-62-2	mg/kg	35.7 J	35.5 J	39.6 J	36.8 J			28.8 J	26.3 J	36.8 J	24.4 J	33.2 J	27.4 J	26.3 J	34.5 J	23.2 J	32.7 J
ZINC	7440-66-6	mg/kg	53.5 J	63.2 J	51.2 J	58.4 J			51.6 J	43.7 J	53 J	35.8 J	47 J	41.6 J	41.5 J	47.3 J	35.6 J	46.8 J
PCBs																		
AROCLOR-1016	12674-11-2	mg/kg	< 0.0016 U	< 0.0017 U	< 0.076 U	< 0.002 U			< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0014 U	< 0.0017 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.0016 U	< 0.0017 U	< 0.076 U	< 0.002 U			< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0014 U	< 0.0017 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.0019 U	< 0.002 U	< 0.089 U	< 0.0024 U			< 0.002 U	< 0.0018 U	< 0.0021 U	< 0.0023 U	< 0.0022 U	< 0.0021 U	< 0.002 U	< 0.002 U	< 0.0016 U	< 0.002 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.0016 U	< 0.0017 U	< 0.076 U	< 0.002 U			< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0014 U	< 0.0017 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.0016 U	< 0.0017 U	< 0.076 U	< 0.002 U			< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0014 U	< 0.0017 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.0016 U	< 0.0017 U	< 0.076 U	< 0.002 U			< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0014 U	< 0.0017 U
AROCLOR-1260	11096-82-5	mg/kg	0.063	0.049	11	0.035			0.11	0.037	0.083 J	< 0.0019 UJ	0.052	< 0.0018 U	0.023 J	0.013 J	0.24 J	< 0.0017 UJ
AROCLOR-1262	37324-23-5	mg/kg	< 0.0016 U	< 0.0017 U	< 0.076 U	< 0.002 U			< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0014 U	< 0.0017 U
AROCLOR-1268	11100-14-4	mg/kg	< 0.0016 U	< 0.0017 U	< 0.076 U	< 0.002 U			< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0014 U	< 0.0017 U
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.063	0.049	11	0.035			0.11	0.037	0.083	< 0.0023 U	0.052	< 0.0021 U	0.023	0.013	0.24	< 0.002 U
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	0.0761	0.0629	11.621	0.0514			0.1239	0.0493	0.0977	< 0.0175 U	0.0668	< 0.0165 U	0.0369	0.0269	0.2514	< 0.0156 U
Pesticides																		
4,4-DDD	72-54-8	mg/kg	< 0.00038 UJ	< 0.00032 U	< 0.00034 UJ	< 0.00038 U			< 0.00033 UJ	0.002 J	< 0.00034 UJ	< 0.00038 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00027 U	< 0.00034 UJ
4,4-DDE	72-55-9	mg/kg	< 0.00038 UJ	< 0.00032 U	< 0.00034 UJ	< 0.00038 U			< 0.00033 UJ	< 0.00029 U	< 0.00034 UJ	< 0.00038 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00027 U	< 0.00034 UJ
4,4-DDT	50-29-3	mg/kg	0.0083 J	0.0023 J	0.41 J	< 0.00038 U			< 0.00033 UJ	< 0.00029 U	0.0056 J	< 0.00038 UJ	0.0032 J	< 0.00035 UJ	< 0.00033 UJ	0.00074 J	0.011	< 0.00034 UJ
ALDRIN	309-00-2	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	0.00016 J	< 0.00017 UJ
ALPHA-BHC	319-84-6	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
BETA-BHC	319-85-7	mg/kg	0.00074 J	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
DELTA-BHC	319-86-8	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
DIELDRIN	60-57-1	mg/kg	0.0022 J	< 0.00032 U	0.13 J	0.00023 J			0.0018 J	< 0.00029 U	< 0.00034 UJ	< 0.00038 UJ	0.0018 J	< 0.00035 UJ	0.00033 J	< 0.00034 UJ	0.0018	< 0.00034 UJ
ENDOSULFAN I	959-98-8	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
ENDOSULFAN II	33213-65-9	mg/kg	< 0.00038 UJ	< 0.00032 U	< 0.00034 UJ	< 0.00038 U			< 0.00033 UJ	< 0.00029 U	< 0.00034 UJ	< 0.00038 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00027 U	< 0.00034 UJ
ENDOSULFAN SULFATE	1031-07-8	mg/kg	0.0081 J	0.0013 J	0.22 J	0.0007 J			0.0061 J	< 0.00029 U	< 0.00034 UJ	< 0.00038 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00027 U	< 0.00034 UJ
ENDRIN	72-20-8	mg/kg	< 0.00038 UJ	< 0.00032 UJ	< 0.00034 UJ	< 0.00038 UJ			< 0.00033 UJ	< 0.00029 UJ	< 0.00034 UJ	< 0.00038 UJ	0.0005 J	< 0.00035 UJ	< 0.00033 UJ	< 0.00034 UJ	< 0.00027 UJ	< 0.00034 UJ
ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.00038 UJ	< 0.00032 U	< 0.00034 UJ	< 0.00038 U			< 0.00033 UJ	0.001 J	< 0.00034 UJ	< 0.00038 UJ	< 0.00036 UJ	< 0.00035 UJ	< 0.00033 UJ	< 0.00034 UJ	0.017 J	< 0.00034 UJ
ENDRIN KETONE	53494-70-5	mg/kg	0.016 J	0.0057 J	0.79 J	0.0016 J			0.013 J	0.0041 J	0.01 J	0.00013 J	0.0011 J	< 0.00035 UJ	0.0021 J	0.0017 J	0.013 J	< 0.00034 UJ
HEPTACHLOR	76-44-8	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	0.00012 J	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
LINDANE	58-89-9	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	0.00094	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ
METHOXYCHLOR	72-43-5	mg/kg	0.032 J	< 0.0017 U	1.6 J	< 0.002 U			0.03 J	< 0.0015 U	< 0.0018 UJ	< 0.0019 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0017 UJ	< 0.0017 UJ	< 0.0014 U	< 0.0017 UJ
TOXAPHENE	8001-35-2	mg/kg	< 0.0038 UJ	< 0.0032 U	< 0.0034 UJ	< 0.0038 U			< 0.0033 UJ	< 0.0029 U	< 0.0034 UJ	< 0.0038 UJ	< 0.0036 UJ	< 0.0035 UJ	< 0.0033 UJ	< 0.0034 UJ	< 0.0027 U	< 0.0034 UJ
TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0002 UJ	< 0.00017 U	< 0.00018 UJ	< 0.0002 U			< 0.00017 UJ	< 0.00015 U	< 0.00018 UJ	< 0.00019 UJ	< 0.00018 UJ	< 0.00018 UJ	< 0.00017 UJ	< 0.00017 UJ	< 0.00014 U	< 0.00017 UJ

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-AREAB-01	FTA-AREAB-01	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01	FTA-AREAC-01	FTA-AREAD-01	FTA-AREAD-01	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAE-01	FTA-AREAE-01	FTA-AREAF-01	FTA-AREAF-01
		sample_date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	11/2/2016	11/2/2016	6/17/2014	6/17/2014	6/19/2014	6/19/2014	6/18/2014	6/18/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014
		sys_sample_code	FTA-AREAB-01-0206	FTA-AREAB-01-0610	FTA-AREAB-02-0002	FTA-AREAB-02-0206	FTA-AREAB-02-SS-D-110216	FTA-AREAB-02-SS-N-110216	FTA-AREAC-01-0002	FTA-AREAC-01-0206	FTA-AREAD-01-0002	FTA-AREAD-01-0206	FTA-AREAD-02-0002	FTA-AREAD-02-0206	FTA-AREAE-01-0610-D	FTA-AREAE-01-0610	FTA-AREAF-01-0002	FTA-AREAF-01-0206
		sample_type_code	N	N	N	N	FD	N	N	N	N	N	N	N	FD	N	N	N
		depth_interval	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Compound	CAS	Units																
SVOCs																		
1,1-BIPHENYL	92-52-4	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
1,4-DIOXANE	123-91-1	mg/kg	< 0.049 UJ	< 0.047 UJ	< 0.055 UJ	< 0.054 UJ			< 0.051 UJ	< 0.051 UJ	< 0.047 U	< 0.057 U	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.0098 UJ	< 0.0094 UJ	< 0.011 UJ	< 0.011 UJ			< 0.01 UJ	< 0.01 UJ	< 0.0095 UJ	< 0.011 UJ	< 0.011 UJ	< 0.011 UJ	< 0.0096 UJ	< 0.0098 UJ	< 0.01 UJ	< 0.0095 UJ
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 U	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.6 U	< 0.58 U	< 0.68 U	< 0.67 U			< 0.63 U	< 0.63 U	< 0.58 U	< 0.7 U	< 0.65 U	< 0.66 U	< 0.59 U	< 0.6 U	< 0.61 U	< 0.59 U
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 U	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
2,4-DINITROPHENOL	51-28-5	mg/kg	UR	UR	UR	UR			UR	UR	UR	UR	UR	UR	UR	UR	UR	UR
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 U	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
2-METHYLPHENOL	95-48-7	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 UJ	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
2-NITROANILINE	88-74-4	mg/kg	< 0.6 U	< 0.58 U	< 0.68 U	< 0.67 U			< 0.63 U	< 0.63 U	< 0.58 U	< 0.7 U	< 0.65 U	< 0.66 U	< 0.59 U	< 0.6 U	< 0.61 U	< 0.59 U
2-NITROPHENOL	88-75-5	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 UJ	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	UR	UR	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
3-NITROANILINE	99-09-2	mg/kg	< 0.6 U	< 0.58 U	< 0.68 U	< 0.67 U			< 0.63 U	< 0.63 U	< 0.58 U	< 0.7 U	< 0.65 U	< 0.66 U	< 0.59 U	< 0.6 U	< 0.61 U	< 0.59 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.098 U	< 0.094 U	< 0.11 U	< 0.11 U			< 0.1 U	< 0.1 U	< 0.095 U	< 0.11 U	< 0.11 U	< 0.11 U	< 0.096 U	< 0.098 U	< 0.1 U	< 0.095 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
4-CHLOROANILINE	106-47-8	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 UJ	< 0.053 UJ	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
4-NITROANILINE	100-01-6	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
4-NITROPHENOL	100-02-7	mg/kg	< 0.6 U	< 0.58 U	< 0.68 U	< 0.67 U			< 0.63 U	< 0.63 UJ	< 0.58 U	< 0.7 U	< 0.65 U	< 0.66 U	< 0.59 U	< 0.6 U	< 0.61 U	< 0.59 U
ACENAPHTHENE	83-32-9	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
ACETOPHENONE	98-86-2	mg/kg																
ANTHRACENE	120-12-7	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
ATRAZINE	1912-24-9	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
BENZALDEHYDE	100-52-7	mg/kg	< 0.24 UJ	< 0.23 UJ	< 0.27 UJ	< 0.27 UJ			< 0.25 UJ	< 0.25 UJ	< 0.24 UJ	< 0.28 UJ	< 0.26 UJ	< 0.27 UJ	< 0.24 UJ	< 0.24 UJ	< 0.25 UJ	< 0.24 UJ
BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.0098 U	< 0.0094 U	0.011 J	< 0.011 U			0.0022 J	< 0.01 U	< 0.0095 U	< 0.011 U	0.0023 J	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
BENZO[A]PYRENE	50-32-8	mg/kg	< 0.0098 U	< 0.0094 U	0.0095 J	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 UJ	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			0.0028 J	< 0.01 U	< 0.0095 U	< 0.011 U	0.003 J	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 UJ	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 UJ	< 0.28 UJ	< 0.26 UJ	< 0.27 UJ	< 0.24 UJ	< 0.24 UJ	< 0.25 UJ	< 0.24 UJ
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 U	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
CAPROLACTAM	105-60-2	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
CARBAZOLE	86-74-8	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
CHRYSENE	218-01-9	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
DIBENZOFURAN	132-64-9	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 U	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
FLUORANTHENE	206-44-0	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
FLUORENE	86-73-7	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.0098 U	< 0.0094 U	0.0051 J	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.24 UJ	< 0.23 UJ	< 0.27 UJ	< 0.27 UJ			< 0.25 UJ	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.0098 U	< 0.0094 U	0.01 J	< 0.011 U			0.0021 J	< 0.01 U	< 0.0095 U	< 0.011 U	0.0029 J	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
ISOPHORONE	78-59-1	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
NAPHTHALENE	91-20-3	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
NITROBENZENE	98-95-3	mg/kg	< 0.0098 U	< 0.0094 UJ	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 UJ	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.0098 U	< 0.0094 U	< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.0095 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0096 U	< 0.0098 U	< 0.01 U	< 0.0095 U
PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.049 U	< 0.047 U	< 0.055 U	< 0.054 U			< 0.051 U	< 0.051 U	< 0.047 U	< 0.057 U	< 0.053 U	< 0.054 U	< 0.048 U	< 0.049 U	< 0.05 U	< 0.048 U
PHENANTHRENE	85-01-8	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
PHENOL	108-95-2	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
PYRENE	129-00-0	mg/kg	< 0.24 U	< 0.23 U	< 0.27 U	< 0.27 U			< 0.25 U	< 0.25 U	< 0.24 U	< 0.28 U	< 0.26 U	< 0.27 U	< 0.24 U	< 0.24 U	< 0.25 U	< 0.24 U
PAHs																		
2-METHYLNAPHTHALENE	91-57-6	mg/kg																
ACENAPHTHENE	83-32-9	mg/kg																
ACENAPHTHYLENE	208-96-8	mg/kg																
ANTHRACENE	120-12-7	mg/kg																
BENZO[A]ANTHRACENE	56-55-3	mg/kg																
BENZO[A]PYRENE	50-32-8	mg/kg																
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																
CHRYSENE	218-01-9	mg/kg																
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																
FLUORANTHENE	206-44-0	mg/kg																
FLUORENE	86-73-7	mg/kg																
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																
NAPHTHALENE	91-20-3	mg/kg																
PHENANTHRENE	85-01-8	mg/kg																
PYRENE	129-00-0	mg/kg																

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-AREAB-01	FTA-AREAB-01	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01	FTA-AREAC-01	FTA-AREAD-01	FTA-AREAD-01	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAD-02	FTA-AREAE-01	FTA-AREAE-01	FTA-AREAF-01	FTA-AREAF-01
		sample_date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	11/2/2016	11/2/2016	6/17/2014	6/17/2014	6/19/2014	6/19/2014	6/18/2014	6/18/2014	6/18/2014	6/19/2014	6/19/2014	6/19/2014	6/19/2014
		sys_sample_code	FTA-AREAB-01-0206	FTA-AREAB-01-0610	FTA-AREAB-02-0002	FTA-AREAB-02-0206	FTA-AREAB-02-SS-D-110216	FTA-AREAB-02-SS-N-110216	FTA-AREAC-01-0002	FTA-AREAC-01-0206	FTA-AREAD-01-0002	FTA-AREAD-01-0206	FTA-AREAD-02-0002	FTA-AREAD-02-0206	FTA-AREAD-02-0206	FTA-AREAE-01-0610-D	FTA-AREAE-01-0610	FTA-AREAF-01-0002	FTA-AREAF-01-0206
		sample_type_code	N	N	N	N	FD	N	N	N	N	N	N	N	N	FD	N	N	N
		depth_interval	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	6 - 10 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft
Compound	CAS	Units																	
VOCs																			
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																	
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0022 U	< 0.0015 UJ	0.00072 J	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 UJ	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																	
1,2-DIBROMOETHANE	106-93-4	mg/kg																	
1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 UJ	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																	
1,2-DICHLOROPROPANE	78-87-5	mg/kg																	
1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 UJ	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 UJ	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
2-BUTANONE	78-93-3	mg/kg																	
2-HEXANONE	591-78-6	mg/kg	< 0.011 U	< 0.0075 UJ	< 0.011 UJ	< 0.012 U			< 0.01 U	< 0.0092 U	< 0.01 UJ	< 0.0099 UJ	< 0.0099 UJ	< 0.0095 UJ	< 0.0098 UJ	< 0.01 UJ	< 0.0099 U	< 0.0099 U	< 0.0099 U
4-METHYL-2-PENTANONE	108-10-1	mg/kg																	
ACETONE	67-64-1	mg/kg	< 0.015 U	< 0.0075 U	0.099 J	0.025			< 0.033 U	0.033	0.059 J	0.048 J	0.078 J	0.01 J	0.012 J	0.018 J	0.038	0.015 J	
BENZENE	71-43-2	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
BROMODICHLOROMETHANE	75-27-4	mg/kg																	
BROMOFORM	75-25-2	mg/kg																	
BROMOMETHANE	74-83-9	mg/kg																	
CARBON DISULFIDE	75-15-0	mg/kg																	
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
CHLOROBENZENE	108-90-7	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
CHLOROETHANE	75-00-3	mg/kg	< 0.0044 U	< 0.003 UJ	< 0.0044 UJ	< 0.0047 U			< 0.0042 U	< 0.0037 U	< 0.0042 UJ	< 0.004 U	< 0.004 UJ	< 0.0038 UJ	< 0.0039 UJ	< 0.004 UJ	< 0.004 U	< 0.004 U	< 0.004 U
CHLOROFORM	67-66-3	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
CHLOROMETHANE	74-87-3	mg/kg	< 0.0044 U	< 0.003 UJ	< 0.0044 UJ	< 0.0047 U			< 0.0042 U	< 0.0037 U	< 0.0042 UJ	< 0.004 U	< 0.004 UJ	< 0.0038 UJ	< 0.0039 UJ	< 0.004 UJ	< 0.004 U	< 0.004 U	< 0.004 U
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																	
CYCLOHEXANE	110-82-7	mg/kg																	
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																	
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																	
ETHYLBENZENE	100-41-4	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0044 U	< 0.003 UJ	< 0.0044 UJ	< 0.0047 U			< 0.0042 U	< 0.0037 U	< 0.0042 UJ	< 0.004 U	< 0.004 UJ	< 0.0038 UJ	< 0.0039 UJ	< 0.004 UJ	< 0.004 U	< 0.004 U	< 0.004 U
METHYL ACETATE	79-20-9	mg/kg																	
METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.011 U	< 0.0075 UJ	< 0.011 UJ	< 0.012 U			< 0.01 U	< 0.0092 U	< 0.01 UJ	< 0.0099 U	< 0.0099 UJ	< 0.0095 UJ	< 0.0098 UJ	< 0.01 UJ	< 0.0099 U	< 0.0099 U	< 0.0099 U
O-XYLENE	95-47-6	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
STYRENE	100-42-5	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
TOLUENE	108-88-3	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																	
TRICHLOROETHENE	79-01-6	mg/kg	< 0.0022 U	< 0.0015 UJ	< 0.0022 UJ	< 0.0024 U			< 0.0021 U	< 0.0018 U	< 0.0021 UJ	< 0.002 U	< 0.002 UJ	< 0.0019 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 UJ	< 0.002 U	< 0.002 U
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																	
VINYL CHLORIDE	75-01-4	mg/kg	< 0.0044 U	< 0.003 UJ	< 0.0044 UJ	< 0.0047 U			< 0.0042 U	< 0.0037 U	< 0.0042 UJ	< 0.004 U	< 0.004 UJ	< 0.0038 UJ	< 0.0039 UJ	< 0.004 UJ	< 0.004 U	< 0.004 U	< 0.004 U
XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0044 U	< 0.003 U	< 0.0044 U	< 0.0047 U			< 0.0042 U	< 0.0037 U	< 0.0042 U	< 0.004 U	< 0.004 U	< 0.0038 U	< 0.0039 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0066 U	< 0.0045 U	< 0.0066 U	< 0.0071 U			< 0.0063 U	< 0.0055 U	< 0.0063 U	< 0.006 U	< 0.006 U	< 0.0057 U	< 0.0059 U	< 0.006 U	< 0.006 U	< 0.006 U	< 0.006 U
			156	156	156	156	3	3	156	156	156	156	156	156	156	156	156	156	156

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 1	Area 1	Area 1
		sys_loc_code	FTA-AREAG-01	FTA-AREAG-01	FTA-AREAG-02	FTA-AREAG-02	FTA-AREAG-03	FTA-AREAG-03	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAI-01	FTA-AREAI-01	FTA-AREAJ-01	FTA-AREAJ-01	FTA-NPCB-SO-BOTPCB	FTA-SB-200	FTA-SB-200	FTA-SB-200
		sample_date	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/17/2014	6/17/2014	6/18/2014	6/18/2014	9/25/2013	11/8/2012	11/8/2012	11/8/2012
		sys_sample_code	FTA-AREAG-01-0002	FTA-AREAG-01-0206	FTA-AREAG-02-0002	FTA-AREAG-02-0206	FTA-AREAG-03-0002	FTA-AREAG-03-0206	FTA-AREAH-01-0206-D	FTA-AREAH-01-0002	FTA-AREAH-01-0206	FTA-AREAI-01-0002	FTA-AREAI-01-0206	FTA-AREAJ-01-0206	FTA-AREAJ-01-069.4	FTA-NPCB-SO-BOTPCB	FTA-SB-200-0002	FTA-SB-200-0206	FTA-SB-200-0610
		sample_type_code	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	6 - 9.4 ft	2 - 3 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft
Compound	CAS	Units																	
Metals																			
ALUMINUM	7429-90-5	mg/kg	12900	15200	11800	17900	14500	12800	10700	13700	12400	13400	13400	13300	12300	14000	4320 J	3550 J	13100
ANTIMONY	7440-36-0	mg/kg	0.057 J	0.072 J	< 0.046 U	0.1 J	0.078 J	0.061 J	0.07 J	0.078 J	0.071 J	0.054 J	0.12 J	0.075 J	0.053 J	0.09 J	0.43 J	0.39 J	0.12 J
ARSENIC	7440-38-2	mg/kg	6.82 J	14.3 J	5.74 J	16.1 J	8.29 J	7.83 J	7.08 J	9.78 J	8 J	5.82 J	6.73 J	8.43 J	5.65 J	7.1 J	5.6 J	3.7 J	7.4 J
BARIUM	7440-39-3	mg/kg	21 J	37.1 J	23.7 J	47 J	39.7 J	23.8 J	21.3 J	24.6 J	23 J	15.3 J	40.1 J	25 J	18.1 J	36.5	114 J	23.7 J	24.7 J
BERYLLIUM	7440-41-7	mg/kg	0.43 J	0.579 J	0.404 J	0.767 J	0.639 J	0.47 J	0.415 J	0.458 J	0.421 J	0.444 J	0.615 J	0.418 J	0.354 J	0.7	0.48 J	0.56 J	0.42
CADMIUM	7440-43-9	mg/kg	0.0825 J	0.125 J	0.0826 J	0.0996 J	0.084 J	0.0928 J	0.0656 J	0.0787 J	0.0749 J	0.0784 J	0.068 J	0.0826 J	0.062 J	0.09	0.72 J	0.67 J	0.06 J
CALCIUM	7440-70-2	mg/kg	3120	3410	3600	3330	2090	2310	2730	2330	3080	2700	3980	3540	2930	2470	22300 J	16600 J	3440
CHROMIUM, TOTAL	7440-47-3	mg/kg	30.6 J	33 J	19.5 J	33.2 J	28 J	25.4 J	24.6 J	24.6 J	26.1 J	39 J	25.2 J	26 J	24.7 J	23.9 J	< 10.6 U	< 18.9 U	25.1 J
CHROMIUM III (c)	16065-83-1	mg/kg																	
CHROMIUM VI	18540-29-9	mg/kg																	
COBALT	7440-48-4	mg/kg	11.5 J	12.2 J	8.47 J	14.4 J	11.1 J	12 J	9.72 J	11.2 J	11 J	12.5 J	9.86 J	11.7 J	10.4 J	9.9	9.8 J	2.2 J	8.7
COPPER	7440-50-8	mg/kg	23.1 J	21.8 J	21.6 J	28.6 J	20.4 J	19.8 J	18.6 J	20.4 J	21.1 J	21.6 J	17.2 J	20.1 J	17.8 J	21.7	17.6 J	20.2 J	17.8 J
IRON	7439-89-6	mg/kg	22700	26900	21200	29400	22000	22600	18800	23300	21200	23900	22100	23100	22100	24100	6840 J	2490 J	22500 J
LEAD	7439-92-1	mg/kg	10.7 J	11.5 J	8.01 J	14.6 J	12 J	12.5 J	8.5 J	12.5 J	9.34 J	10.4 J	12.1 J	8.99 J	7.49 J	9.4 J	16.8 J	< 2.5 U	8.5 J
MAGNESIUM	7439-95-4	mg/kg	7370	7910	6270	8000	5910	6530	5280	6090	6510	8780	6490	6640	7090	6720	2760 J	2270 J	6870 J
MANGANESE	7439-96-5	mg/kg	507	592	432	603	461	891	456	509	443	534	435	573	459	561	2680 J	249 J	453
MERCURY	7439-97-6	mg/kg	0.0043 J	0.0076 J	0.011 J	0.008 J	0.0049 J	< 0.014 U	< 0.013 U	< 0.014 U	< 0.016 U	< 0.015 U	0.011 J	< 0.018 U	< 0.016 U	0.01 J	0.21 J	0.1 J	< 0.018 U
NICKEL	7440-02-0	mg/kg	23.8 J	25.4 J	17.9 J	33 J	25 J	25 J	25.6 J	23.5 J	24.3 J	32.2 J	25 J	24.9 J	21.7 J	22.1 J	< 8.9 U	< 6.2 U	22.6
POTASSIUM	7440-09-7	mg/kg	821 J	1590 J	1000 J	2210 J	1700 J	1000 J	979 J	1040 J	1030 J	546 J	2640 J	1130 J	891 J	1300 J	< 536 U	< 232 U	1470 J
SELENIUM	7782-49-2	mg/kg	0.21 J	0.32 J	0.2 J	0.346 J	0.331 J	0.28 J	0.16 J	0.309 J	0.16 J	< 0.26 U	< 0.283 U	0.23 J	0.2 J	0.38 J	< 4 U	< 5.6 U	< 0.36 U
SILVER	7440-22-4	mg/kg	0.026 J	0.042 J	0.044 J	0.042 J	0.038 J	0.024 J	0.03 J	0.031 J	0.039 J	0.029 J	< 0.0502 U	0.04 J	0.028 J	0.04 J	0.12 J	0.08 J	0.04 J
SODIUM	7440-23-5	mg/kg	178 J	162 J	276 J	214 J	165 J	105 J	191 J	96.5 J	226 J	90.2 J	210 J	182 J	156 J	107	< 167 U	< 205 U	163 J
THALLIUM	7440-28-0	mg/kg	0.072 J	0.0987 J	0.0774 J	0.124 J	0.113 J	0.111 J	0.065 J	0.0808 J	0.073 J	0.0597 J	0.14 J	0.08 J	0.062 J	0.1	0.07 J	< 0.05 U	0.1
VANADIUM	7440-62-2	mg/kg	37.1 J	44.5 J	35.4 J	44.4 J	33.7 J	30.5 J	27.5 J	33 J	33.2 J	35.9 J	32.9 J	35.4 J	30.8 J	30.4 J	17.8 J	11.6 J	33.4
ZINC	7440-66-6	mg/kg	49.9 J	57.7 J	46.5 J	65.1 J	52.8 J	48.2 J	39.2 J	50 J	45.4 J	49 J	52.4 J	47.8 J	44.6 J	58.2 J	40.7 J	11.2 J	42.5 J
PCBs																			
AROCLOR-1016	12674-11-2	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.018 U	< 0.002 U	< 0.18 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 U	< 0.06 UJ	< 0.063 UJ	
AROCLOR-1221	11104-28-2	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.018 U	< 0.002 U	< 0.18 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 U	< 0.06 UJ	< 0.063 UJ	
AROCLOR-1232	11141-16-5	mg/kg	< 0.0019 UJ	< 0.0019 U	< 0.021 U	< 0.0023 U	< 0.22 U	< 0.0022 U	< 0.0022 U	< 0.0022 U	< 0.002 U	< 0.0018 U	< 0.0021 U	< 0.0022 UJ	< 0.002 U	< 0.0096 U	< 0.071 UJ	< 0.074 UJ	
AROCLOR-1242	53469-21-9	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.018 U	< 0.002 U	< 0.18 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 U	< 0.06 UJ	< 0.063 UJ	
AROCLOR-1248	12672-29-6	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.018 U	< 0.002 U	< 0.18 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 U	< 0.06 UJ	< 0.063 UJ	
AROCLOR-1254	11097-69-1	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.018 U	< 0.002 U	< 0.18 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 U	< 0.06 UJ	< 0.063 UJ	
AROCLOR-1260	11096-82-5	mg/kg	0.33 J	0.044	1.2	0.026 J	15	0.56	0.088	0.57	0.099 J	0.48	0.02	0.043 J	0.017	0.29	0.58 J	< 0.063 UJ	
AROCLOR-1262	37324-23-5	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.018 U	< 0.002 U	< 0.18 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 U	< 0.06 UJ	< 0.063 UJ	
AROCLOR-1268	11100-14-4	mg/kg	< 0.0016 UJ	< 0.0016 U	< 0.018 U	< 0.002 U	< 0.18 U	< 0.0018 U	< 0.0018 U	< 0.0018 U	< 0.0017 U	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 U	< 0.06 UJ	< 0.063 UJ	
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.33	0.044	1.2	0.026	15	0.56	0.088	0.57	0.099	0.48	0.020	0.043	0.017	0.29	0.58	< 0.074 U	
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	0.3431	0.0571	1.347	0.0423	16.48	0.5748	0.1028	0.5848	0.1129	0.4923	0.0347	0.0585	0.0309	0.357	1.071	< 0.578 U	
Pesticides																			
4,4-DDD	72-54-8	mg/kg	< 0.00032 UJ	0.0015 J	< 0.00034 UJ	< 0.00038 UJ	< 0.0036 U	< 0.00036 U	< 0.00036 U	0.0092 J	< 0.00034 UJ	< 0.0003 U	< 0.00034 U	< 0.00037 UJ	< 0.00034 U	< 0.0016 UJ			
4,4-DDE	72-55-9	mg/kg	< 0.00032 UJ	0.000082 J	< 0.00034 UJ	< 0.00038 UJ	< 0.0036 U	< 0.00036 U	0.00058 J	< 0.00036 UJ	< 0.00034 UJ	< 0.0003 U	< 0.00034 U	< 0.00037 UJ	< 0.00034 U	< 0.0016 UJ			
4,4-DDT	50-29-3	mg/kg	0.023 J	0.0016 J	< 0.00034 UJ	0.0015 J	0.76 J	< 0.00036 U	< 0.00036 U	0.039 J	< 0.00034 UJ	0.021 J	0.0011	0.003 J	0.0013	< 0.0016 UJ			
ALDRIN	309-00-2	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			
ALPHA-BHC	319-84-6	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			
ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			
BETA-BHC	319-85-7	mg/kg	< 0.00016 UJ	0.000086 J	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			
DELTA-BHC	319-86-8	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 U			
DIELDRIN	60-57-1	mg/kg	< 0.00032 UJ	0.00042 J	0.034 J	0.00049 J	0.48 J	0.02 J	0.0033 J	0.024 J	< 0.00034 UJ	0.006	< 0.00034 U	0.0019 J	0.00084 J	< 0.0016 UJ			
ENDOSULFAN I	959-98-8	mg/kg	< 0.00016 UJ	< 0.00016 UJ	0.00044 J	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			
ENDOSULFAN II	33213-65-9	mg/kg	< 0.00032 UJ	< 0.00032 UJ	< 0.00034 UJ	0.00044 J	< 0.0036 U	< 0.00036 U	< 0.00036 U	< 0.00036 UJ	< 0.00034 UJ	0.0058	0.00032 J	< 0.00037 UJ	< 0.00034 U	< 0.0016 UJ			
ENDOSULFAN SULFATE	1031-07-8	mg/kg	0.01 J	0.00068 J	< 0.00034 UJ	< 0.00038 UJ	< 0.0036 U	0.034 J	< 0.00036 U	< 0.00036 UJ	< 0.00034 UJ	0.011 J	< 0.00034 U	0.0029 J	< 0.00034 U	< 0.0016 U			
ENDRIN	72-20-8	mg/kg	< 0.00032 UJ	< 0.00032 UJ	0.0076 J	< 0.00038 UJ	0.13 J	0.0065 J	0.00087 J	0.0056 J	< 0.00034 UJ	0.024 J	< 0.00034 UJ	0.00045 J	0.00025 J	< 0.0016 UJ			
ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.00032 UJ	< 0.00032 UJ	< 0.00034 UJ	< 0.00038 UJ	< 0.0036 U	< 0.00036 U	< 0.00036 U	< 0.00036 UJ	< 0.00034 UJ	< 0.0003 U	< 0.00034 U	< 0.00037 UJ	< 0.00034 U	< 0.0016 UJ			
ENDRIN KETONE	53494-70-5	mg/kg	0.045 J	0.0031 J	0.024 J	0.0028 J	0.32 J	0.017 J	0.0023 J	0.017 J	< 0.00034 UJ	0.044 J	0.0022 J	< 0.00037 UJ	< 0.00034 U	< 0.0016 UJ			
HEPTACHLOR	76-44-8	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00016 UJ	0.00018 J	0.0044 J	< 0.0002 UJ	0.087 J	0.0043 J	< 0.00018 U	0.0031 J	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	0.00033 J	< 0.00017 U	< 0.00082 UJ			
LINDANE	58-89-9	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			
METHOXYCHLOR	72-43-5	mg/kg	< 0.0016 UJ	< 0.0016 UJ	< 0.0018 UJ	< 0.002 UJ	0.064 J	< 0.0018 U	< 0.0018 U	< 0.0018 UJ	< 0.0018 UJ	< 0.0015 U	< 0.0018 U	< 0.0019 UJ	< 0.0017 U	< 0.0082 UJ			
TOXAPHENE	8001-35-2	mg/kg	< 0.0032 UJ	< 0.0032 UJ	< 0.0034 UJ	< 0.0038 UJ	< 0.036 U	< 0.0036 U	< 0.0036 U	< 0.0036 UJ	< 0.0034 UJ	< 0.003 U	< 0.0034 U	< 0.0037 UJ	< 0.0034 U	< 0.016 U			
TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00016 UJ	< 0.00016 UJ	< 0.00018 UJ	< 0.0002 UJ	< 0.0018 U	< 0.00018 U	< 0.00018 U	< 0.00018 UJ	< 0.00018 UJ	< 0.00015 U	< 0.00018 U	< 0.00019 UJ	< 0.00017 U	< 0.00082 UJ			

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 1	Area 1	Area 1
		sys_loc_code	FTA-AREAG-01	FTA-AREAG-01	FTA-AREAG-02	FTA-AREAG-02	FTA-AREAG-03	FTA-AREAG-03	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAI-01	FTA-AREAI-01	FTA-AREAJ-01	FTA-AREAJ-01	FTA-NPCB-SO-BOTPCB	FTA-SB-200	FTA-SB-200	FTA-SB-200
		sample_date	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/17/2014	6/17/2014	6/18/2014	6/18/2014	9/25/2013	11/8/2012	11/8/2012	11/8/2012
		sys_sample_code	FTA-AREAG-01-0002	FTA-AREAG-01-0206	FTA-AREAG-02-0002	FTA-AREAG-02-0206	FTA-AREAG-03-0002	FTA-AREAG-03-0206	FTA-AREAH-01-0206-D	FTA-AREAH-01-0002	FTA-AREAH-01-0206	FTA-AREAI-01-0002	FTA-AREAI-01-0206	FTA-AREAJ-01-0206	FTA-AREAJ-01-069.4	FTA-NPCB-SO-BOTPCB	FTA-SB-200-0002	FTA-SB-200-0206	FTA-SB-200-0610
		sample_type_code	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	6 - 9.4 ft	2 - 3 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft
Compound	CAS	Units																	
SVOCs																			
1,1-BIPHENYL	92-52-4	mg/kg	0.0016 J	< 0.0093 U	0.0019 J	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	0.017 J	< 0.077 UJ	< 0.01 U
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
1,4-DIOXANE	123-91-1	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 UJ	< 0.052 UJ	< 0.051 U	< 0.051 U	< 0.05 UJ	< 0.33 UJ	< 0.38 UJ	< 0.05 U
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.01 UJ	< 0.0093 UJ	< 0.01 UJ	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.0097 UJ	< 0.01 UJ	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.066 UJ	< 0.077 UJ	< 0.01 U
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.052 U	< 0.046 U	0.0032 J	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.05 U	< 0.33 UJ	< 0.38 UJ	< 0.05 U
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.64 U	< 0.68 UJ	< 0.64 U	< 0.69 U	< 0.62 U	< 0.63 U	< 0.59 U	< 0.63 U	< 0.66 U	< 0.63 U	< 0.64 U	< 0.63 U	< 0.63 U	< 0.61 U	< 4 UJ	< 4.7 UJ	< 0.62 U
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.052 U	< 0.046 U	0.0035 J	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.05 U	< 0.33 UJ	< 0.38 UJ	< 0.05 U
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 UJ	< 1.6 UJ	< 1.9 UJ	< 0.25 U
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
2,4-DINITROPHENOL	51-28-5	mg/kg	UR	UR	UR	UR	UR	UR	UR	UR	UR	UR	UR	UR	UR	< 0.075 UJ	< 0.49 UJ	< 0.58 UJ	< 0.075 UJ
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.05 U	< 0.33 UJ	< 0.38 UJ	< 0.05 U
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
2-METHYLPHENOL	95-48-7	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
2-NITROANILINE	88-74-4	mg/kg	< 0.64 U	< 0.68 UJ	< 0.64 U	< 0.69 U	< 0.62 U	< 0.63 U	< 0.59 U	< 0.63 U	< 0.66 U	< 0.63 U	< 0.64 U	< 0.63 U	< 0.63 U	< 0.61 U	< 4 UJ	< 4.7 UJ	< 0.62 U
2-NITROPHENOL	88-75-5	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 UJ	< 0.066 UJ	< 0.077 UJ	< 0.01 UJ
3-NITROANILINE	99-09-2	mg/kg	< 0.64 U	< 0.68 UJ	< 0.64 U	< 0.69 U	< 0.62 U	< 0.63 U	< 0.59 U	< 0.63 U	< 0.66 U	< 0.63 U	< 0.64 U	< 0.63 U	< 0.63 U	< 0.61 U	< 4 UJ	< 4.7 UJ	< 0.62 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.1 U	< 0.093 U	< 0.1 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.097 U	< 0.1 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.66 UJ	< 0.77 UJ	< 0.1 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
4-CHLOROANILINE	106-47-8	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.05 UJ	< 0.33 UJ	< 0.38 UJ	< 0.05 U
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
4-NITROANILINE	100-01-6	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
4-NITROPHENOL	100-02-7	mg/kg	< 0.64 U	< 0.68 UJ	< 0.64 U	< 0.69 U	< 0.62 U	< 0.63 U	< 0.59 U	< 0.63 U	< 0.66 U	< 0.63 U	< 0.64 U	< 0.63 U	< 0.63 U	< 0.61 U	< 4 UJ	< 4.7 UJ	< 0.62 U
ACENAPHTHENE	83-32-9	mg/kg	0.027	< 0.0093 U	0.0094 J	< 0.011 U	< 0.0015 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
ACETOPHENONE	98-86-2	mg/kg														< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
ANTHRACENE	120-12-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
ATRAZINE	1912-24-9	mg/kg	0.0021 J	< 0.0093 U	0.002 J	0.0023 J	0.0014 J	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
BENZALDEHYDE	100-52-7	mg/kg	< 0.26 UJ	< 0.27 UJ	< 0.26 UJ	< 0.28 UJ	< 0.25 UJ	< 0.25 UJ	< 0.24 UJ	< 0.25 UJ	< 0.26 UJ	< 0.25 UJ	< 0.26 UJ	0.21 J	< 0.25 UJ	< 0.25 UJ	< 1.6 UJ	0.93 J	< 0.25 U
BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.085	0.0031 J	0.046	0.0029 J	0.013 J	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	0.002 J	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 UJ	< 0.066 UJ	< 0.077 UJ	< 0.01 U
BENZO[A]PYRENE	50-32-8	mg/kg	0.058	< 0.0093 U	0.038	< 0.011 U	0.011 J	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.092	0.0038 J	0.058	0.0029 J	0.016 J	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	0.0028 J	< 0.066 UJ	< 0.077 UJ	< 0.01 U
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 UJ	< 0.26 UJ	< 0.25 U	< 0.26 U	< 0.25 UJ	< 0.25 UJ	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	0.087 J	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.26 UJ	< 0.27 UJ	< 0.26 UJ	< 0.28 UJ	< 0.25 UJ	< 0.25 UJ	< 0.24 UJ	< 0.25 UJ	< 0.26 UJ	< 0.25 U	< 0.26 U	< 0.25 UJ	< 0.25 UJ	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.05 U	< 0.33 UJ	< 0.38 UJ	< 0.05 UJ
CAPROLACTAM	105-60-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
CARBAZOLE	86-74-8	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
CHRYSENE	218-01-9	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.01 UJ	< 0.066 UJ	0.016 J	< 0.01 U
DIBENZOFURAN	132-64-9	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.05 U	< 0.33 UJ	< 0.38 UJ	< 0.05 U
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
FLUORANTHENE	206-44-0	mg/kg	0.2 J	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
FLUORENE	86-73-7	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.01 U	< 0.0093 U	0.0025 J	< 0.011 U	0.0083 J	0.0029 J	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 UJ	< 0.26 UJ	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.069	0.0032 J	0.052	0.0054 J	0.015 J	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 UJ	0.082 J	0.048 J	0.0047 J
ISOPHORONE	78-59-1	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
NAPHTHALENE	91-20-3	mg/kg	0.008 J	< 0.0093 U	0.0029 J	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
NITROBENZENE	98-95-3	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 UJ	< 0.01 UJ	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.066 UJ	< 0.077 UJ	< 0.01 U
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.01 U	< 0.0093 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.0097 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.052 U	< 0.046 U	< 0.052 U	< 0.056 U	< 0.051 U	< 0.051 U	< 0.048 U	< 0.051 U	< 0.054 U	< 0.051 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.05 U	< 0.33 UJ	< 0.38 UJ	< 0.05 U
PHENANTHRENE	85-01-8	mg/kg	0.16 J	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
PHENOL	108-95-2	mg/kg	< 0.26 U	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
PYRENE	129-00-0	mg/kg	0.16 J	< 0.27 UJ	< 0.26 U	< 0.28 U	< 0.25 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U	< 1.6 UJ	< 1.9 UJ	< 0.25 U
PAHs																			
2-METHYLNAPHTHALENE	91-57-6	mg/kg														< 0.15 UJ			
ACENAPHTHENE	83-32-9	mg/kg														< 0.19 UJ			
ACENAPHTHYLENE	208-96-8	mg/kg														< 0.15 UJ			
ANTHRACENE	120-12-7	mg/kg														< 0.15 UJ			
BENZO[A]ANTHRACENE	56-55-3	mg/kg														< 0.15 UJ			
BENZO[A]PYRENE	50-32-8	mg/kg														< 0.15 UJ			
BENZO[B]FLUORANTHENE	205-99-2	mg/kg														< 0.15 UJ			
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg														< 0.15 UJ			
BENZO[K]FLUORANTHENE	207-08-9	mg/kg														< 0.15 UJ			
CHRYSENE	218-01-9	mg/kg														< 0.15 UJ			
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg														< 0.15 UJ			
FLUORANTHENE	206-44-0	mg/kg														< 0.15 UJ			
FLUORENE	86-73-7	mg/kg														< 0.15 UJ			
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg														< 0.15 UJ			
NAPHTHALENE	91-20-3	mg/kg														< 0.15 UJ			
PHENANTHRENE	85-01-8	mg/kg														< 0.15 UJ			
PYRENE	129-00-0	mg/kg														< 0.15 UJ			

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 1	Area 1	Area 1
		sys_loc_code	FTA-AREAG-01	FTA-AREAG-01	FTA-AREAG-02	FTA-AREAG-02	FTA-AREAG-03	FTA-AREAG-03	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAH-01	FTA-AREAI-01	FTA-AREAI-01	FTA-AREAJ-01	FTA-AREAJ-01	FTA-AREAJ-01	FTA-NPCB-SO-BOTPCB	FTA-SB-200	FTA-SB-200	FTA-SB-200
		sample_date	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/17/2014	6/17/2014	6/18/2014	6/18/2014	6/18/2014	9/25/2013	11/8/2012	11/8/2012	11/8/2012
		sys_sample_code	FTA-AREAG-01-0002	FTA-AREAG-01-0206	FTA-AREAG-02-0002	FTA-AREAG-02-0206	FTA-AREAG-03-0002	FTA-AREAG-03-0206	FTA-AREAH-01-0206-D	FTA-AREAH-01-0002	FTA-AREAH-01-0206	FTA-AREAI-01-0002	FTA-AREAI-01-0206	FTA-AREAJ-01-0206	FTA-AREAJ-01-069.4		FTA-NPCB-SO-BOTPCB	FTA-SB-200-0002	FTA-SB-200-0206	FTA-SB-200-0610
		sample_type_code	N	N	N	N	N	N	FD	N	N	N	N	N	N		N	N	N	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	2 - 6 ft	6 - 9.4 ft		2 - 3 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft
Compound	CAS	Units																		
VOCs																				
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																		
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	0.00095 J	0.00094 J	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	0.00064 J	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																		
1,2-DIBROMOETHANE	106-93-4	mg/kg																		
1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg															< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,2-DICHLOROPROPANE	78-87-5	mg/kg																		
1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
2-BUTANONE	78-93-3	mg/kg																		
2-HEXANONE	591-78-6	mg/kg	< 0.0074 UJ	< 0.01 U	< 0.01 UJ	< 0.0099 U	< 0.0084 UJ	< 0.012 UJ	< 0.0096 U	< 0.0095 UJ	< 0.0081 U	< 0.0082 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.0095 U	< 0.14 UJ	< 0.14 UJ	< 0.012 U
4-METHYL-2-PENTANONE	108-10-1	mg/kg																		
ACETONE	67-64-1	mg/kg	0.046 J	0.062 J	0.1 J	0.038	0.037 J	0.042 J	0.015 J	0.042 J	0.019 J	< 0.037 U	< 0.022 U	0.025 J	0.012 J	< 0.04 U	1.4 J	1.8 J	< 0.046 U
BENZENE	71-43-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
BROMODICHLOROMETHANE	75-27-4	mg/kg																		
BROMOFORM	75-25-2	mg/kg																		
BROMOMETHANE	74-83-9	mg/kg																		
CARBON DISULFIDE	75-15-0	mg/kg																		
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 UJ
CHLOROBENZENE	108-90-7	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
CHLOROETHANE	75-00-3	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0042 UJ	< 0.004 U	< 0.0034 UJ	< 0.0047 UJ	< 0.0038 U	< 0.0038 UJ	< 0.0032 U	< 0.0033 U	< 0.0048 U	< 0.005 U	< 0.0046 U	< 0.0038 U	< 0.055 UJ	< 0.055 UJ	< 0.0048 U
CHLOROFORM	67-66-3	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
CHLOROMETHANE	74-87-3	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0042 UJ	< 0.004 U	< 0.0034 UJ	< 0.0047 UJ	< 0.0038 U	< 0.0038 UJ	< 0.0032 U	< 0.0033 U	< 0.0048 U	< 0.005 U	< 0.0046 U	< 0.0038 U	< 0.055 UJ	< 0.055 UJ	< 0.0048 U
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																		
CYCLOHEXANE	110-82-7	mg/kg																		
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																		
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																		
ETHYLBENZENE	100-41-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 UJ	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0042 UJ	< 0.004 U	< 0.0034 UJ	< 0.0047 UJ	< 0.0038 U	< 0.0038 UJ	< 0.0032 U	< 0.0033 U	< 0.0048 U	< 0.005 U	< 0.0046 U	< 0.0038 U	< 0.055 UJ	< 0.055 UJ	< 0.0048 U
METHYL ACETATE	79-20-9	mg/kg																		
METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.0074 UJ	< 0.01 U	< 0.01 UJ	< 0.0099 U	< 0.0084 UJ	< 0.012 UJ	< 0.0096 U	< 0.0095 UJ	< 0.0081 U	< 0.0082 U	< 0.012 U	< 0.012 U	< 0.012 U	< 0.0095 U	< 0.14 UJ	< 0.14 UJ	< 0.012 U
O-XYLENE	95-47-6	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
STYRENE	100-42-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
TOLUENE	108-88-3	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	0.0029 J	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																		
TRICHLOROETHENE	79-01-6	mg/kg	< 0.0015 UJ	< 0.0021 U	< 0.0021 UJ	< 0.002 U	< 0.0017 UJ	< 0.0024 UJ	< 0.0019 U	< 0.0019 UJ	< 0.0016 U	< 0.0016 U	< 0.0024 U	< 0.0025 U	< 0.0023 U	< 0.0019 U	< 0.028 UJ	< 0.028 UJ	< 0.0024 U
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																		
VINYL CHLORIDE	75-01-4	mg/kg	< 0.003 UJ	< 0.0042 U	< 0.0042 UJ	< 0.004 U	< 0.0034 UJ	< 0.0047 UJ	< 0.0038 U	< 0.0038 UJ	< 0.0032 U	< 0.0033 U	< 0.0048 U	< 0.005 U	< 0.0046 U	< 0.0038 U	< 0.055 UJ	< 0.055 UJ	< 0.0048 U
XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.003 U	< 0.0042 U	< 0.0042 U	< 0.004 U	< 0.0034 U	< 0.0047 U	< 0.0038 U	< 0.0038 U	< 0.0032 U	< 0.0033 U	< 0.0048 U	< 0.005 U	< 0.0046 U	< 0.0038 U	< 0.055 U	< 0.055 U	< 0.0048 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0045 U	< 0.0063 U	< 0.0063 U	< 0.006 U	< 0.0051 U	< 0.0071 U	< 0.0057 U	< 0.0057 U	< 0.0048 U	< 0.0049 U	< 0.0072 U	< 0.0075 U	< 0.0069 U	< 0.0057 U	< 0.083 U	< 0.083 U	< 0.0072 U
			156	156	156	156	156	156	156	156	156	156	156	156	156	174	137	137	126

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 2
		sys_loc_code	FTA-SB-201	FTA-SB-201	FTA-SB-201	FTA-SB-201	FTA-SB-202	FTA-SB-202	FTA-SB-203	FTA-SB-203	FTA-SB-203	FTA-SB-204	FTA-SB-204	FTA-SB-204	FTA-SB-205	FTA-SB-205	FTA-SB-205	FTA-SB-205	FTA-SB-206
		sample_date	11/13/2012	11/13/2012	11/13/2012	11/2/2016	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/2/2016	11/8/2012	11/8/2012	11/2/2016	11/8/2012	11/8/2012	11/8/2012	11/2/2016	11/6/2012
		sys_sample_code	FTA-SB-201-0002	FTA-SB-201-0406	FTA-SB-201-0206	FTA-SB-201-SS-N-110216	FTA-SB-202-0002	FTA-SB-202-0206	FTA-SB-203-0002	FTA-SB-203-0206	FTA-SB-203-SS-N-110216	FTA-SB-204-0002	FTA-SB-204-0610	FTA-SB-204-SS-N-110216	FTA-SB-205-0002-D	FTA-SB-205-0002	FTA-SB-205-0206	FTA-SB-205-SS-N-110216	FTA-SB-206-0002-D
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	FD
		depth_interval	0 - 2 ft	4 - 6 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																	
Metals																			
ALUMINUM	7429-90-5	mg/kg	5870 J		8720 J		12700	14400	15000	11200		15100	18600		14200	15400	18900		13600
ANTIMONY	7440-36-0	mg/kg	0.72 J		0.38 J		0.08 J	0.04 J	0.08 J	0.06 J		0.09 J	0.18 J		0.17 J	0.16 J	0.22 J		0.17
ARSENIC	7440-38-2	mg/kg	6.6 J		3.4 J		8.2	7.5	7.3	6.2		7.3 J	11.9 J		9 J	14 J	12.9 J		7.5
BARIUM	7440-39-3	mg/kg	53.9 J		25 J		20.5	77.2	41.4	26.3		29.3 J	48.1 J		33 J	30.6 J	49.4 J		25.8
BERYLLIUM	7440-41-7	mg/kg	0.89 J		0.53 J		0.27 J	0.27 J	0.33 J	0.26 J		0.47	0.75		0.56	0.56	0.74		0.39 J
CADMIUM	7440-43-9	mg/kg	1.3 J		0.51 J		0.09	0.06 J	0.09	0.07 J		0.08	0.09 J		0.08	0.07 J	0.1 J		0.13
CALCIUM	7440-70-2	mg/kg	22700 J		15400 J		1520	2880	3170	3340		2910	5440		2940	3640	3360		3640
CHROMIUM, TOTAL	7440-47-3	mg/kg	27.8 J		27.8 J	18.7 J	21 J	31.8 J	37.3 J	22.8 J	24.7 J	26.4 J	32 J	20.8 J	26.1 J	32.6 J	30.9 J	22.0 J	33.7
CHROMIUM III (c)	16065-83-1	mg/kg				R					25			21				22	
CHROMIUM VI	18540-29-9	mg/kg				R					< 0.31 U			< 0.38 U				< 0.32 U	
COBALT	7440-48-4	mg/kg	24.2 J		5 J		7.7	10.6	11.8	9.8		12.1	13.2		10.5	12.4	15.8		11.8
COPPER	7440-50-8	mg/kg	29 J		35.9 J		11.4	18.1	23.6	21.9		24.6 J	24.9 J		23.7 J	21.3 J	30.9 J		25.1
IRON	7439-89-6	mg/kg	9160 J		10400 J		19800	21300	22000	18700		23100 J	31100 J		24900 J	24700 J	34700 J		23000
LEAD	7439-92-1	mg/kg	16.3 J		5.7 J		12 J	7.2 J	11 J	10.1 J		10.8 J	13.8 J		11.3 J	10.4 J	14.8 J		12.9
MAGNESIUM	7439-95-4	mg/kg	3400 J		4480 J		4660	7670	8140	7440		6960 J	8290 J		6950 J	7870 J	8940 J		7780
MANGANESE	7439-96-5	mg/kg	8600 J		1460 J		628	484	503	400		602	617		522	520	666		492
MERCURY	7439-97-6	mg/kg	0.13 J		0.13 J		0.04	0.007 J	0.01 J	0.01 J		0.01 J	0.02 J		0.02 J	0.02 J	0.02 J		0.03 J
NICKEL	7440-02-0	mg/kg	15.3 J		14.1 J		13.5	24	29.1	18.8		27.1	31.3		24.4	26.9	36.8		33.1
POTASSIUM	7440-09-7	mg/kg	670 J		585 J		568 J	1510 J	751 J	875 J		907 J	3300 J		1720 J	1660 J	2720 J		947
SELENIUM	7782-49-2	mg/kg	6.4 J		5.7 J		< 0.4 U	< 0.28 U	< 0.33 U	< 0.3 U		< 0.35 U	< 0.37 U		< 0.24 U	< 0.28 U	< 0.35 U		0.32 J
SILVER	7440-22-4	mg/kg	0.1 J		0.06 J		0.04 J	0.02 J	0.04 J	0.03 J		0.03 J	0.06 J		0.04 J	0.03 J	0.04 J		0.09 J
SODIUM	7440-23-5	mg/kg	194 J		181 J		< 66.4 U	180	< 132 U	< 124 U		208 J	257 J		133 J	120 J	218 J		133 J
THALLIUM	7440-28-0	mg/kg	0.09 J		0.09 J		0.08 J	0.1 J	0.06 J	0.05 J		0.07 J	0.15		0.1	0.08 J	0.14		0.07 J
VANADIUM	7440-62-2	mg/kg	18.9 J		22 J		28.2	37.1	35.6	41		32.1	39.1		34.4	37.8	39.6		42.8
ZINC	7440-66-6	mg/kg	47.7 J		25.7 J		43.6	44	48.1	42		56.2 J	67.5 J		50.1 J	57.6 J	73 J		59.6
PCBs																			
AROCLOR-1016	12674-11-2	mg/kg	< 0.057 UJ		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.17 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.057 UJ		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.17 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.067 UJ		< 0.045 UJ		< 0.012 U	< 0.011 U	< 0.0097 U	< 0.0092 U		< 0.011 U	< 0.011 U		< 0.0092 U	< 0.011 U	< 0.011 U		< 0.2 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.057 UJ		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.17 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.057 UJ		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.17 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.057 UJ		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.17 UJ
AROCLOR-1260	11096-82-5	mg/kg	0.87 J		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		0.1	0.018 J		0.019 J	0.076 J	< 0.0092 U		14
AROCLOR-1262	37324-23-5	mg/kg	< 0.057 UJ		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.17 U
AROCLOR-1268	11100-14-4	mg/kg	< 0.057 UJ		< 0.038 UJ		< 0.01 U	< 0.0093 U	< 0.0082 U	< 0.0078 U		< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.17 U
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.87		< 0.045 U		< 0.012 U	< 0.011 U	< 0.0097 U	< 0.0092 U		0.10	0.018		0.019	0.076	< 0.011 U		14
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	1.336		< 0.349 U		< 0.092 U	< 0.0854 U	< 0.0753 U	< 0.0716 U		0.1754	0.0941		0.0835	0.1528	< 0.0846 U		15.39
Pesticides																			
4,4-DDD	72-54-8	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
4,4-DDE	72-55-9	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
4,4-DDT	50-29-3	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
ALDRIN	309-00-2	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
ALPHA-BHC	319-84-6	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
ALPHA-CHLORDANE	5103-71-9	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
BETA-BHC	319-85-7	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
DELTA-BHC	319-86-8	mg/kg										< 0.00092 U	< 0.00093 UJ		< 0.00079 UJ	< 0.00094 UJ	< 0.00092 UJ		< 0.00083 UJ
DIELDRIN	60-57-1	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
ENDOSULFAN I	959-98-8	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
ENDOSULFAN II	33213-65-9	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
ENDOSULFAN SULFATE	1031-07-8	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
ENDRIN	72-20-8	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
ENDRIN ALDEHYDE	7421-93-4	mg/kg										< 0.0018 U	< 0.0018 U		< 0.0015 U	< 0.0018 U	< 0.0018 U		< 0.0016 U
ENDRIN KETONE	53494-70-5	mg/kg										0.014 J	0.0021 J		0.0021 J	0.0088 J	< 0.0018 U		2.4 J
HEPTACHLOR	76-44-8	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
LINDANE	58-89-9	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U
METHOXYCHLOR	72-43-5	mg/kg										< 0.0092 U	< 0.0093 U		< 0.0079 U	< 0.0094 U	< 0.0092 U		< 0.0083 U
TOXAPHENE	8001-35-2	mg/kg										< 0.018 U	< 0.018 U		< 0.015 U	< 0.018 U	< 0.018 U		< 0.016 U
TRANS-CHLORDANE	5103-74-2	mg/kg										< 0.00092 U	< 0.00093 U		< 0.00079 U	< 0.00094 U	< 0.00092 U		< 0.00083 U

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 2
		sys_loc_code	FTA-SB-201	FTA-SB-201	FTA-SB-201	FTA-SB-201	FTA-SB-202	FTA-SB-202	FTA-SB-203	FTA-SB-203	FTA-SB-203	FTA-SB-204	FTA-SB-204	FTA-SB-204	FTA-SB-205	FTA-SB-205	FTA-SB-205	FTA-SB-205	FTA-SB-206
		sample_date	11/13/2012	11/13/2012	11/13/2012	11/2/2016	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/2/2016	11/8/2012	11/8/2012	11/2/2016	11/8/2012	11/8/2012	11/8/2012	11/2/2016	11/6/2012
		sys_sample_code	FTA-SB-201-0002	FTA-SB-201-0406	FTA-SB-201-0206	FTA-SB-201-SS-N-110216	FTA-SB-202-0002	FTA-SB-202-0206	FTA-SB-203-0002	FTA-SB-203-0206	FTA-SB-203-SS-N-110216	FTA-SB-204-0002	FTA-SB-204-0610	FTA-SB-204-SS-N-110216	FTA-SB-205-0002-D	FTA-SB-205-0002	FTA-SB-205-0206	FTA-SB-205-SS-N-110216	FTA-SB-206-0002-D
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	FD
		depth_interval	0 - 2 ft	4 - 6 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																	
SVOCs																			
1,1-BIPHENYL	92-52-4	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	0.64	0.2		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
1,4-DIOXANE	123-91-1	mg/kg	< 0.28 UJ		< 0.25 UJ		< 0.063 U	< 0.046 U	< 0.045 U	< 0.052 U		< 0.054 U	< 0.056 U		< 0.055 U	< 0.051 U	< 0.062 U		< 0.057 U
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.28 UJ		< 0.25 UJ		< 0.063 U	< 0.046 U	< 0.045 U	< 0.052 U		< 0.054 U	0.016 J		< 0.055 U	< 0.051 U	< 0.062 U		< 0.057 U
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 3.4 UJ		< 3 UJ		< 0.78 U	< 0.57 U	< 0.55 U	< 0.64 U		< 0.66 U	< 0.69 U		< 0.68 U	< 0.63 U	< 0.76 U		< 0.7 U
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.28 UJ		< 0.25 UJ		< 0.063 U	< 0.046 U	< 0.045 U	< 0.052 U		< 0.054 U	0.0066 J		< 0.055 U	< 0.051 U	< 0.062 U		< 0.057 U
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.42 UJ		< 0.37 UJ		< 0.095 UJ	< 0.069 UJ	< 0.067 UJ	< 0.078 UJ		< 0.08 UJ	< 0.084 UJ		< 0.083 UJ	< 0.077 UJ	< 0.093 UJ		< 0.086 UJ
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.28 UJ		< 0.25 UJ		< 0.063 U	< 0.046 U	< 0.045 U	< 0.052 U		< 0.054 U	< 0.056 U		< 0.055 U	< 0.051 U	< 0.062 U		< 0.057 U
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	2.1	0.7		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
2-METHYLPHENOL	95-48-7	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
2-NITROANILINE	88-74-4	mg/kg	< 3.4 UJ		< 3 UJ		< 0.78 U	< 0.57 U	< 0.55 U	< 0.64 U		< 0.66 U	< 0.69 U		< 0.68 U	< 0.63 U	< 0.76 U		< 0.7 U
2-NITROPHENOL	88-75-5	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 UJ	< 0.01 U		UR	< 0.011 U		< 0.011 UJ	< 0.01 UJ	< 0.012 UJ		< 0.011 UJ
3-NITROANILINE	99-09-2	mg/kg	< 3.4 UJ		< 3 UJ		< 0.78 U	< 0.57 U	< 0.55 U	< 0.64 U		< 0.66 U	< 0.69 U		< 0.68 U	< 0.63 U	< 0.76 U		< 0.7 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.56 UJ		< 0.5 UJ		< 0.13 U	< 0.092 U	< 0.089 U	< 0.1 U		< 0.11 U	< 0.11 U		< 0.11 U	< 0.1 U	< 0.12 U		< 0.11 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
4-CHLOROANILINE	106-47-8	mg/kg	< 0.28 UJ		< 0.25 UJ		< 0.063 UJ	< 0.046 UJ	< 0.045 U	< 0.052 UJ		UR	< 0.056 U		< 0.055 U	< 0.051 U	< 0.062 U		< 0.057 U
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
4-NITROANILINE	100-01-6	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 UJ	< 0.01 U		< 0.011 UJ	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
4-NITROPHENOL	100-02-7	mg/kg	< 3.4 UJ		< 3 UJ		< 0.78 U	< 0.57 U	< 0.55 U	< 0.64 U		< 0.66 U	< 0.69 U		< 0.68 U	< 0.63 U	< 0.76 U		< 0.7 UJ
ACENAPHTHENE	83-32-9	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	0.47	0.17 J		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
ACENAPHTHYLENE	208-96-8	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
ACETOPHENONE	98-86-2	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
ANTHRACENE	120-12-7	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
ATRAZINE	1912-24-9	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	0.0037 J		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
BENZALDEHYDE	100-52-7	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 UJ
BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.021 J		0.016 J		0.037	0.0082 J	0.069	0.034		0.0069 J	0.0049 J		< 0.011 U	< 0.01 U	< 0.012 U		0.021 J
BENZO[A]PYRENE	50-32-8	mg/kg	< 0.056 UJ		< 0.05 UJ		0.026	0.0074 J	0.037	0.016 J		0.0053 J	0.0046 J		< 0.011 U	< 0.01 U	< 0.012 U		0.018 J
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	0.038	< 0.01 U		0.0093 J	0.0061 J		< 0.011 U	0.003 J	< 0.012 U		0.034
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	0.16 J		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	0.031 J		< 0.25 UJ		< 0.063 U	< 0.046 U	< 0.045 U	< 0.052 U		< 0.054 U	0.0049 J		< 0.055 UJ	< 0.051 UJ	< 0.062 UJ		< 0.057 U
CAPROLACTAM	105-60-2	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
CARBAZOLE	86-74-8	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
CHRYSENE	218-01-9	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	0.17 J	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.056 UJ		< 0.05 UJ		0.0062 J	< 0.0092 U	< 0.0089 UJ	0.0033 J		< 0.011 U	0.005 J		< 0.011 U	< 0.01 U	< 0.012 U		0.0048 J
DIBENZOFURAN	132-64-9	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	0.086 J		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
DIETHYLPHTHALATE	84-66-2	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.28 UJ		< 0.25 UJ		< 0.063 U	< 0.046 U	< 0.045 U	< 0.052 U		< 0.054 U	< 0.056 U		< 0.055 U	< 0.051 U	< 0.062 U		< 0.057 U
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
FLUORANTHENE	206-44-0	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	0.1 J	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
FLUORENE	86-73-7	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	0.77	0.3 J		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.05 J		0.027 J		0.022 J	0.008 J	0.017 J	0.01 J		0.0097 J	0.0091 J		0.0056 J	0.0055 J	0.0063 J		0.024
ISOPHORONE	78-59-1	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
NAPHTHALENE	91-20-3	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	0.12	0.041		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
NITROBENZENE	98-95-3	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.056 UJ		< 0.05 UJ		< 0.013 U	< 0.0092 U	< 0.0089 U	< 0.01 U		< 0.011 U	< 0.011 U		< 0.011 U	< 0.01 U	< 0.012 U		< 0.011 U
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.28 UJ		< 0.25 UJ		< 0.063 U	< 0.046 U	< 0.045 U	< 0.052 U		< 0.054 U	< 0.056 U		< 0.055 U	< 0.051 U	< 0.062 U		< 0.057 U
PHENANTHRENE	85-01-8	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	1.6	0.7		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
PHENOL	108-95-2	mg/kg	< 1.4 UJ		< 1.2 UJ		< 0.31 U	< 0.23 U	< 0.22 U	< 0.26 U		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
PYRENE	129-00-0	mg/kg	< 1.4 UJ		< 1.2 UJ		0.17 J	< 0.23 U	0.42	0.17 J		< 0.26 U	< 0.28 U		< 0.28 U	< 0.25 U	< 0.31 U		< 0.28 U
PAHs																			
2-METHYLNAPHTHALENE	91-57-6	mg/kg																	
ACENAPHTHENE	83-32-9	mg/kg																	
ACENAPHTHYLENE	208-96-8	mg/kg																	
ANTHRACENE	120-12-7	mg/kg																	
BENZO[A]ANTHRACENE	56-55-3	mg/kg																	
BENZO[A]PYRENE	50-32-8	mg/kg																	
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																	
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																	
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																	
CHRYSENE	218-01-9	mg/kg																	
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																	
FLUORANTHENE	206-44-0	mg/kg																	
FLUORENE	86-73-7	mg/kg																	
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																	
NAPHTHALENE	91-20-3	mg/kg																	
PHENANTHRENE	85-01-8	mg/kg																	
PYRENE	129-00-0	mg/kg																	

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 1	Area 2
			sys_loc_code	FTA-SB-201	FTA-SB-201	FTA-SB-201	FTA-SB-201	FTA-SB-202	FTA-SB-202	FTA-SB-203	FTA-SB-203	FTA-SB-203	FTA-SB-204	FTA-SB-204	FTA-SB-204	FTA-SB-205	FTA-SB-205	FTA-SB-205	FTA-SB-205	FTA-SB-206
			sample_date	11/13/2012	11/13/2012	11/13/2012	11/2/2016	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/2/2016	11/8/2012	11/8/2012	11/2/2016	11/8/2012	11/8/2012	11/8/2012	11/2/2016	11/6/2012
			sys_sample_code	FTA-SB-201-0002	FTA-SB-201-0406	FTA-SB-201-0206	FTA-SB-201-SS-N-110216	FTA-SB-202-0002	FTA-SB-202-0206	FTA-SB-203-0002	FTA-SB-203-0206	FTA-SB-203-SS-N-110216	FTA-SB-204-0002	FTA-SB-204-0610	FTA-SB-204-SS-N-110216	FTA-SB-205-0002-D	FTA-SB-205-0002	FTA-SB-205-0206	FTA-SB-205-SS-N-110216	FTA-SB-206-0002-D
			sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	FD
			depth_interval	0 - 2 ft	4 - 6 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																			
VOCs																					
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																			
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,1-DICHLOROETHANE	75-34-3	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,1-DICHLOROETHENE	75-35-4	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																			
1,2-DIBROMOETHANE	106-93-4	mg/kg																			
1,2-DICHLOROBENZENE	95-50-1	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,2-DICHLOROETHANE	107-06-2	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg		0.014 J	0.0565 J			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,2-DICHLOROPROPANE	78-87-5	mg/kg																			
1,3-DICHLOROBENZENE	541-73-1	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
1,4-DICHLOROBENZENE	106-46-7	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
2-BUTANONE	78-93-3	mg/kg																			
2-HEXANONE	591-78-6	mg/kg		< 0.12 UJ	< 0.12 UJ			< 0.015 U	< 0.011 U	< 0.0098 U	< 0.012 U		< 0.012 UJ	< 0.014 U		< 0.015 U	< 0.0089 U	< 0.012 U		< 0.014 U
4-METHYL-2-PENTANONE	108-10-1	mg/kg																			
ACETONE	67-64-1	mg/kg		2 J	2.4 J			0.2	0.038	0.056	0.023 J		< 0.11 U	< 0.052 U		< 0.071 U	< 0.031 U	< 0.036 U		0.058
BENZENE	71-43-2	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		0.0014 J	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
BROMODICHLOROMETHANE	75-27-4	mg/kg																			
BROMOFORM	75-25-2	mg/kg																			
BROMOMETHANE	74-83-9	mg/kg																			
CARBON DISULFIDE	75-15-0	mg/kg																			
CARBON TETRACHLORIDE	56-23-5	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
CHLOROBENZENE	108-90-7	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
CHLOROETHANE	75-00-3	mg/kg		< 0.048 UJ	< 0.05 UJ			< 0.006 U	< 0.0044 U	< 0.0039 U	< 0.005 U		< 0.0049 U	< 0.0055 U		< 0.006 U	< 0.0036 U	< 0.005 U		< 0.0055 U
CHLOROFORM	67-66-3	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
CHLOROMETHANE	74-87-3	mg/kg		< 0.048 UJ	< 0.05 UJ			< 0.006 U	< 0.0044 U	< 0.0039 U	< 0.005 U		< 0.0049 UJ	< 0.0055 U		< 0.006 UJ	< 0.0036 U	< 0.005 UJ		< 0.0055 U
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg		0.014 J	0.049 J			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																			
CYCLOHEXANE	110-82-7	mg/kg																			
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																			
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																			
ETHYLBENZENE	100-41-4	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		0.008 J	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
ISOPROPYLBENZENE	98-82-8	mg/kg		< 0.024 UJ	0.011 J			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg		< 0.048 UJ	< 0.05 UJ			< 0.006 U	< 0.0044 U	< 0.0039 U	< 0.005 U		< 0.0049 UJ	< 0.0055 U		< 0.006 U	< 0.0036 U	< 0.005 U		< 0.0055 U
METHYL ACETATE	79-20-9	mg/kg																			
METHYL CYCLOHEXANE	108-87-2	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
METHYLENE CHLORIDE	75-09-2	mg/kg		< 0.12 UJ	< 0.12 UJ			< 0.015 U	< 0.011 U	< 0.0098 U	< 0.012 U		< 0.012 U	< 0.014 U		< 0.015 U	< 0.0089 U	< 0.012 U		< 0.014 U
O-XYLENE	95-47-6	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
STYRENE	100-42-5	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
TETRACHLOROETHENE	127-18-4	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
TOLUENE	108-88-3	mg/kg		< 0.024 UJ	0.022 J			0.0048 J	< 0.0022 U	< 0.002 U	< 0.0025 U		0.016 J	0.0015 J		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg		< 0.024 UJ	0.0075 J			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 U	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																			
TRICHLOROETHENE	79-01-6	mg/kg		< 0.024 UJ	< 0.025 UJ			< 0.003 U	< 0.0022 U	< 0.002 U	< 0.0025 U		< 0.0024 UJ	< 0.0028 U		< 0.003 U	< 0.0018 U	< 0.0025 U		< 0.0028 U
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																			
VINYL CHLORIDE	75-01-4	mg/kg		< 0.048 UJ	0.083 J			< 0.006 U	< 0.0044 U	< 0.0039 U	< 0.005 U		< 0.0049 U	< 0.0055 U		< 0.006 U	< 0.0036 U	< 0.005 U		< 0.0055 U
XYLENES, TOTAL (a)	1330-20-7	mg/kg		< 0.048 U	< 0.05 U			< 0.006 U	< 0.0044 U	< 0.0039 U	< 0.005 U		< 0.0049 U	< 0.0055 U		< 0.006 U	< 0.0036 U	< 0.005 U		< 0.0055 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg		< 0.072 U	< 0.075 U			< 0.009 U	< 0.0066 U	< 0.0059 U	< 0.0075 U		< 0.0073 U	< 0.0083 U		< 0.009 U	< 0.0054 U	< 0.0075 U		< 0.0083 U
				137	35	102	3	137	137	137	137	3	158	158	3	158	158	158	3	158

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 1	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SB-206	FTA-SB-206	FTA-SB-208	FTA-SB-208	FTA-SB-208	FTA-SB-209	FTA-SB-209	FTA-SB-209	FTA-SB-210	FTA-SB-210	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-212	FTA-SB-212	FTA-SB-212
		sample_date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/5/2012	11/5/2012	11/8/2012	11/2/2016
		sys_sample_code	FTA-SB-206-0002	FTA-SB-206-0206	FTA-SB-208-0002	FTA-SB-208-0610	FTA-SB-208-SS-N-110216	FTA-SB-209-0002	FTA-SB-209-0206	FTA-SB-209-0610	FTA-SB-210-0002	FTA-SB-210-0610	FTA-SB-211-0002-D	FTA-SB-211-0002	FTA-SB-211-0206	FTA-SB-211-0610	FTA-SB-212-0002	FTA-SB-212-0206	FTA-SB-212-0610	FTA-SB-212-SS-N-110216
		sample_type_code	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft
Compound	CAS	Units																		
Metals																				
ALUMINUM	7429-90-5	mg/kg	12800	15600	17000	14800		13300	13200	19000	17800	15800	16400	17100	13000	13400	14400	15800	12900	
ANTIMONY	7440-36-0	mg/kg	0.07 J	0.16	0.08 J	0.08 J		0.06 J	0.05 J	0.15	0.09 J	0.08 J	0.11	0.1	0.08 J	0.09	0.07 J	0.14 J	0.12 J	
ARSENIC	7440-38-2	mg/kg	8.1	23.1	4.9 J	8.7 J		6	6.5	20	9.8 J	6.8 J	11.7	10.1	7.7	10.4	7.1 J	9.4 J	8.2 J	
BARIUM	7440-39-3	mg/kg	24.9	42.2	18	22		15.1	23.9	52.8	39.5	22.2	36.3	35.7	28.2	23.6	25.7	39.9	22 J	
BERYLLIUM	7440-41-7	mg/kg	0.42 J	0.62	0.36 J	0.47		0.33 J	0.34 J	0.79	0.67	0.47	0.68	0.66	0.46 J	0.4 J	0.51	0.68	0.39	
CADMIUM	7440-43-9	mg/kg	0.11	0.1	0.06 J	0.08		0.09	0.08 J	0.08	0.13	0.08	0.1	0.12	0.08 J	0.08 J	0.19	0.08 J	0.07	
CALCIUM	7440-70-2	mg/kg	3310	4150	1470	2110		2990	3090	3690	3590	4270	2810	3270	2900	3590	3170	3530	3420	
CHROMIUM, TOTAL	7440-47-3	mg/kg	27.4	29.3	26.2 J	38.1 J	23.4 J	33.4	28.9	38.2	37.5 J	32.7 J	30.3	37.1	29.8	28.2	27.7 J	29.7 J	23.4 J	29.0 J
CHROMIUM III (c)	16065-83-1	mg/kg					23													29
CHROMIUM VI	18540-29-9	mg/kg					< 1.6 U													< 0.32 U
COBALT	7440-48-4	mg/kg	11.5	12.8	6.8	12.6		12.3	11.5	15.1	15.2	15.3	13.4	14.3	11.7	13.9	15.1	13.6	12.6	
COPPER	7440-50-8	mg/kg	26.9	22.5	7.1	26		23.5	23.2	25.5	31.7	28.4	27.6	30.9	22.1	28.4	22.4	24.5	24.6 J	
IRON	7439-89-6	mg/kg	22500	27100	23400	27400		24400	25000	31300	32000	29800	29400	31000	23600	25800	24200	24500	26000 J	
LEAD	7439-92-1	mg/kg	12.2	12.4	9 J	10.9 J		10.6	10.1	15.8	13.6 J	11.3 J	12.2	13.6	11.4	13.9	11.2 J	12.2 J	11.6 J	
MAGNESIUM	7439-95-4	mg/kg	7200	7410	4460	8260		9690	7630	8490	9460	8360	7500	8420	6430	7160	7680	6870	6890 J	
MANGANESE	7439-96-5	mg/kg	504	534	476	569		476	504	662	686	632	596	666	544	544	508	526	573	
MERCURY	7439-97-6	mg/kg	< 0.02 U	< 0.02 U	0.05	< 0.016 U		0.006 J	0.006 J	< 0.02 U	< 0.018 U	< 0.015 U	0.006 J	< 0.019 U	< 0.015 U	0.005 J	0.007 J	< 0.014 U	0.008 J	
NICKEL	7440-02-0	mg/kg	24	30	15.6	30.5		30.7	23.8	36.2	31.6	31.7	28.2	30.3	24.8	28.3	29.5	28.4	25.2	
POTASSIUM	7440-09-7	mg/kg	958	2530	549 J	959 J		691	1060	3390	1960 J	1040 J	1900	1740	1560	1160	1290 J	2260 J	1040 J	
SELENIUM	7782-49-2	mg/kg	0.31 J	0.4	0.8 J	0.22 J		0.33 J	0.3 J	0.45	0.34 J	0.3 J	0.27 J	0.25 J	0.13 J	0.34 J	0.23 J	0.22 J	< 0.32 U	
SILVER	7440-22-4	mg/kg	0.08 J	0.05 J	0.04 J	0.02 J		0.04 J	0.03 J	0.06 J	0.05 J	0.03 J	0.04 J	0.05 J	0.03 J	0.04 J	0.02 J	0.05 J	0.04 J	
SODIUM	7440-23-5	mg/kg	118 J	206	103 J	91.8 J		139 J	159 J	247	417 J	164 J	159	180	136	246	324 J	217 J	152 J	
THALLIUM	7440-28-0	mg/kg	0.07 J	0.13	0.09 J	0.07 J		0.07 J	0.07 J	0.16	0.11 J	0.06 J	0.11	0.12	0.09 J	0.07 J	0.08 J	0.12 J	0.06	
VANADIUM	7440-62-2	mg/kg	37.6	38.3	42.7	38.1		38.7	38.5	48.3	47	40.3	45.4	45.8	32.6	32.7	36.7	39.7	29.4	
ZINC	7440-66-6	mg/kg	57.4	56.1	38.5	50.2		46.8	49.5	65.6	72	59	59.7	64	49.4	54.6	69.1	53.7	52.7 J	
PCBs																				
AROCLOR-1016	12674-11-2	mg/kg	< 0.2 U	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.09 U	< 0.0086 UJ	< 0.01 U	< 0.0089 U	< 0.0092 U	< 0.24 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
AROCLOR-1221	11104-28-2	mg/kg	< 0.2 U	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.09 U	< 0.0086 UJ	< 0.01 U	< 0.0089 U	< 0.0092 U	< 0.24 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
AROCLOR-1232	11141-16-5	mg/kg	< 0.24 U	< 0.011 U	< 0.012 U	< 0.01 U		< 0.11 U	< 0.01 UJ	< 0.012 U	< 0.01 U	< 0.011 U	< 0.28 U	< 0.11 U	< 0.011 U	< 0.0099 U	< 0.011 U	< 0.01 U	< 0.01 U	
AROCLOR-1242	53469-21-9	mg/kg	< 0.2 U	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.09 U	< 0.0086 UJ	< 0.01 U	< 0.0089 U	< 0.0092 U	< 0.24 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
AROCLOR-1248	12672-29-6	mg/kg	< 0.2 U	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.09 U	< 0.0086 UJ	< 0.01 U	< 0.0089 U	< 0.0092 U	< 0.24 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
AROCLOR-1254	11097-69-1	mg/kg	2.6 J	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.09 U	< 0.0086 UJ	< 0.01 U	< 0.0089 U	< 0.0092 U	8.3 J	3.2 J	0.21	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
AROCLOR-1260	11096-82-5	mg/kg	12 J	0.022	0.015 J	< 0.0089 U		8.7	2 J	< 0.01 U	1.9	< 0.0092 U	36 J	13 J	0.74	0.072	0.32	< 0.0089 U	< 0.0089 U	
AROCLOR-1262	37324-23-5	mg/kg	< 0.2 U	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.09 U	< 0.0086 UJ	< 0.01 U	< 0.0089 U	< 0.0092 U	< 0.24 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
AROCLOR-1268	11100-14-4	mg/kg	< 0.2 U	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.09 U	< 0.0086 UJ	< 0.01 U	< 0.0089 U	< 0.0092 U	< 0.24 U	< 0.097 U	< 0.0094 U	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	15	0.022	0.015	< 0.01 U		8.7	2.0	< 0.012 U	1.9	< 0.011 U	44	16	0.95	0.072	0.32	< 0.01 U	< 0.01 U	
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	16.04	0.0988	0.097	< 0.0812 U		9.44	2.0702	< 0.092 U	1.9723	< 0.0846 U	46.02	16.892	1.0174	0.1407	0.3954	< 0.0812 U	< 0.0812 U	
Pesticides																				
4,4-DDD	72-54-8	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
4,4-DDE	72-55-9	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
4,4-DDT	50-29-3	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	0.043 J	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
ALDRIN	309-00-2	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
ALPHA-BHC	319-84-6	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
BETA-BHC	319-85-7	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
DELTA-BHC	319-86-8	mg/kg	< 0.00099 UJ	< 0.00094 UJ	< 0.001 UJ	< 0.00089 UJ		< 0.00086 UJ	< 0.00086 UJ	< 0.001 UJ	< 0.00089 UJ	< 0.00092 UJ	< 0.00095 UJ	< 0.00097 UJ	< 0.00094 UJ	< 0.00084 UJ	< 0.00092 UJ	< 0.00089 UJ	< 0.00089 UJ	
DIELDRIN	60-57-1	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
ENDOSULFAN I	959-98-8	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
ENDOSULFAN II	33213-65-9	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
ENDRIN	72-20-8	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0019 U	< 0.0018 U	< 0.002 U	< 0.0017 U		< 0.0017 U	< 0.0017 U	< 0.002 U	< 0.0017 U	< 0.0018 U	< 0.0018 U	< 0.0019 U	< 0.0018 U	< 0.0016 U	< 0.0018 U	< 0.0017 U	< 0.0017 U	
ENDRIN KETONE	53494-70-5	mg/kg	1.5 J	0.0019 J	0.0015 J	< 0.0017 U		0.99 J	0.27 J	< 0.002 U	0.24 J	< 0.0018 U	4.3 J	1.6 J	0.086 J	0.0078 J	0.044 J	< 0.0017 U	< 0.0017 U	
HEPTACHLOR	76-44-8	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
LINDANE	58-89-9	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	
METHOXYCHLOR	72-43-5	mg/kg	< 0.0099 U	< 0.0094 U	< 0.01 U	< 0.0089 U		< 0.0086 U	< 0.0086 U	< 0.01 U	< 0.0089 U	< 0.0092 U	< 0.0095 U	< 0.0097 U	< 0.0094 U	< 0.0084 U	< 0.0092 U	< 0.0089 U	< 0.0089 U	
TOXAPHENE	8001-35-2	mg/kg	< 0.019 U	< 0.018 U	< 0.02 U	< 0.017 U		< 0.017 U	< 0.017 U	< 0.02 U	< 0.017 U	< 0.018 U	< 0.018 U	< 0.019 U	< 0.018 U	< 0.016 U	< 0.018 U	< 0.017 U	< 0.017 U	
TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00099 U	< 0.00094 U	< 0.001 U	< 0.00089 U		< 0.00086 U	< 0.00086 U	< 0.001 U	< 0.00089 U	< 0.00092 U	< 0.00095 U	< 0.00097 U	< 0.00094 U	< 0.00084 U	< 0.00092 U	< 0.00089 U	< 0.00089 U	

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 1	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SB-206	FTA-SB-206	FTA-SB-208	FTA-SB-208	FTA-SB-208	FTA-SB-209	FTA-SB-209	FTA-SB-209	FTA-SB-210	FTA-SB-210	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-212	FTA-SB-212	FTA-SB-212	FTA-SB-212
		sample_date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/5/2012	11/5/2012	11/8/2012	11/2/2016
		sys_sample_code	FTA-SB-206-0002	FTA-SB-206-0206	FTA-SB-208-0002	FTA-SB-208-0610	FTA-SB-208-SS-N-110216	FTA-SB-209-0002	FTA-SB-209-0206	FTA-SB-209-0610	FTA-SB-210-0002	FTA-SB-210-0610	FTA-SB-211-0002-D	FTA-SB-211-0002	FTA-SB-211-0206	FTA-SB-211-0610	FTA-SB-211-0610	FTA-SB-212-0002	FTA-SB-212-0206	FTA-SB-212-0610	FTA-SB-212-SS-N-110216
		sample_type_code	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft
Compound	CAS	Units																			
SVOCs																					
1,1-BIPHENYL	92-52-4	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		0.0054 J	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	0.0013 J	0.0014 J	< 0.011 U	< 0.01 U		
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
1,4-DIOXANE	123-91-1	mg/kg	< 0.055 U	< 0.042 U	< 0.058 UJ	< 0.054 U		< 0.05 U	< 0.052 U	< 0.056 U	< 0.053 U	< 0.052 U	< 0.054 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.049 U	< 0.055 U	< 0.052 U		
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 UJ	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.055 U	< 0.042 U	< 0.058 U	< 0.054 U		< 0.05 U	< 0.052 U	< 0.056 U	< 0.053 U	< 0.052 U	< 0.054 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.049 U	0.0041 J	< 0.052 U		
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.67 U	< 0.52 U	< 0.71 U	< 0.67 U		< 0.61 U	< 0.64 U	< 0.7 U	< 0.65 U	< 0.64 U	< 0.66 U	< 0.69 U	< 0.68 U	< 0.65 U	< 0.61 U	< 0.68 UJ	< 0.63 U		
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.055 U	< 0.042 U	< 0.058 U	< 0.054 U		< 0.05 U	< 0.052 U	< 0.056 U	< 0.053 U	< 0.052 U	< 0.054 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.049 U	< 0.055 U	< 0.052 U		
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.082 UJ	< 0.064 UJ	< 0.087 UJ	< 0.081 UJ		< 0.075 UJ	< 0.078 UJ	< 0.085 UJ	< 0.079 UJ	< 0.078 UJ	< 0.08 UJ	< 0.084 UJ	< 0.083 UJ	< 0.079 UJ	< 0.074 UJ	< 0.083 UJ	< 0.077 UJ		
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.055 U	< 0.042 U	< 0.058 U	< 0.054 U		< 0.05 U	< 0.052 U	< 0.056 U	< 0.053 U	< 0.052 U	< 0.054 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.049 U	< 0.055 U	< 0.052 U		
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
2-METHYLPHENOL	95-48-7	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
2-NITROANILINE	88-74-4	mg/kg	< 0.67 U	< 0.52 U	< 0.71 U	< 0.67 U		< 0.61 U	< 0.64 U	< 0.7 U	< 0.65 U	< 0.64 UJ	< 0.66 UJ	< 0.69 UJ	< 0.68 UJ	< 0.65 UJ	< 0.61 U	< 0.68 UJ	< 0.63 U		
2-NITROPHENOL	88-75-5	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.011 UJ	< 0.0085 UJ	UR	< 0.011 UJ		< 0.01 UJ	< 0.01 UJ	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.011 UJ	< 0.011 U	< 0.011 U	< 0.01 UJ	< 0.0099 U	< 0.011 U	< 0.01 UJ		
3-NITROANILINE	99-09-2	mg/kg	< 0.67 U	< 0.52 U	< 0.71 U	< 0.67 U		< 0.61 U	< 0.64 U	< 0.7 U	< 0.65 U	< 0.64 U	< 0.66 U	< 0.69 U	< 0.68 U	< 0.65 U	< 0.61 U	< 0.68 UJ	< 0.63 U		
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.11 U	< 0.085 U	< 0.12 U	< 0.11 U		< 0.1 U	< 0.1 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.11 U	< 0.11 U	< 0.11 U	< 0.1 U	< 0.099 U	< 0.11 U	< 0.1 U		
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
4-CHLOROANILINE	106-47-8	mg/kg	< 0.055 U	< 0.042 U	< 0.058 UJ	< 0.054 U		< 0.05 U	< 0.052 U	< 0.056 U	< 0.053 U	< 0.052 U	< 0.054 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.049 U	< 0.055 U	< 0.052 U		
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
4-NITROANILINE	100-01-6	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 UJ	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
4-NITROPHENOL	100-02-7	mg/kg	< 0.67 UJ	< 0.52 UJ	< 0.71 UJ	< 0.67 UJ		< 0.61 UJ	< 0.64 UJ	< 0.7 UJ	< 0.65 UJ	< 0.64 UJ	< 0.66 U	< 0.69 U	< 0.68 U	< 0.65 U	< 0.61 UJ	< 0.68 UJ	< 0.63 U		
ACENAPHTHENE	83-32-9	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		0.076 J	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
ACETOPHENONE	98-86-2	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
ANTHRACENE	120-12-7	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		0.087 J	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
ATRAZINE	1912-24-9	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	0.0014 J	0.001 J	0.0018 J	< 0.01 U		
BENZALDEHYDE	100-52-7	mg/kg	< 0.27 UJ	< 0.21 UJ	< 0.29 UJ	< 0.27 UJ		< 0.25 UJ	< 0.26 UJ	< 0.28 UJ	< 0.26 UJ	< 0.26 UJ	< 0.27 UJ	< 0.28 UJ	< 0.28 UJ	< 0.26 UJ	< 0.24 UJ	< 0.28 UJ	< 0.26 U		
BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.022 J	< 0.0085 U	< 0.012 U	< 0.011 U		0.17	0.016 J	< 0.011 U	0.1	< 0.01 U	0.0034 J	0.0035 J	< 0.011 U	0.0023 J	0.027	< 0.011 U	< 0.01 U		
BENZO[A]PYRENE	50-32-8	mg/kg	0.019 J	< 0.0085 U	< 0.012 UJ	< 0.011 U		0.12	0.013 J	< 0.011 U	0.081	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	0.03	< 0.011 U	< 0.01 U		
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.03	< 0.0085 U	< 0.012 U	< 0.011 U		0.2	0.022	< 0.011 U	0.14	< 0.01 U	0.0045 J	0.0044 J	< 0.011 U	0.0026 J	0.047	< 0.011 U	< 0.01 U		
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	0.093 J	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.27 U	0.12 J	< 0.29 U	< 0.27 U		< 0.25 U	0.13 J	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	0.12 J	< 0.24 U	< 0.28 UJ	< 0.26 U		
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.055 U	< 0.042 U	< 0.058 UJ	< 0.054 UJ		< 0.05 U	< 0.052 UJ	< 0.056 U	0.0052 J	< 0.052 UJ	< 0.054 UJ	< 0.056 U	< 0.056 U	< 0.053 UJ	< 0.049 U	< 0.055 U	< 0.052 UJ		
CAPROLACTAM	105-60-2	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
CARBAZOLE	86-74-8	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
CHRYSENE	218-01-9	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		0.17 J	< 0.26 U	< 0.28 U	0.11 J	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.0048 J	< 0.0085 UJ	< 0.012 U	< 0.011 U		0.028	0.0033 J	< 0.011 UJ	0.02 J	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	0.0025 J	0.0099 J	< 0.011 U	< 0.01 U		
DIBENZOFURAN	132-64-9	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.055 U	< 0.042 U	< 0.058 U	< 0.054 U		< 0.05 U	< 0.052 U	< 0.056 U	< 0.053 U	< 0.052 U	< 0.054 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.049 U	< 0.055 U	< 0.052 U		
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
FLUORANTHENE	206-44-0	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		0.39	< 0.26 U	< 0.28 U	0.21 J	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
FLUORENE	86-73-7	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
HEXACHLOROBENZENE	118-74-1	mg/kg	0.004 J	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	0.0083 J	0.017 J	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 UJ	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.023	0.0044 J	< 0.012 U	< 0.011 U		0.12	0.016 J	0.0059 J	0.095	< 0.01 U	0.0064 J	0.0069 J	0.0056 J	0.0063 J	0.048	< 0.011 U	< 0.01 U		
ISOPHORONE	78-59-1	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
NAPHTHALENE	91-20-3	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		0.017 J	< 0.01 U	< 0.011 U	0.0043 J	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
NITROBENZENE	98-95-3	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.011 U	< 0.0085 U	< 0.012 U	< 0.011 U		< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.011 U	< 0.01 U		
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.055 U	< 0.042 U	< 0.058 U	< 0.054 U		< 0.05 U	< 0.052 U	< 0.056 U	< 0.053 U	< 0.052 U	< 0.054 U	< 0.056 U	< 0.056 U	< 0.053 U	< 0.049 UJ	< 0.055 UJ	< 0.052 U		
PHENANTHRENE	85-01-8	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		0.33 J	< 0.26 U	< 0.28 U	0.13 J	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
PHENOL	108-95-2	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		< 0.25 U	< 0.26 U	< 0.28 U	< 0.26 U	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
PYRENE	129-00-0	mg/kg	< 0.27 U	< 0.21 U	< 0.29 U	< 0.27 U		0.27 J	< 0.26 U	< 0.28 U	0.13 J	< 0.26 U	< 0.27 U	< 0.28 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.28 UJ	< 0.26 U		
PAHs																					
2-METHYLNAPHTHALENE	91-57-6	mg/kg																			
ACENAPHTHENE	83-32-9	mg/kg																			
ACENAPHTHYLENE	208-96-8	mg/kg																			
ANTHRACENE	120-12-7	mg/kg																			
BENZO[A]ANTHRACENE	56-55-3	mg/kg																			
BENZO[A]PYRENE	50-32-8	mg/kg																			
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																			
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																			
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																			
CHRYSENE	218-01-9	mg/kg																			
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																			
FLUORANTHENE	206-44-0	mg/kg																			
FLUORENE	86-73-7	mg/kg																			
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																			
NAPHTHALENE	91-20-3	mg/kg																			
PHENANTHRENE	85-01-8	mg/kg																			
PYRENE	129-00-0	mg/kg																			

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 1	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SB-206	FTA-SB-206	FTA-SB-208	FTA-SB-208	FTA-SB-208	FTA-SB-209	FTA-SB-209	FTA-SB-209	FTA-SB-210	FTA-SB-210	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-211	FTA-SB-212	FTA-SB-212	FTA-SB-212	FTA-SB-212
		sample_date	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/6/2012	11/5/2012	11/5/2012	11/8/2012	11/2/2016
		sys_sample_code	FTA-SB-206-0002	FTA-SB-206-0206	FTA-SB-208-0002	FTA-SB-208-0610	FTA-SB-208-SS-N-110216	FTA-SB-209-0002	FTA-SB-209-0206	FTA-SB-209-0610	FTA-SB-210-0002	FTA-SB-210-0610	FTA-SB-211-0002-D	FTA-SB-211-0002	FTA-SB-211-0206	FTA-SB-211-0610	FTA-SB-211-0610	FTA-SB-212-0002	FTA-SB-212-0206	FTA-SB-212-0610	FTA-SB-212-SS-N-110216
		sample_type_code	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	6 - 10 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft
Compound	CAS	Units																			
VOCs																					
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 U	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																			
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 U	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 U	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	0.0011 J	0.0028 J	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																			
1,2-DIBROMOETHANE	106-93-4	mg/kg																			
1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	0.0033 J	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 U	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,2-DICHLOROPROPANE	78-87-5	mg/kg																			
1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	0.0042 J	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	0.00069 J	0.0024 J	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
2-BUTANONE	78-93-3	mg/kg																			
2-HEXANONE	591-78-6	mg/kg	< 0.014 U	< 0.0098 U	< 0.014 U	< 0.019 U		< 0.0096 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0099 U	< 0.012 U	< 0.01 U	< 0.01 U		
4-METHYL-2-PENTANONE	108-10-1	mg/kg																			
ACETONE	67-64-1	mg/kg	0.059	0.025	0.29	< 0.067 U		0.12	0.15	0.012 J	< 0.089 U	< 0.026 U	0.13	0.15	< 0.0099 U	0.0067 J	< 0.021 U	< 0.01 U	< 0.024 U		
BENZENE	71-43-2	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
BROMODICHLOROMETHANE	75-27-4	mg/kg																			
BROMOFORM	75-25-2	mg/kg																			
BROMOMETHANE	74-83-9	mg/kg																			
CARBON DISULFIDE	75-15-0	mg/kg																			
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 U	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
CHLOROBENZENE	108-90-7	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
CHLOROETHANE	75-00-3	mg/kg	< 0.0055 U	< 0.0039 U	< 0.0055 U	< 0.0075 U		< 0.0038 U	< 0.0048 U	< 0.0042 U	< 0.005 U	< 0.004 U	< 0.0049 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.005 U	< 0.004 U	< 0.004 U		
CHLOROFORM	67-66-3	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
CHLOROMETHANE	74-87-3	mg/kg	< 0.0055 U	< 0.0039 U	< 0.0055 U	< 0.0075 U		< 0.0038 U	< 0.0048 U	< 0.0042 U	< 0.005 U	< 0.004 U	< 0.0049 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.005 U	< 0.004 U	< 0.004 UJ		
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																			
CYCLOHEXANE	110-82-7	mg/kg																			
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																			
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																			
ETHYLBENZENE	100-41-4	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0055 U	< 0.0039 U	< 0.0055 U	< 0.0075 U		< 0.0038 U	< 0.0048 U	< 0.0042 U	< 0.005 UJ	< 0.004 U	< 0.0049 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.005 U	< 0.004 U	< 0.004 U		
METHYL ACETATE	79-20-9	mg/kg																			
METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 U	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.014 U	< 0.0098 U	< 0.014 U	< 0.019 U		< 0.0096 U	< 0.012 U	< 0.011 U	< 0.012 U	< 0.01 U	< 0.012 U	< 0.011 U	< 0.0099 U	< 0.0099 U	< 0.012 U	< 0.01 U	< 0.01 U		
O-XYLENE	95-47-6	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
STYRENE	100-42-5	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
TOLUENE	108-88-3	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0028 U	< 0.002 U	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																			
TRICHLOROETHENE	79-01-6	mg/kg	< 0.0028 U	0.0016 J	< 0.0028 U	< 0.0038 U		< 0.0019 U	< 0.0024 U	< 0.0021 U	< 0.0025 UJ	< 0.002 U	< 0.0024 U	< 0.0022 U	< 0.002 U	< 0.002 U	< 0.0025 U	< 0.002 U	< 0.002 U		
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																			
VINYL CHLORIDE	75-01-4	mg/kg	< 0.0055 U	< 0.0039 U	< 0.0055 U	< 0.0075 U		< 0.0038 U	< 0.0048 U	< 0.0042 U	< 0.005 U	< 0.004 U	< 0.0049 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.005 U	< 0.004 U	< 0.004 U		
XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0055 U	< 0.0039 U	< 0.0055 U	< 0.0075 U		< 0.0038 U	< 0.0048 U	< 0.0042 U	< 0.005 U	< 0.004 U	< 0.0049 U	< 0.0045 U	< 0.004 U	< 0.004 U	< 0.005 U	< 0.004 U	< 0.004 U		
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0083 U	< 0.0059 U	< 0.0083 U	< 0.0113 U		< 0.0057 U	< 0.0072 U	< 0.0063 U	< 0.0075 U	< 0.006 U	< 0.0073 U	< 0.0067 U	< 0.006 U	< 0.006 U	< 0.0075 U	< 0.006 U	< 0.006 U		
			158	158	158	158	3	158	158	158	158	158	158	158	158	158	158	158	158	158	3

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 1	Area 1	Area 1	Area 1	Area 1
			sys_loc_code	FTA-SB-213	FTA-SB-213	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-215	FTA-SB-215	FTA-SB-215	FTA-SB-215	FTA-SB-216	FTA-SB-216	FTA-SB-216	FTA-SB-217	FTA-SB-217	FTA-SB-217	FTA-SB-218	FTA-SB-218
			sample_date	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/1/2016	11/7/2012	11/7/2012	11/2/2016	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
			sys_sample_code	FTA-SB-213-0002	FTA-SB-213-0610	FTA-SB-214-0002-D	FTA-SB-214-0002	FTA-SB-214-0206	FTA-SB-214-SS-N-110216	FTA-SB-215-0002	FTA-SB-215-0610	FTA-SB-215-SS-D-110216	FTA-SB-215-SS-N-110216	FTA-SB-216-0002	FTA-SB-216-0206	FTA-SB-216-0610	FTA-SB-217-0002-D	FTA-SB-217-0002	FTA-SB-217-0206	FTA-SB-218-0002	FTA-SB-218-0610
			sample_type_code	N	N	FD	N	N	N	N	N	FD	N	N	N	N	FD	N	N	N	N
			depth_interval	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	6 - 10 ft
Compound	CAS	Units																			
Metals																					
ALUMINUM	7429-90-5	mg/kg	11700	14300	13000	13500	26100		15100	23000			8970	12500	19100	13300	11600	15300	16600	19100
ANTIMONY	7440-36-0	mg/kg	0.09 J	0.08 J	0.05 J	0.18 J	0.2 J		0.1 J	0.18 J			0.1	0.05 J	0.15	0.06 J	0.06 J	0.07 J	0.06 J	0.12 J
ARSENIC	7440-38-2	mg/kg	9 J	9.8 J	6.1 J	7 J	25.1 J		7.6	13.9			5.3	5.6	12.2	7.3	6.5	8.5	5.5	11
BARIUM	7440-39-3	mg/kg	21.8	30.3	17.4	16.7	88		28.9	65			27.3	17.6	49.9	27.2	20.4	23.8	11.7	49.1
BERYLLIUM	7440-41-7	mg/kg	0.48	0.51	0.41 J	0.47	1.2		0.35 J	0.87 J			0.28 J	0.38	0.76	0.38 J	0.32 J	0.36 J	0.26 J	0.64 J
CADMIUM	7440-43-9	mg/kg	0.08 J	0.08	0.09	0.08	0.14		0.1	0.09 J			0.13	0.05 J	0.07 J	0.06 J	0.06 J	0.06 J	0.04 J	0.08
CALCIUM	7440-70-2	mg/kg	1680	4140	3480	3260	4710		2690	7140			5840	2660	5000	2240	1790	2970	1740	1600
CHROMIUM, TOTAL	7440-47-3	mg/kg	21.8 J	38.3 J	32.7 J	41.4 J	47 J	19.5 J	27.6 J	42.9 J	32.9 J	23.6 J	22	27.4	35.9	23.8 J	21.4 J	35.8 J	25.1 J	35.7 J
CHROMIUM III (c)	16065-83-1	mg/kg						20			33	24								
CHROMIUM VI	18540-29-9	mg/kg						< 0.33 U			< 0.32 U	< 0.32 U								
COBALT	7440-48-4	mg/kg	11.5	11.3	10.3	12.2	18.9		9.6	16.5			7.8	8.9	14.8	10.4	10.3	12.8	8.2	13.8
COPPER	7440-50-8	mg/kg	21.2	20.8	18.9	27.3	33		21.6	29.7			32.1	24.7	26.7	25.2	21.2	24.3	6.3	29.4
IRON	7439-89-6	mg/kg	19200	23800	20700	27300	43100		22300	36600			16400	25500	34600	19700	18000	23900	19500	33000
LEAD	7439-92-1	mg/kg	11.4 J	16.4 J	10.2 J	10.4 J	19.6 J		12.5 J	16.1 J			9.3	8.5	14.5	8.7 J	20.1 J	8.9 J	7.9 J	13.6 J
MAGNESIUM	7439-95-4	mg/kg	5040	7620	7500	8860	10500		6910	10300			5170	7680	10100	6570	5400	7620	5490	8190
MANGANESE	7439-96-5	mg/kg	470	455	474	576	1530		498	714			345	510	650	469	452	521	342	630
MERCURY	7439-97-6	mg/kg	< 0.018 U	0.009 J	< 0.013 U	< 0.016 U	< 0.021 U		0.03 J	0.03 J			0.03 J	< 0.013 U	< 0.02 U	0.01 J	0.01 J	0.008 J	0.04	0.04
NICKEL	7440-02-0	mg/kg	21.1	24.8	23	28.7	45.9		21.5	39.7			17.9	22.8	36.3	22.4	20.5	28.9	18.3	31
POTASSIUM	7440-09-7	mg/kg	949 J	1780 J	760 J	791 J	5640 J		1000 J	4290 J			850	904	3210	823 J	627 J	946 J	436 J	1780 J
SELENIUM	7782-49-2	mg/kg	0.21 J	0.28 J	0.19 J	0.24 J	0.3 J		< 0.45 U	< 0.45 U			0.4	0.27 J	0.55	< 0.27 U	< 0.27 U	< 0.25 U	< 0.35 U	< 0.31 U
SILVER	7440-22-4	mg/kg	0.05 J	0.08	0.03 J	0.03 J	0.07 J		0.05 J	0.07 J			0.22	0.03 J	0.05 J	0.04 J	0.05 J	0.03 J	0.03 J	0.03 J
SODIUM	7440-23-5	mg/kg	96.2 J	228 J	159 J	118 J	335 J		< 145 U	318			118	116 J	249	< 100 U	< 73.8 U	< 167 U	< 61.2 U	< 101 U
THALLIUM	7440-28-0	mg/kg	0.08 J	0.14 J	0.06 J	0.06 J	0.26 J		0.09 J	0.19 J			0.06 J	0.07 J	0.15	0.07 J	0.07 J	0.06 J	0.05 J	0.11 J
VANADIUM	7440-62-2	mg/kg	27.5	40.9	30.4	36.6	56.2		38.6	54.3			24.8	33.7	45.8	28.6	28.9	39	28.4	42.4
ZINC	7440-66-6	mg/kg	43.3	53.6	44.8	47	81.1		50.8	74.1			63.2	41.7	70.5	38.5	35.1	47.6	34.5	63.4
PCBs																					
AROCLOR-1016	12674-11-2	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.0096 U	< 0.01 U	< 0.0099 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.012 U			< 0.011 U	< 0.0099 U	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0098 U	< 0.012 U	< 0.011 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
AROCLOR-1260	11096-82-5	mg/kg	0.054	< 0.0088 U	0.71	0.6	< 0.0099 U		1.1	< 0.01 U			0.46	0.078	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
AROCLOR-1262	37324-23-5	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
AROCLOR-1268	11100-14-4	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U	< 0.009 U	< 0.0092 U	< 0.0094 U	< 0.0083 U	< 0.01 U	< 0.0096 U
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.054	< 0.01 U	0.71	0.60	< 0.012 U		1.1	< 0.012 U			0.46	0.078	< 0.011 U	< 0.011 U	< 0.011 U	< 0.0098 U	< 0.012 U	< 0.011 U
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	0.121	< 0.0804 U	0.7787	0.6716	< 0.0912 U		1.1761	< 0.092 U			0.5389	0.1467	< 0.083 U	< 0.0846 U	< 0.0862 U	< 0.0762 U	< 0.092 U	< 0.0878 U
Pesticides																					
4,4-DDD	72-54-8	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 U	< 0.002 U			< 0.0019 U	< 0.0016 U						
4,4-DDE	72-55-9	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 U	< 0.002 U			< 0.0019 U	< 0.0016 U						
4,4-DDT	50-29-3	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 U	< 0.002 U			< 0.0019 U	< 0.0016 U						
ALDRIN	309-00-2	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
ALPHA-BHC	319-84-6	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
BETA-BHC	319-85-7	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
DELTA-BHC	319-86-8	mg/kg	< 0.00082 UJ	< 0.00088 UJ	< 0.00084 UJ	< 0.00088 UJ	< 0.00099 UJ		< 0.00093 UJ	< 0.001 UJ			< 0.00097 UJ	< 0.00084 UJ						
DIELDRIN	60-57-1	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 U	< 0.002 U			< 0.0019 U	< 0.0016 U						
ENDOSULFAN I	959-98-8	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
ENDOSULFAN II	33213-65-9	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 U	< 0.002 U			< 0.0019 U	< 0.0016 U						
ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 UJ	< 0.002 UJ			< 0.0019 U	< 0.0016 U						
ENDRIN	72-20-8	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 U	< 0.002 U			< 0.0019 U	< 0.0016 U						
ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0016 U	< 0.0017 U	< 0.0016 U	< 0.0017 U	< 0.0019 U		< 0.0018 U	< 0.002 U			< 0.0019 U	< 0.0016 U						
ENDRIN KETONE	53494-70-5	mg/kg	0.005 J	< 0.0017 U	0.083 J	0.079 J	< 0.0019 U		0.13 J	< 0.002 UJ			0.067 J	0.0097 J						
HEPTACHLOR	76-44-8	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
LINDANE	58-89-9	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						
METHOXYCHLOR	72-43-5	mg/kg	< 0.0082 U	< 0.0088 U	< 0.0084 U	< 0.0088 U	< 0.0099 U		< 0.0093 U	< 0.01 U			< 0.0097 U	< 0.0084 U						
TOXAPHENE	8001-35-2	mg/kg	< 0.016 U	< 0.017 U	< 0.016 U	< 0.017 U	< 0.019 U		< 0.018 U	< 0.02 U			< 0.019 U	< 0.016 U						
TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00082 U	< 0.00088 U	< 0.00084 U	< 0.00088 U	< 0.00099 U		< 0.00093 U	< 0.001 U			< 0.00097 U	< 0.00084 U						

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 1	Area 1	Area 1	Area 1	Area 1
		sys_loc_code	FTA-SB-213	FTA-SB-213	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-215	FTA-SB-215	FTA-SB-215	FTA-SB-215	FTA-SB-216	FTA-SB-216	FTA-SB-216	FTA-SB-217	FTA-SB-217	FTA-SB-217	FTA-SB-218	FTA-SB-218
		sample_date	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/1/2016	11/7/2012	11/7/2012	11/2/2016	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
		sys_sample_code	FTA-SB-213-0002	FTA-SB-213-0610	FTA-SB-214-0002-D	FTA-SB-214-0002	FTA-SB-214-0206	FTA-SB-214-SS-N-110216	FTA-SB-215-0002	FTA-SB-215-0610	FTA-SB-215-SS-D-110216	FTA-SB-215-SS-N-110216	FTA-SB-216-0002	FTA-SB-216-0206	FTA-SB-216-0610	FTA-SB-217-0002-D	FTA-SB-217-0002	FTA-SB-217-0206	FTA-SB-218-0002	FTA-SB-218-0610
		sample_type_code	N	N	FD	N	N	N	N	N	FD	N	N	N	N	FD	N	N	N	N
		depth_interval	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	6 - 10 ft
Compound	CAS	Units																		
SVOCs																				
1,1-BIPHENYL	92-52-4	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			0.055	0.0018 J	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	0.0018 J	0.0014 J
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
1,4-DIOXANE	123-91-1	mg/kg	< 0.044 U	< 0.051 U	< 0.049 U	< 0.05 U	< 0.06 U		< 0.055 U	< 0.057 U			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	< 0.05 U	< 0.048 U	< 0.062 U	< 0.055 UJ
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.044 U	< 0.051 U	< 0.049 U	< 0.05 U	< 0.06 U		< 0.055 U	< 0.057 U			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	< 0.05 U	< 0.048 U	0.0041 J	0.0033 J
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.54 U	< 0.62 U	< 0.6 U	< 0.62 U	< 0.74 U		< 0.68 U	< 0.7 U			< 0.64 U	< 0.62 U	< 0.7 U	< 0.65 U	< 0.61 U	< 0.59 U	< 0.77 U	< 0.67 U
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.044 U	< 0.051 U	< 0.049 U	< 0.05 U	< 0.06 U		< 0.055 U	< 0.057 U			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	< 0.05 U	< 0.048 U	< 0.062 U	< 0.055 U
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.066 UJ	< 0.076 UJ	< 0.073 UJ	< 0.076 UJ	< 0.09 UJ		< 0.082 UJ	< 0.085 UJ			< 0.078 UJ	< 0.075 UJ	< 0.086 UJ	< 0.079 UJ	< 0.074 UJ	< 0.072 UJ	< 0.094 UJ	< 0.082 UJ
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.044 U	< 0.051 U	< 0.049 U	< 0.05 U	< 0.06 U		< 0.055 U	< 0.057 U			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	< 0.05 U	< 0.048 U	< 0.062 U	< 0.055 U
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			0.21 J	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
2-METHYLPHENOL	95-48-7	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
2-NITROANILINE	88-74-4	mg/kg	< 0.54 U	< 0.62 U	< 0.6 U	< 0.62 U	< 0.74 U		< 0.68 U	< 0.7 U			< 0.64 UJ	< 0.62 U	< 0.7 U	< 0.65 U	< 0.61 U	< 0.59 U	< 0.77 U	< 0.67 U
2-NITROPHENOL	88-75-5	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 UJ	< 0.011 UJ	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	UR
3-NITROANILINE	99-09-2	mg/kg	< 0.54 U	< 0.62 U	< 0.6 U	< 0.62 U	< 0.74 U		< 0.68 U	< 0.7 U			< 0.64 U	< 0.62 U	< 0.7 U	< 0.65 U	< 0.61 U	< 0.59 U	< 0.77 U	< 0.67 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.088 U	< 0.1 U	< 0.098 U	< 0.1 U	< 0.12 U		< 0.11 U	< 0.11 U			< 0.1 U	< 0.1 U	< 0.11 U	< 0.1 U	< 0.099 U	< 0.096 U	< 0.12 U	< 0.11 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
4-CHLOROANILINE	106-47-8	mg/kg	< 0.044 U	< 0.051 U	< 0.049 U	< 0.05 U	< 0.06 U		< 0.055 UJ	< 0.057 UJ			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 UJ	< 0.05 UJ	< 0.048 UJ	< 0.062 UJ	< 0.055 UJ
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
4-NITROANILINE	100-01-6	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
4-NITROPHENOL	100-02-7	mg/kg	< 0.54 UJ	< 0.62 UJ	< 0.6 UJ	< 0.62 UJ	< 0.74 UJ		< 0.68 U	< 0.7 U			< 0.64 UJ	< 0.62 UJ	< 0.7 UJ	< 0.65 U	< 0.61 U	< 0.59 U	< 0.77 U	< 0.67 U
ACENAPHTHENE	83-32-9	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			1.7	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
ACETOPHENONE	98-86-2	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
ANTHRACENE	120-12-7	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			2.8	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
ATRAZINE	1912-24-9	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	0.0019 J	0.0018 J
BENZALDEHYDE	100-52-7	mg/kg	< 0.22 UJ	< 0.25 UJ	< 0.24 UJ	< 0.25 UJ	< 0.3 UJ		< 0.27 U	< 0.28 U			< 0.26 UJ	< 0.25 UJ	< 0.28 UJ	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		0.024	< 0.011 U			6.6	0.14	< 0.011 U	0.0034 J	0.002 J	< 0.0096 U	0.0032 J	0.0032 J
BENZO[A]PYRENE	50-32-8	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	0.0042 J	< 0.012 U		0.024	< 0.011 U			4.3	0.1	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		0.037	< 0.011 U			6.1	0.16	< 0.011 U	0.0045 J	0.0029 J	< 0.0096 U	0.0048 J	0.0033 J
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			1.5	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			2.3	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	0.68		< 0.27 U	< 0.28 U			0.22 J	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.044 U	< 0.051 U	< 0.049 U	0.0044 J	< 0.06 U		0.0049 J	< 0.057 U			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	< 0.05 U	< 0.048 U	< 0.062 U	< 0.055 U
CAPROLACTAM	105-60-2	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
CARBAZOLE	86-74-8	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			0.76	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
CHRYSENE	218-01-9	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			6	0.14 J	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		0.008 J	< 0.011 U			0.92 J	0.021 J	< 0.011 UJ	< 0.01 U	< 0.0099 U	< 0.0096 U	0.0031 J	0.0031 J
DIBENZOFURAN	132-64-9	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			0.62	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.044 U	< 0.051 U	< 0.049 U	< 0.05 U	< 0.06 U		< 0.055 U	< 0.057 U			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	< 0.05 U	< 0.048 U	< 0.062 U	< 0.055 U
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
FLUORANTHENE	206-44-0	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			14	0.29 J	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
FLUORENE	86-73-7	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			1.3	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		0.031	< 0.011 U			4.7 J	0.1	0.0058 J	0.0067 J	0.0052 J	< 0.0096 U	0.008 J	0.0085 J
ISOPHORONE	78-59-1	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
NAPHTHALENE	91-20-3	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			0.16	0.0076 J	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
NITROBENZENE	98-95-3	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
N-NITROSODIPROPYLAMINE	621-64-7	mg/kg	< 0.0088 U	< 0.01 U	< 0.0098 U	< 0.01 U	< 0.012 U		< 0.011 U	< 0.011 U			< 0.01 U	< 0.01 U	< 0.011 U	< 0.01 U	< 0.0099 U	< 0.0096 U	< 0.012 U	< 0.011 U
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.044 UJ	< 0.051 UJ	< 0.049 UJ	< 0.05 UJ	< 0.06 UJ		< 0.055 U	< 0.057 U			< 0.052 U	< 0.05 U	< 0.057 U	< 0.053 U	< 0.05 U	< 0.048 U	< 0.062 U	< 0.055 U
PHENANTHRENE	85-01-8	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			9.3	0.2 J	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
PHENOL	108-95-2	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			< 0.26 U	< 0.25 U	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
PYRENE	129-00-0	mg/kg	< 0.22 U	< 0.25 U	< 0.24 U	< 0.25 U	< 0.3 U		< 0.27 U	< 0.28 U			11	0.18 J	< 0.28 U	< 0.26 U	< 0.24 U	< 0.24 U	< 0.31 U	< 0.27 U
PAHs																				
2-METHYLNAPHTHALENE	91-57-6	mg/kg																		
ACENAPHTHENE	83-32-9	mg/kg																		
ACENAPHTHYLENE	208-96-8	mg/kg																		
ANTHRACENE	120-12-7	mg/kg																		
BENZO[A]ANTHRACENE	56-55-3	mg/kg																		
BENZO[A]PYRENE	50-32-8	mg/kg																		
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																		
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																		
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																		
CHRYSENE	218-01-9	mg/kg																		
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																		
FLUORANTHENE	206-44-0	mg/kg																		
FLUORENE	86-73-7	mg/kg																		
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																		
NAPHTHALENE	91-20-3	mg/kg																		
PHENANTHRENE	85-01-8	mg/kg																		
PYRENE	129-00-0	mg/kg																		

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 1	Area 1	Area 1	Area 1	Area 1
			sys_loc_code	FTA-SB-213	FTA-SB-213	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-215	FTA-SB-215	FTA-SB-215	FTA-SB-215	FTA-SB-216	FTA-SB-216	FTA-SB-216	FTA-SB-217	FTA-SB-217	FTA-SB-217	FTA-SB-218	FTA-SB-218
			sample_date	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/5/2012	11/1/2016	11/7/2012	11/7/2012	11/2/2016	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012	11/7/2012
			sys_sample_code	FTA-SB-213-0002	FTA-SB-213-0610	FTA-SB-214-0002-D	FTA-SB-214-0002	FTA-SB-214-0206	FTA-SB-214-SS-N-110216	FTA-SB-215-0002	FTA-SB-215-0610	FTA-SB-215-SS-D-110216	FTA-SB-215-SS-N-110216	FTA-SB-216-0002	FTA-SB-216-0206	FTA-SB-216-0610	FTA-SB-217-0002-D	FTA-SB-217-0002	FTA-SB-217-0206	FTA-SB-218-0002	FTA-SB-218-0610
			sample_type_code	N	N	FD	N	N	N	N	N	FD	N	N	N	N	FD	N	N	N	N
			depth_interval	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	6 - 10 ft	0 - 2 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	6 - 10 ft
Compound	CAS	Units																			
VOCs																					
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																		
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																		
1,2-DIBROMOETHANE	106-93-4	mg/kg																		
1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
1,2-DICHLOROPROPANE	78-87-5	mg/kg																		
1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
2-BUTANONE	78-93-3	mg/kg																		
2-HEXANONE	591-78-6	mg/kg	< 0.012 U	< 0.01 U	< 0.011 U	< 0.012 U	< 0.01 U		< 0.011 U	< 0.014 U			< 0.014 U	< 0.01 U	< 0.015 U	< 0.01 U	< 0.018 U	< 0.01 U	< 0.012 U	< 0.011 U
4-METHYL-2-PENTANONE	108-10-1	mg/kg																		
ACETONE	67-64-1	mg/kg	< 0.16 U	< 0.016 U	< 0.035 U	< 0.012 U	< 0.012 U		0.14	0.01 J			0.12	0.043	0.032	0.047	0.059	0.022	0.13	0.13
BENZENE	71-43-2	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
BROMODICHLOROMETHANE	75-27-4	mg/kg																		
BROMOFORM	75-25-2	mg/kg																		
BROMOMETHANE	74-83-9	mg/kg																		
CARBON DISULFIDE	75-15-0	mg/kg																		
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
CHLOROBENZENE	108-90-7	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
CHLOROETHANE	75-00-3	mg/kg	< 0.0046 U	< 0.0041 U	< 0.0044 U	< 0.005 U	< 0.004 U		< 0.0042 U	< 0.0055 U			< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	< 0.007 U	< 0.0041 U	< 0.005 U	< 0.0043 U
CHLOROFORM	67-66-3	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
CHLOROMETHANE	74-87-3	mg/kg	< 0.0046 U	< 0.0041 U	< 0.0044 U	< 0.005 U	< 0.004 U		< 0.0042 U	< 0.0055 U			< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	< 0.007 U	< 0.0041 U	< 0.005 U	< 0.0043 U
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																		
CYCLOHEXANE	110-82-7	mg/kg																		
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																		
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																		
ETHYLBENZENE	100-41-4	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		0.002 J	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0046 U	< 0.0041 U	< 0.0044 U	< 0.005 U	< 0.004 U		< 0.0042 U	< 0.0055 U			< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	< 0.007 U	< 0.0041 U	< 0.005 U	< 0.0043 UJ
METHYL ACETATE	79-20-9	mg/kg																		
METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.012 U	< 0.01 U	< 0.011 U	< 0.012 U	< 0.01 U		< 0.011 U	< 0.014 U			< 0.014 U	< 0.01 U	< 0.015 U	< 0.01 U	< 0.018 U	< 0.01 U	< 0.012 U	< 0.011 U
O-XYLENE	95-47-6	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
STYRENE	100-42-5	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 UJ
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
TOLUENE	108-88-3	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		0.0032 J	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																		
TRICHLOROETHENE	79-01-6	mg/kg	< 0.0023 U	< 0.002 U	< 0.0022 U	< 0.0025 U	< 0.002 U		< 0.0021 U	< 0.0028 U			< 0.0028 U	< 0.0021 U	< 0.003 U	< 0.002 U	< 0.0035 U	< 0.002 U	< 0.0025 U	< 0.0022 U
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																		
VINYL CHLORIDE	75-01-4	mg/kg	< 0.0046 U	< 0.0041 U	< 0.0044 U	< 0.005 U	< 0.004 U		< 0.0042 U	< 0.0055 U			< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	< 0.007 U	< 0.0041 U	< 0.005 U	< 0.0043 U
XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0046 U	< 0.0041 U	< 0.0044 U	< 0.005 U	< 0.004 U		< 0.0042 U	< 0.0055 U			< 0.0055 U	< 0.0042 U	< 0.006 U	< 0.004 U	< 0.007 U	< 0.0041 U	< 0.005 U	< 0.0043 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0069 U	< 0.0061 U	< 0.0066 U	< 0.0075 U	< 0.006 U		< 0.0063 U	< 0.0083 U			< 0.0083 U	< 0.0063 U	< 0.009 U	< 0.006 U	< 0.0105 U	< 0.0061 U	< 0.0075 U	< 0.0065 U
			158	158	158	158	158	3	158	158	3	3	158	158	137	137	137	137	137	137

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SB-219	FTA-SB-219	FTA-SB-220	FTA-SB-220	FTA-SB-220	FTA-WANOM1-SO-BOTPCB	DDA-E-1E	DDA-E-1E	DDA-N-2A	DDA-N-3A	DDA-N-3A	DDA-N-5A	DDA-N-5A	DDA-N-5A	DDA-NE-10D	DDA-NE-10D
		sample_date	11/8/2012	11/8/2012	11/6/2012	11/6/2012	11/2/2016	9/25/2013	7/15/2011	7/15/2011	8/16/2010	8/16/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	7/15/2011	7/15/2011
		sys_sample_code	FTA-SB-219-0002	FTA-SB-219-0206	FTA-SB-220-0002	FTA-SB-220-0206	FTA-SB-220-SS-N-110216	FTA-WANOM1-SO-BOTPCB	DDA-E-01E-SO-0002	DDA-E-01E-SO-0608	DDA-N-2A-SO-0507	DDA-N-3A-SO-0305	DDA-N-3A-SO-0709	DDA-N-5A-SO-0002	DDA-N-5A-SO-0406	DDA-N-5A-SO-0608	DDA-NE-10D-SO-0002-D	DDA-NE-10D-SO-0002
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 3 ft	0 - 2 ft	6 - 8 ft	5 - 7 ft	3 - 5 ft	7 - 9 ft	0 - 2 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																
Metals																		
ALUMINUM	7429-90-5	mg/kg	8460	10700	11600	14900		13400										
ANTIMONY	7440-36-0	mg/kg	0.09 J	0.1 J	0.06 J	0.07 J		0.11 J										
ARSENIC	7440-38-2	mg/kg	3.6 J	8 J	4.6 J	7.2 J		9.2 J										
BARIUM	7440-39-3	mg/kg	33.6 J	19.2 J	18.6	20.7		27										
BERYLLIUM	7440-41-7	mg/kg	0.63	0.48	0.38 J	0.47		0.53										
CADMIUM	7440-43-9	mg/kg	0.37	0.07	0.07 J	0.07		0.22										
CALCIUM	7440-70-2	mg/kg	3500	2160	2360	2510		2860										
CHROMIUM, TOTAL	7440-47-3	mg/kg	13.9 J	20.6 J	38.9 J	43.8 J	24.0 J	26.7 J										
CHROMIUM III (c)	16065-83-1	mg/kg					24											
CHROMIUM VI	18540-29-9	mg/kg					< 0.77 U											
COBALT	7440-48-4	mg/kg	11.9	8.3	8.6	12.8		12.2										
COPPER	7440-50-8	mg/kg	8 J	18.2 J	12.9	24.6		25.6										
IRON	7439-89-6	mg/kg	18300 J	17900 J	17200	26900		22200										
LEAD	7439-92-1	mg/kg	5.2 J	7.2 J	7.3 J	9.3 J		10.7 J										
MAGNESIUM	7439-95-4	mg/kg	3310 J	5150 J	6700	9690		7390										
MANGANESE	7439-96-5	mg/kg	2220	417	315	530		1290										
MERCURY	7439-97-6	mg/kg	0.04 J	0.03 J	0.005 J	< 0.017 U		0.006 J										
NICKEL	7440-02-0	mg/kg	7.1	17.5	21.9	35.4		29.1 J										
POTASSIUM	7440-09-7	mg/kg	583 J	945 J	732 J	918 J		1320 J										
SELENIUM	7782-49-2	mg/kg	2.4	< 0.37 U	0.28 J	0.23 J		0.17 J										
SILVER	7440-22-4	mg/kg	0.03 J	0.03 J	0.02 J	0.03 J		0.03 J										
SODIUM	7440-23-5	mg/kg	110 J	110 J	91.7 J	112 J		158										
THALLIUM	7440-28-0	mg/kg	0.1 J	0.07	0.05 J	0.07 J		0.15										
VANADIUM	7440-62-2	mg/kg	34.2	24.2	28.8	39.8		32 J										
ZINC	7440-66-6	mg/kg	39 J	34 J	38	43		48.1 J										
PCBs																		
AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.0096 U	< 0.0089 U	< 0.0089 U		< 0.0082 U	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.0096 U	< 0.0089 U	< 0.0089 U		< 0.0082 U	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.021 U	< 0.011 U	< 0.01 U	< 0.01 U		< 0.0097 U	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.0096 U	< 0.0089 U	< 0.0089 U		< 0.0082 U	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.0096 U	< 0.0089 U	< 0.0089 U		< 0.0082 U	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.0096 U	< 0.0089 U	< 0.0089 U		< 0.0082 U	< 0.018 U	< 0.018 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U
AROCLOR-1260	11096-82-5	mg/kg	0.041	< 0.0096 U	1.5	< 0.0089 U		0.44	3.45	< 0.018 U	0.3 J	17.7	< 0.0165 U	0.599	< 0.0165 U	< 0.0165 U	10.6	7.4
AROCLOR-1262	37324-23-5	mg/kg	< 0.018 U	< 0.0096 U	< 0.0089 U	< 0.0089 U		< 0.0082 U										
AROCLOR-1268	11100-14-4	mg/kg	< 0.018 U	< 0.0096 U	< 0.0089 U	< 0.0089 U		< 0.0082 U										
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.041	< 0.011 U	1.5	< 0.01 U		0.44	3.45	< 0.018 U	0.3	17.7	< 0.0165 U	0.599	< 0.0165 U	< 0.0165 U	10.6	7.4
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	0.188	< 0.0878 U	1.5723	< 0.0812 U		0.5071	3.558	< 0.126 U	0.42	17.808	< 0.1155 U	0.698	< 0.1155 U	< 0.1155 U	10.708	7.508
Pesticides																		
4,4-DDD	72-54-8	mg/kg						< 0.0016 UJ										
4,4-DDE	72-55-9	mg/kg						< 0.0016 UJ										
4,4-DDT	50-29-3	mg/kg						< 0.0016 UJ										
ALDRIN	309-00-2	mg/kg						< 0.00082 UJ										
ALPHA-BHC	319-84-6	mg/kg						< 0.00082 UJ										
ALPHA-CHLORDANE	5103-71-9	mg/kg						< 0.00082 UJ										
BETA-BHC	319-85-7	mg/kg						< 0.00082 UJ										
DELTA-BHC	319-86-8	mg/kg						< 0.00082 U										
DIELDRIN	60-57-1	mg/kg						< 0.0016 UJ										
ENDOSULFAN I	959-98-8	mg/kg						< 0.00082 UJ										
ENDOSULFAN II	33213-65-9	mg/kg						< 0.0016 UJ										
ENDOSULFAN SULFATE	1031-07-8	mg/kg						< 0.0016 U										
ENDRIN	72-20-8	mg/kg						< 0.0016 UJ										
ENDRIN ALDEHYDE	7421-93-4	mg/kg						< 0.0016 UJ										
ENDRIN KETONE	53494-70-5	mg/kg						< 0.0016 UJ										
HEPTACHLOR	76-44-8	mg/kg						< 0.00082 UJ										
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg						< 0.00082 UJ										
LINDANE	58-89-9	mg/kg						< 0.00082 UJ										
METHOXYCHLOR	72-43-5	mg/kg						< 0.0082 UJ										
TOXAPHENE	8001-35-2	mg/kg						< 0.016 U										
TRANS-CHLORDANE	5103-74-2	mg/kg						< 0.00082 UJ										

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SB-219	FTA-SB-219	FTA-SB-220	FTA-SB-220	FTA-SB-220	FTA-WANOM1-SO-BOTPCB	DDA-E-1E	DDA-E-1E	DDA-N-2A	DDA-N-3A	DDA-N-3A	DDA-N-5A	DDA-N-5A	DDA-N-5A	DDA-NE-10D
		sample_date	11/8/2012	11/8/2012	11/6/2012	11/6/2012	11/2/2016	9/25/2013	7/15/2011	7/15/2011	8/16/2010	8/16/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	7/15/2011
		sys_sample_code	FTA-SB-219-0002	FTA-SB-219-0206	FTA-SB-220-0002	FTA-SB-220-0206	FTA-SB-220-SS-N-110216	FTA-WANOM1-SO-BOTPCB	DDA-E-01E-SO-0002	DDA-E-01E-SO-0608	DDA-N-2A-SO-0507	DDA-N-3A-SO-0305	DDA-N-3A-SO-0709	DDA-N-5A-SO-0002	DDA-N-5A-SO-0406	DDA-N-5A-SO-0608	DDA-NE-10D-SO-0002-D
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 3 ft	0 - 2 ft	6 - 8 ft	5 - 7 ft	3 - 5 ft	7 - 9 ft	0 - 2 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft
Compound	CAS	Units															
SVOCs																	
1,1-BIPHENYL	92-52-4	mg/kg	0.069	0.014 J	< 0.011 U	< 0.0085 U		< 0.0094 U									
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
1,4-DIOXANE	123-91-1	mg/kg	< 0.11 U	< 0.05 U	< 0.056 U	< 0.042 U		< 0.047 UJ									
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 UJ									
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.11 U	< 0.05 U	< 0.056 U	< 0.042 U		< 0.047 U									
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 1.4 U	< 0.62 U	< 0.68 U	< 0.52 U		< 0.58 U									
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.11 U	< 0.05 U	< 0.056 U	< 0.042 U		< 0.047 U									
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 UJ									
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.16 UJ	< 0.076 UJ	< 0.084 UJ	< 0.064 UJ		< 0.07 U									
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.11 U	< 0.05 U	< 0.056 U	< 0.042 U		< 0.047 U									
2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
2-METHYLPHENOL	95-48-7	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
2-NITROANILINE	88-74-4	mg/kg	< 1.4 U	< 0.62 U	< 0.68 U	< 0.52 UJ		< 0.58 U									
2-NITROPHENOL	88-75-5	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.022 UJ	< 0.01 UJ	< 0.011 UJ	< 0.0085 UJ		< 0.0094 U									
3-NITROANILINE	99-09-2	mg/kg	< 1.4 U	< 0.62 U	< 0.68 U	< 0.52 U		< 0.58 U									
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.22 U	< 0.1 U	< 0.11 U	< 0.085 U		< 0.094 U									
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
4-CHLOROANILINE	106-47-8	mg/kg	< 0.11 U	< 0.05 U	< 0.056 U	< 0.042 U		< 0.047 UJ									
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
4-NITROANILINE	100-01-6	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
4-NITROPHENOL	100-02-7	mg/kg	< 1.4 U	< 0.62 U	< 0.68 UJ	< 0.52 UJ		< 0.58 U									
ACENAPHTHENE	83-32-9	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
ACETOPHENONE	98-86-2	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
ANTHRACENE	120-12-7	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
ATRAZINE	1912-24-9	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
BENZALDEHYDE	100-52-7	mg/kg	< 0.54 U	< 0.25 U	< 0.28 UJ	< 0.21 UJ		< 0.23 UJ									
BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.0074 J	0.0022 J	< 0.011 U	< 0.0085 U		< 0.0094 U									
BENZO[A]PYRENE	50-32-8	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.54 U	0.58	0.61	< 0.21 U		< 0.23 U									
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.11 UJ	0.0059 J	< 0.056 UJ	< 0.042 UJ		< 0.047 U									
CAPROLACTAM	105-60-2	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
CARBAZOLE	86-74-8	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
CHRYSENE	218-01-9	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.0044 J	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
DIBENZOFURAN	132-64-9	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.11 U	< 0.05 U	< 0.056 U	< 0.042 U		< 0.047 U									
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
FLUORANTHENE	206-44-0	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
FLUORENE	86-73-7	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.018 J	0.0054 J	< 0.011 U	< 0.0085 U		< 0.0094 U									
ISOPHORONE	78-59-1	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
NAPHTHALENE	91-20-3	mg/kg	0.043 J	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
NITROBENZENE	98-95-3	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.022 U	< 0.01 U	< 0.011 U	< 0.0085 U		< 0.0094 U									
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.11 U	< 0.05 U	< 0.056 U	< 0.042 U		< 0.047 U									
PHENANTHRENE	85-01-8	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
PHENOL	108-95-2	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
PYRENE	129-00-0	mg/kg	< 0.54 U	< 0.25 U	< 0.28 U	< 0.21 U		< 0.23 U									
PAHs																	
2-METHYLNAPHTHALENE	91-57-6	mg/kg						< 0.16 U									
ACENAPHTHENE	83-32-9	mg/kg						< 0.2 U									
ACENAPHTHYLENE	208-96-8	mg/kg						< 0.16 U									
ANTHRACENE	120-12-7	mg/kg						< 0.16 U									
BENZO[A]ANTHRACENE	56-55-3	mg/kg						< 0.16 U									
BENZO[A]PYRENE	50-32-8	mg/kg						< 0.16 U									
BENZO[B]FLUORANTHENE	205-99-2	mg/kg						< 0.16 U									
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg						< 0.16 U									
BENZO[K]FLUORANTHENE	207-08-9	mg/kg						< 0.16 U									
CHRYSENE	218-01-9	mg/kg						< 0.16 U									
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg						< 0.16 U									
FLUORANTHENE	206-44-0	mg/kg						< 0.16 U									
FLUORENE	86-73-7	mg/kg						< 0.16 U									
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg						< 0.16 U									
NAPHTHALENE	91-20-3	mg/kg						< 0.16 U									
PHENANTHRENE	85-01-8	mg/kg						< 0.16 U									
PYRENE	129-00-0	mg/kg						< 0.16 U									

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 1	Area 1	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	FTA-SB-219	FTA-SB-219	FTA-SB-220	FTA-SB-220	FTA-SB-220	FTA-WANOM1-SO-BOTPCB	DDA-E-1E	DDA-E-1E	DDA-N-2A	DDA-N-3A	DDA-N-3A	DDA-N-5A	DDA-N-5A	DDA-N-5A	DDA-NE-10D	DDA-NE-10D
		sample_date	11/8/2012	11/8/2012	11/6/2012	11/6/2012	11/2/2016	9/25/2013	7/15/2011	7/15/2011	8/16/2010	8/16/2010	8/20/2010	8/20/2010	8/20/2010	8/20/2010	7/15/2011	7/15/2011
		sys_sample_code	FTA-SB-219-0002	FTA-SB-219-0206	FTA-SB-220-0002	FTA-SB-220-0206	FTA-SB-220-SS-N-110216	FTA-WANOM1-SO-BOTPCB	DDA-E-01E-SO-0002	DDA-E-01E-SO-0608	DDA-N-2A-SO-0507	DDA-N-3A-SO-0305	DDA-N-3A-SO-0709	DDA-N-5A-SO-0002	DDA-N-5A-SO-0406	DDA-N-5A-SO-0608	DDA-NE-10D-SO-0002-D	DDA-NE-10D-SO-0002
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N
		depth_interval	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 6 ft	0 - 2 ft	2 - 3 ft	0 - 2 ft	6 - 8 ft	5 - 7 ft	3 - 5 ft	7 - 9 ft	0 - 2 ft	4 - 6 ft	6 - 8 ft	0 - 2 ft	0 - 2 ft
Compound	CAS	Units																
VOCs																		
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																
1,2-DIBROMOETHANE	106-93-4	mg/kg																
1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U												
1,2-DICHLOROPROPANE	78-87-5	mg/kg																
1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
2-BUTANONE	78-93-3	mg/kg																
2-HEXANONE	591-78-6	mg/kg	< 0.04 UJ	< 0.012 U	< 0.0096 U	< 0.012 U		< 0.011 U										
4-METHYL-2-PENTANONE	108-10-1	mg/kg																
ACETONE	67-64-1	mg/kg	0.76 J	< 0.061 U	< 0.17 U	< 0.031 U		< 0.052 U										
BENZENE	71-43-2	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
BROMODICHLOROMETHANE	75-27-4	mg/kg																
BROMOFORM	75-25-2	mg/kg																
BROMOMETHANE	74-83-9	mg/kg																
CARBON DISULFIDE	75-15-0	mg/kg																
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.008 UJ	< 0.0023 UJ	< 0.0019 U	< 0.0024 U		< 0.0023 U										
CHLOROBENZENE	108-90-7	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
CHLOROETHANE	75-00-3	mg/kg	< 0.016 UJ	< 0.0046 U	< 0.0038 U	< 0.0048 U		< 0.0046 U										
CHLOROFORM	67-66-3	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
CHLOROMETHANE	74-87-3	mg/kg	< 0.016 UJ	< 0.0046 U	< 0.0038 U	< 0.0048 U		< 0.0046 U										
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																
CYCLOHEXANE	110-82-7	mg/kg																
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																
ETHYLBENZENE	100-41-4	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
ISOPROPYLBENZENE	98-82-8	mg/kg	0.011 J	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.016 UJ	< 0.0046 U	< 0.0038 U	< 0.0048 U		< 0.0046 U										
METHYL ACETATE	79-20-9	mg/kg																
METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.04 UJ	< 0.012 U	< 0.0096 U	< 0.012 U		< 0.011 U										
O-XYLENE	95-47-6	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
STYRENE	100-42-5	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
TOLUENE	108-88-3	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																
TRICHLOROETHENE	79-01-6	mg/kg	< 0.008 UJ	< 0.0023 U	< 0.0019 U	< 0.0024 U		< 0.0023 U										
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																
VINYL CHLORIDE	75-01-4	mg/kg	< 0.016 UJ	< 0.0046 U	< 0.0038 U	< 0.0048 U		< 0.0046 U										
XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.016 U	< 0.0046 U	< 0.0038 U	< 0.0048 U		< 0.0046 U										
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.024 U	< 0.0069 U	< 0.0057 U	< 0.0072 U		< 0.0069 U										
			137	137	137	137	3	174	9	9	9	9	9	9	9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	DDA-NE-10D	DDA-NE-13I	DDA-NE-2I	DDA-NE-2I	DDA-NE-3E	DDA-NE-3E	DDA-NE-5C	DDA-NE-5C	DDA-NE-5D	DDA-NE-5D	DDA-NE-5E	DDA-NE-5E	DDA-NE-6C	DDA-NE-6C	DDA-NE-6D	DDA-NE-6E
			sample_date	7/15/2011	7/15/2011	7/14/2011	7/14/2011	7/13/2011	7/13/2011	8/19/2010	8/19/2010	8/20/2010	8/20/2010	7/13/2011	7/13/2011	8/20/2010	8/20/2010	8/20/2010	7/13/2011
			sys_sample_code	DDA-NE-10D-SO-0608	DDA-NE-13I-SO-0002	DDA-NE-02I-SO-0002-D	DDA-NE-02I-SO-0002	DDA-NE-3E-0002	DDA-NE-03E-SO-0608	DDA-NE-5C-SO-0002	DDA-NE-5C-SO-0204	DDA-NE-5D-SO-0002	DDA-NE-5D-SO-0204	DDA-NE-05E-SO-0002	DDA-NE-05E-SO-0406	DDA-NE-6C-SO-0002	DDA-NE-6C-SO-0204	DDA-NE-6D-SO-0002	DDA-NE-06E-SO-0204-D
			sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD
			depth_interval	6 - 8 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units																	
Metals																			
ALUMINUM	7429-90-5	mg/kg																	
ANTIMONY	7440-36-0	mg/kg																	
ARSENIC	7440-38-2	mg/kg																	
BARIUM	7440-39-3	mg/kg																	
BERYLLIUM	7440-41-7	mg/kg																	
CADMIUM	7440-43-9	mg/kg																	
CALCIUM	7440-70-2	mg/kg																	
CHROMIUM, TOTAL	7440-47-3	mg/kg																	
CHROMIUM III (c)	16065-83-1	mg/kg																	
CHROMIUM VI	18540-29-9	mg/kg																	
COBALT	7440-48-4	mg/kg																	
COPPER	7440-50-8	mg/kg																	
IRON	7439-89-6	mg/kg																	
LEAD	7439-92-1	mg/kg																	
MAGNESIUM	7439-95-4	mg/kg																	
MANGANESE	7439-96-5	mg/kg																	
MERCURY	7439-97-6	mg/kg																	
NICKEL	7440-02-0	mg/kg																	
POTASSIUM	7440-09-7	mg/kg																	
SELENIUM	7782-49-2	mg/kg																	
SILVER	7440-22-4	mg/kg																	
SODIUM	7440-23-5	mg/kg																	
THALLIUM	7440-28-0	mg/kg																	
VANADIUM	7440-62-2	mg/kg																	
ZINC	7440-66-6	mg/kg																	
PCBs																			
AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
AROCLOR-1260	11096-82-5	mg/kg	< 0.018 U	0.469	0.192	0.169	2.67	< 0.018 U	16	< 0.018 U	1.83	0.46 J	1.36	0.012 J	0.303	< 0.018 U	1.64	3.3	
AROCLOR-1262	37324-23-5	mg/kg																	
AROCLOR-1268	11100-14-4	mg/kg																	
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	< 0.018 U	0.469	0.192	0.169	2.67	< 0.018 U	16	< 0.018 U	1.83	0.46	1.36	0.012	0.303	< 0.018 U	1.64	3.3	
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	< 0.126 U	0.577	0.3	0.277	2.778	< 0.126 U	16.099	< 0.126 U	1.929	0.559	1.459	0.12	0.402	< 0.126 U	1.748	3.408	
Pesticides																			
4,4-DDD	72-54-8	mg/kg																	
4,4-DDE	72-55-9	mg/kg																	
4,4-DDT	50-29-3	mg/kg																	
ALDRIN	309-00-2	mg/kg																	
ALPHA-BHC	319-84-6	mg/kg																	
ALPHA-CHLORDANE	5103-71-9	mg/kg																	
BETA-BHC	319-85-7	mg/kg																	
DELTA-BHC	319-86-8	mg/kg																	
DIELDRIN	60-57-1	mg/kg																	
ENDOSULFAN I	959-98-8	mg/kg																	
ENDOSULFAN II	33213-65-9	mg/kg																	
ENDOSULFAN SULFATE	1031-07-8	mg/kg																	
ENDRIN	72-20-8	mg/kg																	
ENDRIN ALDEHYDE	7421-93-4	mg/kg																	
ENDRIN KETONE	53494-70-5	mg/kg																	
HEPTACHLOR	76-44-8	mg/kg																	
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg																	
LINDANE	58-89-9	mg/kg																	
METHOXYCHLOR	72-43-5	mg/kg																	
TOXAPHENE	8001-35-2	mg/kg																	
TRANS-CHLORDANE	5103-74-2	mg/kg																	

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	DDA-NE-10D	DDA-NE-13I	DDA-NE-2I	DDA-NE-2I	DDA-NE-3E	DDA-NE-3E	DDA-NE-5C	DDA-NE-5C	DDA-NE-5D	DDA-NE-5D	DDA-NE-5E	DDA-NE-5E	DDA-NE-6C	DDA-NE-6C	DDA-NE-6D	DDA-NE-6E
			sample_date	7/15/2011	7/15/2011	7/14/2011	7/14/2011	7/13/2011	7/13/2011	8/19/2010	8/19/2010	8/20/2010	8/20/2010	7/13/2011	7/13/2011	8/20/2010	8/20/2010	8/20/2010	7/13/2011
			sys_sample_code	DDA-NE-10D-SO-0608	DDA-NE-13I-SO-0002	DDA-NE-02I-SO-0002-D	DDA-NE-02I-SO-0002	DDA-NE-3E-0002	DDA-NE-03E-SO-0608	DDA-NE-5C-SO-0002	DDA-NE-5C-SO-0204	DDA-NE-5D-SO-0002	DDA-NE-5D-SO-0204	DDA-NE-05E-SO-0002	DDA-NE-05E-SO-0406	DDA-NE-6C-SO-0002	DDA-NE-6C-SO-0204	DDA-NE-6D-SO-0002	DDA-NE-06E-SO-0204-D
			sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD
			depth_interval	6 - 8 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units																	
SVOCs																			
1,1-BIPHENYL	92-52-4	mg/kg																	
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg																	
1,4-DIOXANE	123-91-1	mg/kg																	
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg																	
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg																	
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg																	
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg																	
2,4-DICHLOROPHENOL	120-83-2	mg/kg																	
2,4-DIMETHYLPHENOL	105-67-9	mg/kg																	
2,4-DINITROPHENOL	51-28-5	mg/kg																	
2,4-DINITROTOLUENE	121-14-2	mg/kg																	
2,6-DINITROTOLUENE	606-20-2	mg/kg																	
2-CHLORONAPHTHALENE	91-58-7	mg/kg																	
2-CHLOROPHENOL	95-57-8	mg/kg																	
2-METHYLNAPHTHALENE	91-57-6	mg/kg																	
2-METHYLPHENOL	95-48-7	mg/kg																	
2-NITROANILINE	88-74-4	mg/kg																	
2-NITROPHENOL	88-75-5	mg/kg																	
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg																	
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg																	
3-NITROANILINE	99-09-2	mg/kg																	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg																	
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg																	
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg																	
4-CHLOROANILINE	106-47-8	mg/kg																	
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg																	
4-NITROANILINE	100-01-6	mg/kg																	
4-NITROPHENOL	100-02-7	mg/kg																	
ACENAPHTHENE	83-32-9	mg/kg																	
ACENAPHTHYLENE	208-96-8	mg/kg																	
ACETOPHENONE	98-86-2	mg/kg																	
ANTHRACENE	120-12-7	mg/kg																	
ATRAZINE	1912-24-9	mg/kg																	
BENZALDEHYDE	100-52-7	mg/kg																	
BENZO[A]ANTHRACENE	56-55-3	mg/kg																	
BENZO[A]PYRENE	50-32-8	mg/kg																	
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																	
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																	
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																	
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg																	
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg																	
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg																	
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg																	
CAPROLACTAM	105-60-2	mg/kg																	
CARBAZOLE	86-74-8	mg/kg																	
CHRYSENE	218-01-9	mg/kg																	
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																	
DIBENZOFURAN	132-64-9	mg/kg																	
DIETHYLPHTHALATE	84-66-2	mg/kg																	
DIMETHYL PHTHALATE	131-11-3	mg/kg																	
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg																	
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg																	
FLUORANTHENE	206-44-0	mg/kg																	
FLUORENE	86-73-7	mg/kg																	
HEXACHLOROBENZENE	118-74-1	mg/kg																	
HEXACHLOROBUTADIENE	87-68-3	mg/kg																	
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg																	
HEXACHLOROETHANE	67-72-1	mg/kg																	
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																	
ISOPHORONE	78-59-1	mg/kg																	
NAPHTHALENE	91-20-3	mg/kg																	
NITROBENZENE	98-95-3	mg/kg																	
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg																	
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg																	
PENTACHLOROPHENOL	87-86-5	mg/kg																	
PHENANTHRENE	85-01-8	mg/kg																	
PHENOL	108-95-2	mg/kg																	
PYRENE	129-00-0	mg/kg																	
PAHs																			
2-METHYLNAPHTHALENE	91-57-6	mg/kg																	
ACENAPHTHENE	83-32-9	mg/kg																	
ACENAPHTHYLENE	208-96-8	mg/kg																	
ANTHRACENE	120-12-7	mg/kg																	
BENZO[A]ANTHRACENE	56-55-3	mg/kg																	
BENZO[A]PYRENE	50-32-8	mg/kg																	
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																	
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																	
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																	
CHRYSENE	218-01-9	mg/kg																	
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																	
FLUORANTHENE	206-44-0	mg/kg																	
FLUORENE	86-73-7	mg/kg																	
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																	
NAPHTHALENE	91-20-3	mg/kg																	
PHENANTHRENE	85-01-8	mg/kg																	
PYRENE	129-00-0	mg/kg																	

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	DDA-NE-10D	DDA-NE-13I	DDA-NE-2I	DDA-NE-2I	DDA-NE-3E	DDA-NE-3E	DDA-NE-5C	DDA-NE-5C	DDA-NE-5D	DDA-NE-5D	DDA-NE-5E	DDA-NE-5E	DDA-NE-6C	DDA-NE-6C	DDA-NE-6D	DDA-NE-6E
			sample_date	7/15/2011	7/15/2011	7/14/2011	7/14/2011	7/13/2011	7/13/2011	8/19/2010	8/19/2010	8/20/2010	8/20/2010	7/13/2011	7/13/2011	8/20/2010	8/20/2010	8/20/2010	7/13/2011
			sys_sample_code	DDA-NE-10D-SO-0608	DDA-NE-13I-SO-0002	DDA-NE-02I-SO-0002-D	DDA-NE-02I-SO-0002	DDA-NE-3E-0002	DDA-NE-03E-SO-0608	DDA-NE-5C-SO-0002	DDA-NE-5C-SO-0204	DDA-NE-5D-SO-0002	DDA-NE-5D-SO-0204	DDA-NE-05E-SO-0002	DDA-NE-05E-SO-0406	DDA-NE-6C-SO-0002	DDA-NE-6C-SO-0204	DDA-NE-6D-SO-0002	DDA-NE-06E-SO-0204-D
			sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD
			depth_interval	6 - 8 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units																	
VOCs																			
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg																	
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg																	
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																	
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg																	
1,1-DICHLOROETHANE	75-34-3	mg/kg																	
1,1-DICHLOROETHENE	75-35-4	mg/kg																	
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg																	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																	
1,2-DIBROMOETHANE	106-93-4	mg/kg																	
1,2-DICHLOROBENZENE	95-50-1	mg/kg																	
1,2-DICHLOROETHANE	107-06-2	mg/kg																	
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																	
1,2-DICHLOROPROPANE	78-87-5	mg/kg																	
1,3-DICHLOROBENZENE	541-73-1	mg/kg																	
1,4-DICHLOROBENZENE	106-46-7	mg/kg																	
2-BUTANONE	78-93-3	mg/kg																	
2-HEXANONE	591-78-6	mg/kg																	
4-METHYL-2-PENTANONE	108-10-1	mg/kg																	
ACETONE	67-64-1	mg/kg																	
BENZENE	71-43-2	mg/kg																	
BROMODICHLOROMETHANE	75-27-4	mg/kg																	
BROMOFORM	75-25-2	mg/kg																	
BROMOMETHANE	74-83-9	mg/kg																	
CARBON DISULFIDE	75-15-0	mg/kg																	
CARBON TETRACHLORIDE	56-23-5	mg/kg																	
CHLOROBENZENE	108-90-7	mg/kg																	
CHLOROETHANE	75-00-3	mg/kg																	
CHLOROFORM	67-66-3	mg/kg																	
CHLOROMETHANE	74-87-3	mg/kg																	
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg																	
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																	
CYCLOHEXANE	110-82-7	mg/kg																	
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																	
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																	
ETHYLBENZENE	100-41-4	mg/kg																	
ISOPROPYLBENZENE	98-82-8	mg/kg																	
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																	
METHYL ACETATE	79-20-9	mg/kg																	
METHYL CYCLOHEXANE	108-87-2	mg/kg																	
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																	
METHYLENE CHLORIDE	75-09-2	mg/kg																	
O-XYLENE	95-47-6	mg/kg																	
STYRENE	100-42-5	mg/kg																	
TETRACHLOROETHENE	127-18-4	mg/kg																	
TOLUENE	108-88-3	mg/kg																	
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg																	
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																	
TRICHLOROETHENE	79-01-6	mg/kg																	
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																	
VINYL CHLORIDE	75-01-4	mg/kg																	
XYLENES, TOTAL (a)	1330-20-7	mg/kg																	
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																	
				9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrati For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NE-6E	DDA-NE-6E	DDA-NE-7D	DDA-NE-7I	DDA-NE-8B	DDA-NE-8B	DDA-NW-10E	DDA-NW-10G	DDA-NW-10G	DDA-NW-10Q	DDA-NW-10Q	DDA-NW-2D	DDA-NW-2D	DDA-NW-2F	DDA-NW-2F
		sample_date	7/13/2011	7/13/2011	7/12/2011	7/15/2011	7/13/2011	7/13/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	8/19/2010	8/19/2010	8/18/2010	8/18/2010
		sys_sample_code	DDA-NE-06E-SO-0204	DDA-NE-06E-SO-0406	DDA-NE-07D-SO-0002	DDA-NE-07I-SO-0002	DDA-NE-08B-SO-0002	DDA-NE-08B-SO-0406	DDA-NW-10E-SO-0004	DDA-NW-10G-SO-0002	DDA-NW-10G-SO-0204	DDA-NW-10Q-SO-0002	DDA-NW-10Q-SO-0406	DDA-NW-2D-SO-0002	DDA-NW-2D-SO-0204	DDA-NW-2F-SO-0002	DDA-NW-2F-SO-0204
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units															
Metals																	
ALUMINUM	7429-90-5	mg/kg															
ANTIMONY	7440-36-0	mg/kg															
ARSENIC	7440-38-2	mg/kg															
BARIUM	7440-39-3	mg/kg															
BERYLLIUM	7440-41-7	mg/kg															
CADMIUM	7440-43-9	mg/kg															
CALCIUM	7440-70-2	mg/kg															
CHROMIUM, TOTAL	7440-47-3	mg/kg															
CHROMIUM III (c)	16065-83-1	mg/kg															
CHROMIUM VI	18540-29-9	mg/kg															
COBALT	7440-48-4	mg/kg															
COPPER	7440-50-8	mg/kg															
IRON	7439-89-6	mg/kg															
LEAD	7439-92-1	mg/kg															
MAGNESIUM	7439-95-4	mg/kg															
MANGANESE	7439-96-5	mg/kg															
MERCURY	7439-97-6	mg/kg															
NICKEL	7440-02-0	mg/kg															
POTASSIUM	7440-09-7	mg/kg															
SELENIUM	7782-49-2	mg/kg															
SILVER	7440-22-4	mg/kg															
SODIUM	7440-23-5	mg/kg															
THALLIUM	7440-28-0	mg/kg															
VANADIUM	7440-62-2	mg/kg															
ZINC	7440-66-6	mg/kg															
PCBs																	
AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.085 U	< 0.0165 U
AROCLOR-1260	11096-82-5	mg/kg	3.36	4.99	68.1	2.24	1.96	< 0.018 U	1.2	14.2	0.484	1.94	1.84	5.65	< 0.018 U	25.6	0.449
AROCLOR-1262	37324-23-5	mg/kg															
AROCLOR-1268	11100-14-4	mg/kg															
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	3.36	4.99	68.1	2.24	1.96	< 0.018 U	1.2	14.2	0.484	1.94	1.84	5.65	< 0.018 U	25.6	0.449
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	3.468	5.098	68.199	2.36	2.059	< 0.126 U	1.299	14.299	0.583	2.039	1.939	5.749	< 0.126 U	26.11	0.548
Pesticides																	
4,4-DDD	72-54-8	mg/kg															
4,4-DDE	72-55-9	mg/kg															
4,4-DDT	50-29-3	mg/kg															
ALDRIN	309-00-2	mg/kg															
ALPHA-BHC	319-84-6	mg/kg															
ALPHA-CHLORDANE	5103-71-9	mg/kg															
BETA-BHC	319-85-7	mg/kg															
DELTA-BHC	319-86-8	mg/kg															
DIELDRIN	60-57-1	mg/kg															
ENDOSULFAN I	959-98-8	mg/kg															
ENDOSULFAN II	33213-65-9	mg/kg															
ENDOSULFAN SULFATE	1031-07-8	mg/kg															
ENDRIN	72-20-8	mg/kg															
ENDRIN ALDEHYDE	7421-93-4	mg/kg															
ENDRIN KETONE	53494-70-5	mg/kg															
HEPTACHLOR	76-44-8	mg/kg															
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg															
LINDANE	58-89-9	mg/kg															
METHOXYCHLOR	72-43-5	mg/kg															
TOXAPHENE	8001-35-2	mg/kg															
TRANS-CHLORDANE	5103-74-2	mg/kg															

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NE-6E	DDA-NE-6E	DDA-NE-7D	DDA-NE-7I	DDA-NE-8B	DDA-NE-8B	DDA-NW-10E	DDA-NW-10G	DDA-NW-10G	DDA-NW-10Q	DDA-NW-10Q	DDA-NW-2D	DDA-NW-2D	DDA-NW-2F	DDA-NW-2F
		sample_date	7/13/2011	7/13/2011	7/12/2011	7/15/2011	7/13/2011	7/13/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	8/19/2010	8/19/2010	8/18/2010	8/18/2010
		sys_sample_code	DDA-NE-06E-SO-0204	DDA-NE-06E-SO-0406	DDA-NE-07D-SO-0002	DDA-NE-07I-SO-0002	DDA-NE-08B-SO-0002	DDA-NE-08B-SO-0406	DDA-NW-10E-SO-0004	DDA-NW-10G-SO-0002	DDA-NW-10G-SO-0204	DDA-NW-10Q-SO-0002	DDA-NW-10Q-SO-0406	DDA-NW-2D-SO-0002	DDA-NW-2D-SO-0204	DDA-NW-2F-SO-0002	DDA-NW-2F-SO-0204
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units															
SVOCs																	
1,1-BIPHENYL	92-52-4	mg/kg															
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg															
1,4-DIOXANE	123-91-1	mg/kg															
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg															
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg															
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg															
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg															
2,4-DICHLOROPHENOL	120-83-2	mg/kg															
2,4-DIMETHYLPHENOL	105-67-9	mg/kg															
2,4-DINITROPHENOL	51-28-5	mg/kg															
2,4-DINITROTOLUENE	121-14-2	mg/kg															
2,6-DINITROTOLUENE	606-20-2	mg/kg															
2-CHLORONAPHTHALENE	91-58-7	mg/kg															
2-CHLOROPHENOL	95-57-8	mg/kg															
2-METHYLNAPHTHALENE	91-57-6	mg/kg															
2-METHYLPHENOL	95-48-7	mg/kg															
2-NITROANILINE	88-74-4	mg/kg															
2-NITROPHENOL	88-75-5	mg/kg															
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg															
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg															
3-NITROANILINE	99-09-2	mg/kg															
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg															
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg															
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg															
4-CHLOROANILINE	106-47-8	mg/kg															
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg															
4-NITROANILINE	100-01-6	mg/kg															
4-NITROPHENOL	100-02-7	mg/kg															
ACENAPHTHENE	83-32-9	mg/kg															
ACENAPHTHYLENE	208-96-8	mg/kg															
ACETOPHENONE	98-86-2	mg/kg															
ANTHRACENE	120-12-7	mg/kg															
ATRAZINE	1912-24-9	mg/kg															
BENZALDEHYDE	100-52-7	mg/kg															
BENZO[A]ANTHRACENE	56-55-3	mg/kg															
BENZO[A]PYRENE	50-32-8	mg/kg															
BENZO[B]FLUORANTHENE	205-99-2	mg/kg															
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg															
BENZO[K]FLUORANTHENE	207-08-9	mg/kg															
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg															
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg															
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg															
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg															
CAPROLACTAM	105-60-2	mg/kg															
CARBAZOLE	86-74-8	mg/kg															
CHRYSENE	218-01-9	mg/kg															
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg															
DIBENZOFURAN	132-64-9	mg/kg															
DIETHYLPHTHALATE	84-66-2	mg/kg															
DIMETHYL PHTHALATE	131-11-3	mg/kg															
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg															
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg															
FLUORANTHENE	206-44-0	mg/kg															
FLUORENE	86-73-7	mg/kg															
HEXACHLOROBENZENE	118-74-1	mg/kg															
HEXACHLOROBUTADIENE	87-68-3	mg/kg															
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg															
HEXACHLOROETHANE	67-72-1	mg/kg															
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg															
ISOPHORONE	78-59-1	mg/kg															
NAPHTHALENE	91-20-3	mg/kg															
NITROBENZENE	98-95-3	mg/kg															
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg															
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg															
PENTACHLOROPHENOL	87-86-5	mg/kg															
PHENANTHRENE	85-01-8	mg/kg															
PHENOL	108-95-2	mg/kg															
PYRENE	129-00-0	mg/kg															
PAHs																	
2-METHYLNAPHTHALENE	91-57-6	mg/kg															
ACENAPHTHENE	83-32-9	mg/kg															
ACENAPHTHYLENE	208-96-8	mg/kg															
ANTHRACENE	120-12-7	mg/kg															
BENZO[A]ANTHRACENE	56-55-3	mg/kg															
BENZO[A]PYRENE	50-32-8	mg/kg															
BENZO[B]FLUORANTHENE	205-99-2	mg/kg															
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg															
BENZO[K]FLUORANTHENE	207-08-9	mg/kg															
CHRYSENE	218-01-9	mg/kg															
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg															
FLUORANTHENE	206-44-0	mg/kg															
FLUORENE	86-73-7	mg/kg															
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg															
NAPHTHALENE	91-20-3	mg/kg															
PHENANTHRENE	85-01-8	mg/kg															
PYRENE	129-00-0	mg/kg															

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	DDA-NE-6E	DDA-NE-6E	DDA-NE-7D	DDA-NE-7I	DDA-NE-8B	DDA-NE-8B	DDA-NW-10E	DDA-NW-10G	DDA-NW-10G	DDA-NW-10Q	DDA-NW-10Q	DDA-NW-2D	DDA-NW-2D	DDA-NW-2F	DDA-NW-2F
			sample_date	7/13/2011	7/13/2011	7/12/2011	7/15/2011	7/13/2011	7/13/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	7/14/2011	8/19/2010	8/19/2010	8/18/2010	8/18/2010
			sys_sample_code	DDA-NE-06E-SO-0204	DDA-NE-06E-SO-0406	DDA-NE-07D-SO-0002	DDA-NE-07I-SO-0002	DDA-NE-08B-SO-0002	DDA-NE-08B-SO-0406	DDA-NW-10E-SO-0004	DDA-NW-10G-SO-0002	DDA-NW-10G-SO-0204	DDA-NW-10Q-SO-0002	DDA-NW-10Q-SO-0406	DDA-NW-2D-SO-0002	DDA-NW-2D-SO-0204	DDA-NW-2F-SO-0002	DDA-NW-2F-SO-0204
			sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
			depth_interval	2 - 4 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units																
VOCs																		
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg																
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg																
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg																
1,1-DICHLOROETHANE	75-34-3	mg/kg																
1,1-DICHLOROETHENE	75-35-4	mg/kg																
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg																
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																
1,2-DIBROMOETHANE	106-93-4	mg/kg																
1,2-DICHLOROBENZENE	95-50-1	mg/kg																
1,2-DICHLOROETHANE	107-06-2	mg/kg																
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																
1,2-DICHLOROPROPANE	78-87-5	mg/kg																
1,3-DICHLOROBENZENE	541-73-1	mg/kg																
1,4-DICHLOROBENZENE	106-46-7	mg/kg																
2-BUTANONE	78-93-3	mg/kg																
2-HEXANONE	591-78-6	mg/kg																
4-METHYL-2-PENTANONE	108-10-1	mg/kg																
ACETONE	67-64-1	mg/kg																
BENZENE	71-43-2	mg/kg																
BROMODICHLOROMETHANE	75-27-4	mg/kg																
BROMOFORM	75-25-2	mg/kg																
BROMOMETHANE	74-83-9	mg/kg																
CARBON DISULFIDE	75-15-0	mg/kg																
CARBON TETRACHLORIDE	56-23-5	mg/kg																
CHLOROBENZENE	108-90-7	mg/kg																
CHLOROETHANE	75-00-3	mg/kg																
CHLOROFORM	67-66-3	mg/kg																
CHLOROMETHANE	74-87-3	mg/kg																
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg																
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																
CYCLOHEXANE	110-82-7	mg/kg																
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																
ETHYLBENZENE	100-41-4	mg/kg																
ISOPROPYLBENZENE	98-82-8	mg/kg																
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																
METHYL ACETATE	79-20-9	mg/kg																
METHYL CYCLOHEXANE	108-87-2	mg/kg																
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																
METHYLENE CHLORIDE	75-09-2	mg/kg																
O-XYLENE	95-47-6	mg/kg																
STYRENE	100-42-5	mg/kg																
TETRACHLOROETHENE	127-18-4	mg/kg																
TOLUENE	108-88-3	mg/kg																
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg																
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																
TRICHLOROETHENE	79-01-6	mg/kg																
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																
VINYL CHLORIDE	75-01-4	mg/kg																
XYLENES, TOTAL (a)	1330-20-7	mg/kg																
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																
				9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrati For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-2G	DDA-NW-2G	DDA-NW-2G	DDA-NW-2P	DDA-NW-2P	DDA-NW-3B	DDA-NW-3E	DDA-NW-3E	DDA-NW-3F	DDA-NW-3F	DDA-NW-3R	DDA-NW-3R	DDA-NW-4D	DDA-NW-4D	DDA-NW-4F
		sample_date	8/20/2010	8/20/2010	8/20/2010	7/12/2011	7/12/2011	8/16/2010	8/20/2010	8/20/2010	8/18/2010	8/18/2010	7/14/2011	7/15/2011	8/19/2010	8/19/2010	8/18/2010
		sys_sample_code	DDA-NW-2G-SO-0002-D	DDA-NW-2G-SO-0002	DDA-NW-2G-SO-0204	DDA-NW-02P-SO-0002	DDA-NW-02P-SO-0406	DDA-NW-3B-SO-0305	DDA-NW-3E-SO-0002	DDA-NW-3E-SO-0204	DDA-NW-3F-SO-0002	DDA-NW-3F-SO-0204	DDA-NW-03R-SO-0002	DDA-NW-03R-SO-0810	DDA-NW-4D-SO-0002	DDA-NW-4D-SO-0204	DDA-NW-4F-SO-0001
		sample_type_code	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	3 - 5 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	8 - 10 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft
Compound	CAS	Units															
Metals																	
ALUMINUM	7429-90-5	mg/kg															
ANTIMONY	7440-36-0	mg/kg															
ARSENIC	7440-38-2	mg/kg															
BARIUM	7440-39-3	mg/kg															
BERYLLIUM	7440-41-7	mg/kg															
CADMIUM	7440-43-9	mg/kg															
CALCIUM	7440-70-2	mg/kg															
CHROMIUM, TOTAL	7440-47-3	mg/kg															
CHROMIUM III (c)	16065-83-1	mg/kg															
CHROMIUM VI	18540-29-9	mg/kg															
COBALT	7440-48-4	mg/kg															
COPPER	7440-50-8	mg/kg															
IRON	7439-89-6	mg/kg															
LEAD	7439-92-1	mg/kg															
MAGNESIUM	7439-95-4	mg/kg															
MANGANESE	7439-96-5	mg/kg															
MERCURY	7439-97-6	mg/kg															
NICKEL	7440-02-0	mg/kg															
POTASSIUM	7440-09-7	mg/kg															
SELENIUM	7782-49-2	mg/kg															
SILVER	7440-22-4	mg/kg															
SODIUM	7440-23-5	mg/kg															
THALLIUM	7440-28-0	mg/kg															
VANADIUM	7440-62-2	mg/kg															
ZINC	7440-66-6	mg/kg															
PCBs																	
AROCLOR-1016	12674-11-2	mg/kg	< 0.33 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.02 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.33 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.02 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.33 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.02 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.33 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.02 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.33 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.02 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.33 U	< 0.33 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.02 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.0165 U
AROCLOR-1260	11096-82-5	mg/kg	81.7	78.9	13.5	0.31	< 0.018 U	0.074	22.2	1.48	3.61	0.145	0.166	< 0.018 U	8.47	< 0.02 U	11
AROCLOR-1262	37324-23-5	mg/kg															
AROCLOR-1268	11100-14-4	mg/kg															
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	81.7	78.9	13.5	0.31	< 0.018 U	0.074	22.2	1.48	3.61	0.145	0.166	< 0.018 U	8.47	< 0.02 U	11
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	83.68	80.88	13.608	0.409	< 0.126 U	0.194	22.71	1.588	3.709	0.253	0.265	< 0.126 U	8.569	< 0.14 U	11.099
Pesticides																	
4,4-DDD	72-54-8	mg/kg															
4,4-DDE	72-55-9	mg/kg															
4,4-DDT	50-29-3	mg/kg															
ALDRIN	309-00-2	mg/kg															
ALPHA-BHC	319-84-6	mg/kg															
ALPHA-CHLORDANE	5103-71-9	mg/kg															
BETA-BHC	319-85-7	mg/kg															
DELTA-BHC	319-86-8	mg/kg															
DIELDRIN	60-57-1	mg/kg															
ENDOSULFAN I	959-98-8	mg/kg															
ENDOSULFAN II	33213-65-9	mg/kg															
ENDOSULFAN SULFATE	1031-07-8	mg/kg															
ENDRIN	72-20-8	mg/kg															
ENDRIN ALDEHYDE	7421-93-4	mg/kg															
ENDRIN KETONE	53494-70-5	mg/kg															
HEPTACHLOR	76-44-8	mg/kg															
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg															
LINDANE	58-89-9	mg/kg															
METHOXYCHLOR	72-43-5	mg/kg															
TOXAPHENE	8001-35-2	mg/kg															
TRANS-CHLORDANE	5103-74-2	mg/kg															

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-2G	DDA-NW-2G	DDA-NW-2G	DDA-NW-2P	DDA-NW-2P	DDA-NW-3B	DDA-NW-3E	DDA-NW-3E	DDA-NW-3F	DDA-NW-3F	DDA-NW-3R	DDA-NW-3R	DDA-NW-4D	DDA-NW-4D	DDA-NW-4F
		sample_date	8/20/2010	8/20/2010	8/20/2010	7/12/2011	7/12/2011	8/16/2010	8/20/2010	8/20/2010	8/18/2010	8/18/2010	7/14/2011	7/15/2011	8/19/2010	8/19/2010	8/18/2010
		sys_sample_code	DDA-NW-2G-SO-0002-D	DDA-NW-2G-SO-0002	DDA-NW-2G-SO-0204	DDA-NW-02P-SO-0002	DDA-NW-02P-SO-0406	DDA-NW-3B-SO-0305	DDA-NW-3E-SO-0002	DDA-NW-3E-SO-0204	DDA-NW-3F-SO-0002	DDA-NW-3F-SO-0204	DDA-NW-03R-SO-0002	DDA-NW-03R-SO-0810	DDA-NW-4D-SO-0002	DDA-NW-4D-SO-0204	DDA-NW-4F-SO-0001
		sample_type_code	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	3 - 5 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	8 - 10 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft
Compound	CAS	Units															
SVOCs																	
1,1-BIPHENYL	92-52-4	mg/kg															
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg															
1,4-DIOXANE	123-91-1	mg/kg															
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg															
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg															
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg															
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg															
2,4-DICHLOROPHENOL	120-83-2	mg/kg															
2,4-DIMETHYLPHENOL	105-67-9	mg/kg															
2,4-DINITROPHENOL	51-28-5	mg/kg															
2,4-DINITROTOLUENE	121-14-2	mg/kg															
2,6-DINITROTOLUENE	606-20-2	mg/kg															
2-CHLORONAPHTHALENE	91-58-7	mg/kg															
2-CHLOROPHENOL	95-57-8	mg/kg															
2-METHYLNAPHTHALENE	91-57-6	mg/kg															
2-METHYLPHENOL	95-48-7	mg/kg															
2-NITROANILINE	88-74-4	mg/kg															
2-NITROPHENOL	88-75-5	mg/kg															
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg															
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg															
3-NITROANILINE	99-09-2	mg/kg															
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg															
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg															
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg															
4-CHLOROANILINE	106-47-8	mg/kg															
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg															
4-NITROANILINE	100-01-6	mg/kg															
4-NITROPHENOL	100-02-7	mg/kg															
ACENAPHTHENE	83-32-9	mg/kg															
ACENAPHTHYLENE	208-96-8	mg/kg															
ACETOPHENONE	98-86-2	mg/kg															
ANTHRACENE	120-12-7	mg/kg															
ATRAZINE	1912-24-9	mg/kg															
BENZALDEHYDE	100-52-7	mg/kg															
BENZO[A]ANTHRACENE	56-55-3	mg/kg															
BENZO[A]PYRENE	50-32-8	mg/kg															
BENZO[B]FLUORANTHENE	205-99-2	mg/kg															
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg															
BENZO[K]FLUORANTHENE	207-08-9	mg/kg															
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg															
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg															
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg															
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg															
CAPROLACTAM	105-60-2	mg/kg															
CARBAZOLE	86-74-8	mg/kg															
CHRYSENE	218-01-9	mg/kg															
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg															
DIBENZOFURAN	132-64-9	mg/kg															
DIETHYLPHTHALATE	84-66-2	mg/kg															
DIMETHYL PHTHALATE	131-11-3	mg/kg															
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg															
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg															
FLUORANTHENE	206-44-0	mg/kg															
FLUORENE	86-73-7	mg/kg															
HEXACHLOROBENZENE	118-74-1	mg/kg															
HEXACHLOROBUTADIENE	87-68-3	mg/kg															
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg															
HEXACHLOROETHANE	67-72-1	mg/kg															
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg															
ISOPHORONE	78-59-1	mg/kg															
NAPHTHALENE	91-20-3	mg/kg															
NITROBENZENE	98-95-3	mg/kg															
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg															
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg															
PENTACHLOROPHENOL	87-86-5	mg/kg															
PHENANTHRENE	85-01-8	mg/kg															
PHENOL	108-95-2	mg/kg															
PYRENE	129-00-0	mg/kg															
PAHs																	
2-METHYLNAPHTHALENE	91-57-6	mg/kg															
ACENAPHTHENE	83-32-9	mg/kg															
ACENAPHTHYLENE	208-96-8	mg/kg															
ANTHRACENE	120-12-7	mg/kg															
BENZO[A]ANTHRACENE	56-55-3	mg/kg															
BENZO[A]PYRENE	50-32-8	mg/kg															
BENZO[B]FLUORANTHENE	205-99-2	mg/kg															
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg															
BENZO[K]FLUORANTHENE	207-08-9	mg/kg															
CHRYSENE	218-01-9	mg/kg															
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg															
FLUORANTHENE	206-44-0	mg/kg															
FLUORENE	86-73-7	mg/kg															
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg															
NAPHTHALENE	91-20-3	mg/kg															
PHENANTHRENE	85-01-8	mg/kg															
PYRENE	129-00-0	mg/kg															

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	DDA-NW-2G	DDA-NW-2G	DDA-NW-2G	DDA-NW-2P	DDA-NW-2P	DDA-NW-3B	DDA-NW-3E	DDA-NW-3E	DDA-NW-3F	DDA-NW-3F	DDA-NW-3R	DDA-NW-3R	DDA-NW-4D	DDA-NW-4D	DDA-NW-4F
			sample_date	8/20/2010	8/20/2010	8/20/2010	7/12/2011	7/12/2011	8/16/2010	8/20/2010	8/20/2010	8/18/2010	8/18/2010	7/14/2011	7/15/2011	8/19/2010	8/19/2010	8/18/2010
			sys_sample_code	DDA-NW-2G-SO-0002-D	DDA-NW-2G-SO-0002	DDA-NW-2G-SO-0204	DDA-NW-02P-SO-0002	DDA-NW-02P-SO-0406	DDA-NW-3B-SO-0305	DDA-NW-3E-SO-0002	DDA-NW-3E-SO-0204	DDA-NW-3F-SO-0002	DDA-NW-3F-SO-0204	DDA-NW-03R-SO-0002	DDA-NW-03R-SO-0810	DDA-NW-4D-SO-0002	DDA-NW-4D-SO-0204	DDA-NW-4F-SO-0001
			sample_type_code	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
			depth_interval	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	3 - 5 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	8 - 10 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft
Compound	CAS	Units																
VOCs																		
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg																
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg																
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg																
1,1-DICHLOROETHANE	75-34-3	mg/kg																
1,1-DICHLOROETHENE	75-35-4	mg/kg																
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg																
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																
1,2-DIBROMOETHANE	106-93-4	mg/kg																
1,2-DICHLOROBENZENE	95-50-1	mg/kg																
1,2-DICHLOROETHANE	107-06-2	mg/kg																
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																
1,2-DICHLOROPROPANE	78-87-5	mg/kg																
1,3-DICHLOROBENZENE	541-73-1	mg/kg																
1,4-DICHLOROBENZENE	106-46-7	mg/kg																
2-BUTANONE	78-93-3	mg/kg																
2-HEXANONE	591-78-6	mg/kg																
4-METHYL-2-PENTANONE	108-10-1	mg/kg																
ACETONE	67-64-1	mg/kg																
BENZENE	71-43-2	mg/kg																
BROMODICHLOROMETHANE	75-27-4	mg/kg																
BROMOFORM	75-25-2	mg/kg																
BROMOMETHANE	74-83-9	mg/kg																
CARBON DISULFIDE	75-15-0	mg/kg																
CARBON TETRACHLORIDE	56-23-5	mg/kg																
CHLOROBENZENE	108-90-7	mg/kg																
CHLOROETHANE	75-00-3	mg/kg																
CHLOROFORM	67-66-3	mg/kg																
CHLOROMETHANE	74-87-3	mg/kg																
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg																
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																
CYCLOHEXANE	110-82-7	mg/kg																
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																
ETHYLBENZENE	100-41-4	mg/kg																
ISOPROPYLBENZENE	98-82-8	mg/kg																
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																
METHYL ACETATE	79-20-9	mg/kg																
METHYL CYCLOHEXANE	108-87-2	mg/kg																
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																
METHYLENE CHLORIDE	75-09-2	mg/kg																
O-XYLENE	95-47-6	mg/kg																
STYRENE	100-42-5	mg/kg																
TETRACHLOROETHENE	127-18-4	mg/kg																
TOLUENE	108-88-3	mg/kg																
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg																
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																
TRICHLOROETHENE	79-01-6	mg/kg																
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																
VINYL CHLORIDE	75-01-4	mg/kg																
XYLENES, TOTAL (a)	1330-20-7	mg/kg																
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																
				9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratic For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-4F	DDA-NW-4P	DDA-NW-4R	DDA-NW-4R	DDA-NW-4Y	DDA-NW-4Y	DDA-NW-5C	DDA-NW-5C	DDA-NW-5F	DDA-NW-5F	DDA-NW-5G	DDA-NW-5G	DDA-NW-6B	DDA-NW-6B	DDA-NW-6C	DDA-NW-6D
		sample_date	8/18/2010	7/12/2011	7/14/2011	7/14/2011	7/15/2011	7/15/2011	8/20/2010	8/20/2010	8/17/2010	8/17/2010	8/20/2010	8/20/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010
		sys_sample_code	DDA-NW-4F-SO-0002	DDA-NW-4P-0406	DDA-NW-4R-0002-D	DDA-NW-4R-0002	DDA-NW-04Y-SO-0002	DDA-NW-04Y-SO-0204	DDA-NW-5C-SO-0002	DDA-NW-5C-SO-0204	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-5G-SO-0002	DDA-NW-5G-SO-0204	DDA-NW-6B-SO-0001	DDA-NW-6B-SO-0204	DDA-NW-6C-SO-0204	DDA-NW-6D-SO-0001-D
		sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD
		depth_interval	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 1 ft
Compound	CAS	Units																
Metals																		
ALUMINUM	7429-90-5	mg/kg																
ANTIMONY	7440-36-0	mg/kg																
ARSENIC	7440-38-2	mg/kg																
BARIUM	7440-39-3	mg/kg																
BERYLLIUM	7440-41-7	mg/kg																
CADMIUM	7440-43-9	mg/kg																
CALCIUM	7440-70-2	mg/kg																
CHROMIUM, TOTAL	7440-47-3	mg/kg																
CHROMIUM III (c)	16065-83-1	mg/kg																
CHROMIUM VI	18540-29-9	mg/kg																
COBALT	7440-48-4	mg/kg																
COPPER	7440-50-8	mg/kg																
IRON	7439-89-6	mg/kg																
LEAD	7439-92-1	mg/kg																
MAGNESIUM	7439-95-4	mg/kg																
MANGANESE	7439-96-5	mg/kg																
MERCURY	7439-97-6	mg/kg																
NICKEL	7440-02-0	mg/kg																
POTASSIUM	7440-09-7	mg/kg																
SELENIUM	7782-49-2	mg/kg																
SILVER	7440-22-4	mg/kg																
SODIUM	7440-23-5	mg/kg																
THALLIUM	7440-28-0	mg/kg																
VANADIUM	7440-62-2	mg/kg																
ZINC	7440-66-6	mg/kg																
PCBs																		
AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.018 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.165 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.018 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.165 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.018 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.165 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.018 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.165 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.018 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.165 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.018 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.165 U
AROCLOR-1260	11096-82-5	mg/kg	1.3	0.076	0.63	0.612	1.34	< 0.0215 U	4.35	1.05 J	38.3	7.48	24.7	2.02	7.52	0.158	0.104	45.4
AROCLOR-1262	37324-23-5	mg/kg																
AROCLOR-1268	11100-14-4	mg/kg																
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.3	0.076	0.63	0.612	1.34	< 0.0215 U	4.35	1.05	38.3	7.48	24.7	2.02	7.52	0.158	0.104	45.4
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	1.399	0.184	0.729	0.72	1.439	< 0.1505 U	4.449	1.158	40.28	7.579	25.21	2.128	7.619	0.278	0.212	46.39
Pesticides																		
4,4-DDD	72-54-8	mg/kg																
4,4-DDE	72-55-9	mg/kg																
4,4-DDT	50-29-3	mg/kg																
ALDRIN	309-00-2	mg/kg																
ALPHA-BHC	319-84-6	mg/kg																
ALPHA-CHLORDANE	5103-71-9	mg/kg																
BETA-BHC	319-85-7	mg/kg																
DELTA-BHC	319-86-8	mg/kg																
DIELDRIN	60-57-1	mg/kg																
ENDOSULFAN I	959-98-8	mg/kg																
ENDOSULFAN II	33213-65-9	mg/kg																
ENDOSULFAN SULFATE	1031-07-8	mg/kg																
ENDRIN	72-20-8	mg/kg																
ENDRIN ALDEHYDE	7421-93-4	mg/kg																
ENDRIN KETONE	53494-70-5	mg/kg																
HEPTACHLOR	76-44-8	mg/kg																
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg																
LINDANE	58-89-9	mg/kg																
METHOXYCHLOR	72-43-5	mg/kg																
TOXAPHENE	8001-35-2	mg/kg																
TRANS-CHLORDANE	5103-74-2	mg/kg																

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-4F	DDA-NW-4P	DDA-NW-4R	DDA-NW-4R	DDA-NW-4Y	DDA-NW-4Y	DDA-NW-5C	DDA-NW-5C	DDA-NW-5F	DDA-NW-5F	DDA-NW-5G	DDA-NW-5G	DDA-NW-6B	DDA-NW-6B	DDA-NW-6C	DDA-NW-6D
		sample_date	8/18/2010	7/12/2011	7/14/2011	7/14/2011	7/15/2011	7/15/2011	8/20/2010	8/20/2010	8/17/2010	8/17/2010	8/20/2010	8/20/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010
		sys_sample_code	DDA-NW-4F-SO-0002	DDA-NW-4P-0406	DDA-NW-4R-0002-D	DDA-NW-4R-0002	DDA-NW-04Y-SO-0002	DDA-NW-04Y-SO-0204	DDA-NW-5C-SO-0002	DDA-NW-5C-SO-0204	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-5G-SO-0002	DDA-NW-5G-SO-0204	DDA-NW-6B-SO-0001	DDA-NW-6B-SO-0204	DDA-NW-6C-SO-0204	DDA-NW-6D-SO-0001-D
		sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD
		depth_interval	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 1 ft
Compound	CAS	Units																
SVOCs																		
1,1-BIPHENYL	92-52-4	mg/kg																
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg																
1,4-DIOXANE	123-91-1	mg/kg																
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg																
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg																
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg																
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg																
2,4-DICHLOROPHENOL	120-83-2	mg/kg																
2,4-DIMETHYLPHENOL	105-67-9	mg/kg																
2,4-DINITROPHENOL	51-28-5	mg/kg																
2,4-DINITROTOLUENE	121-14-2	mg/kg																
2,6-DINITROTOLUENE	606-20-2	mg/kg																
2-CHLORONAPHTHALENE	91-58-7	mg/kg																
2-CHLOROPHENOL	95-57-8	mg/kg																
2-METHYLNAPHTHALENE	91-57-6	mg/kg																
2-METHYLPHENOL	95-48-7	mg/kg																
2-NITROANILINE	88-74-4	mg/kg																
2-NITROPHENOL	88-75-5	mg/kg																
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg																
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg																
3-NITROANILINE	99-09-2	mg/kg																
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg																
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg																
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg																
4-CHLOROANILINE	106-47-8	mg/kg																
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg																
4-NITROANILINE	100-01-6	mg/kg																
4-NITROPHENOL	100-02-7	mg/kg																
ACENAPHTHENE	83-32-9	mg/kg																
ACENAPHTHYLENE	208-96-8	mg/kg																
ACETOPHENONE	98-86-2	mg/kg																
ANTHRACENE	120-12-7	mg/kg																
ATRAZINE	1912-24-9	mg/kg																
BENZALDEHYDE	100-52-7	mg/kg																
BENZO[A]ANTHRACENE	56-55-3	mg/kg																
BENZO[A]PYRENE	50-32-8	mg/kg																
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg																
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg																
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg																
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg																
CAPROLACTAM	105-60-2	mg/kg																
CARBAZOLE	86-74-8	mg/kg																
CHRYSENE	218-01-9	mg/kg																
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																
DIBENZOFURAN	132-64-9	mg/kg																
DIETHYLPHTHALATE	84-66-2	mg/kg																
DIMETHYL PHTHALATE	131-11-3	mg/kg																
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg																
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg																
FLUORANTHENE	206-44-0	mg/kg																
FLUORENE	86-73-7	mg/kg																
HEXACHLOROBENZENE	118-74-1	mg/kg																
HEXACHLOROBUTADIENE	87-68-3	mg/kg																
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg																
HEXACHLOROETHANE	67-72-1	mg/kg																
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																
ISOPHORONE	78-59-1	mg/kg																
NAPHTHALENE	91-20-3	mg/kg																
NITROBENZENE	98-95-3	mg/kg																
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg																
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg																
PENTACHLOROPHENOL	87-86-5	mg/kg																
PHENANTHRENE	85-01-8	mg/kg																
PHENOL	108-95-2	mg/kg																
PYRENE	129-00-0	mg/kg																
PAHs																		
2-METHYLNAPHTHALENE	91-57-6	mg/kg																
ACENAPHTHENE	83-32-9	mg/kg																
ACENAPHTHYLENE	208-96-8	mg/kg																
ANTHRACENE	120-12-7	mg/kg																
BENZO[A]ANTHRACENE	56-55-3	mg/kg																
BENZO[A]PYRENE	50-32-8	mg/kg																
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																
CHRYSENE	218-01-9	mg/kg																
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																
FLUORANTHENE	206-44-0	mg/kg																
FLUORENE	86-73-7	mg/kg																
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																
NAPHTHALENE	91-20-3	mg/kg																
PHENANTHRENE	85-01-8	mg/kg																
PYRENE	129-00-0	mg/kg																

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-4F	DDA-NW-4P	DDA-NW-4R	DDA-NW-4R	DDA-NW-4Y	DDA-NW-4Y	DDA-NW-5C	DDA-NW-5C	DDA-NW-5F	DDA-NW-5F	DDA-NW-5G	DDA-NW-5G	DDA-NW-6B	DDA-NW-6B	DDA-NW-6C	DDA-NW-6D
		sample_date	8/18/2010	7/12/2011	7/14/2011	7/14/2011	7/15/2011	7/15/2011	8/20/2010	8/20/2010	8/17/2010	8/17/2010	8/20/2010	8/20/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010
		sys_sample_code	DDA-NW-4F-SO-0002	DDA-NW-4P-0406	DDA-NW-4R-0002-D	DDA-NW-4R-0002	DDA-NW-04Y-SO-0002	DDA-NW-04Y-SO-0204	DDA-NW-5C-SO-0002	DDA-NW-5C-SO-0204	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-5G-SO-0002	DDA-NW-5G-SO-0204	DDA-NW-6B-SO-0001	DDA-NW-6B-SO-0204	DDA-NW-6C-SO-0204	DDA-NW-6D-SO-0001-D
		sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD
		depth_interval	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	2 - 4 ft	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 1 ft
Compound	CAS	Units																
VOCs																		
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg																
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg																
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg																
1,1-DICHLOROETHANE	75-34-3	mg/kg																
1,1-DICHLOROETHENE	75-35-4	mg/kg																
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg																
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																
1,2-DIBROMOETHANE	106-93-4	mg/kg																
1,2-DICHLOROBENZENE	95-50-1	mg/kg																
1,2-DICHLOROETHANE	107-06-2	mg/kg																
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																
1,2-DICHLOROPROPANE	78-87-5	mg/kg																
1,3-DICHLOROBENZENE	541-73-1	mg/kg																
1,4-DICHLOROBENZENE	106-46-7	mg/kg																
2-BUTANONE	78-93-3	mg/kg																
2-HEXANONE	591-78-6	mg/kg																
4-METHYL-2-PENTANONE	108-10-1	mg/kg																
ACETONE	67-64-1	mg/kg																
BENZENE	71-43-2	mg/kg																
BROMODICHLOROMETHANE	75-27-4	mg/kg																
BROMOFORM	75-25-2	mg/kg																
BROMOMETHANE	74-83-9	mg/kg																
CARBON DISULFIDE	75-15-0	mg/kg																
CARBON TETRACHLORIDE	56-23-5	mg/kg																
CHLOROBENZENE	108-90-7	mg/kg																
CHLOROETHANE	75-00-3	mg/kg																
CHLOROFORM	67-66-3	mg/kg																
CHLOROMETHANE	74-87-3	mg/kg																
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg																
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																
CYCLOHEXANE	110-82-7	mg/kg																
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																
ETHYLBENZENE	100-41-4	mg/kg																
ISOPROPYLBENZENE	98-82-8	mg/kg																
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																
METHYL ACETATE	79-20-9	mg/kg																
METHYL CYCLOHEXANE	108-87-2	mg/kg																
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																
METHYLENE CHLORIDE	75-09-2	mg/kg																
O-XYLENE	95-47-6	mg/kg																
STYRENE	100-42-5	mg/kg																
TETRACHLOROETHENE	127-18-4	mg/kg																
TOLUENE	108-88-3	mg/kg																
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg																
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																
TRICHLOROETHENE	79-01-6	mg/kg																
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																
VINYL CHLORIDE	75-01-4	mg/kg																
XYLENES, TOTAL (a)	1330-20-7	mg/kg																
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																
			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrati For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-6E	DDA-NW-6F	DDA-NW-6F	DDA-NW-6R	DDA-NW-6R	DDA-NW-6R	DDA-NW-7B	DDA-NW-7D	DDA-NW-7E	DDA-NW-8I	DDA-NW-8I
		sample_date	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/20/2010	8/20/2010	7/14/2011	7/14/2011	7/14/2011	8/20/2010	8/20/2010	8/20/2010	7/13/2011	7/13/2011
		sys_sample_code	DDA-NW-6D-SO-0001	DDA-NW-6D-SO-0204	DDA-NW-6E-SO-0001-D	DDA-NW-6E-SO-0001	DDA-NW-6E-SO-0204	DDA-NW-6F-SO-0002	DDA-NW-6F-SO-0204	DDA-NW-06R-SO-0002-D	DDA-NW-06R-SO-0002	DDA-NW-06R-SO-0406	DDA-NW-7B-SO-0002	DDA-NW-7D-SO-0204	DDA-NW-7E-SO-0002	DDA-NW-08I-SO-0204-D	DDA-NW-08I-SO-0204
		sample_type_code	N	N	FD	N	N	N	N	FD	N	N	N	N	N	FD	N
		depth_interval	0 - 1 ft	2 - 4 ft	0 - 1 ft	0 - 1 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	2 - 4 ft
Compound	CAS	Units															
Metals																	
ALUMINUM	7429-90-5	mg/kg															
ANTIMONY	7440-36-0	mg/kg															
ARSENIC	7440-38-2	mg/kg															
BARIUM	7440-39-3	mg/kg															
BERYLLIUM	7440-41-7	mg/kg															
CADMIUM	7440-43-9	mg/kg															
CALCIUM	7440-70-2	mg/kg															
CHROMIUM, TOTAL	7440-47-3	mg/kg															
CHROMIUM III (c)	16065-83-1	mg/kg															
CHROMIUM VI	18540-29-9	mg/kg															
COBALT	7440-48-4	mg/kg															
COPPER	7440-50-8	mg/kg															
IRON	7439-89-6	mg/kg															
LEAD	7439-92-1	mg/kg															
MAGNESIUM	7439-95-4	mg/kg															
MANGANESE	7439-96-5	mg/kg															
MERCURY	7439-97-6	mg/kg															
NICKEL	7440-02-0	mg/kg															
POTASSIUM	7440-09-7	mg/kg															
SELENIUM	7782-49-2	mg/kg															
SILVER	7440-22-4	mg/kg															
SODIUM	7440-23-5	mg/kg															
THALLIUM	7440-28-0	mg/kg															
VANADIUM	7440-62-2	mg/kg															
ZINC	7440-66-6	mg/kg															
PCBs																	
AROCLOR-1016	12674-11-2	mg/kg	< 0.165 U	< 0.02 U	< 0.18 U	< 0.085 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.165 U	< 0.02 U	< 0.18 U	< 0.085 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.165 U	< 0.02 U	< 0.18 U	< 0.085 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.165 U	< 0.02 U	< 0.18 U	< 0.085 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.165 U	< 0.02 U	< 0.18 U	< 0.085 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.165 U	< 0.02 U	< 0.18 U	< 0.085 U	< 0.02 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1260	11096-82-5	mg/kg	45.6	0.204	37.2	29.4	0.154	18.1	1.62	0.576	0.471	< 0.018 U	3.55	0.113	5.21	4.43 J	2.38 J
AROCLOR-1262	37324-23-5	mg/kg															
AROCLOR-1268	11100-14-4	mg/kg															
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	45.6	0.204	37.2	29.4	0.154	18.1	1.62	0.576	0.471	< 0.018 U	3.55	0.113	5.21	4.43	2.38
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	46.59	0.324	38.28	29.91	0.274	18.199	1.728	0.675	0.57	< 0.126 U	3.649	0.212	5.309	4.529	2.479
Pesticides																	
4,4-DDD	72-54-8	mg/kg															
4,4-DDE	72-55-9	mg/kg															
4,4-DDT	50-29-3	mg/kg															
ALDRIN	309-00-2	mg/kg															
ALPHA-BHC	319-84-6	mg/kg															
ALPHA-CHLORDANE	5103-71-9	mg/kg															
BETA-BHC	319-85-7	mg/kg															
DELTA-BHC	319-86-8	mg/kg															
DIELDRIN	60-57-1	mg/kg															
ENDOSULFAN I	959-98-8	mg/kg															
ENDOSULFAN II	33213-65-9	mg/kg															
ENDOSULFAN SULFATE	1031-07-8	mg/kg															
ENDRIN	72-20-8	mg/kg															
ENDRIN ALDEHYDE	7421-93-4	mg/kg															
ENDRIN KETONE	53494-70-5	mg/kg															
HEPTACHLOR	76-44-8	mg/kg															
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg															
LINDANE	58-89-9	mg/kg															
METHOXYCHLOR	72-43-5	mg/kg															
TOXAPHENE	8001-35-2	mg/kg															
TRANS-CHLORDANE	5103-74-2	mg/kg															

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-6E	DDA-NW-6F	DDA-NW-6F	DDA-NW-6R	DDA-NW-6R	DDA-NW-6R	DDA-NW-7B	DDA-NW-7D	DDA-NW-7E	DDA-NW-8I	DDA-NW-8I
		sample_date	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/20/2010	8/20/2010	7/14/2011	7/14/2011	7/14/2011	8/20/2010	8/20/2010	8/20/2010	7/13/2011	7/13/2011
		sys_sample_code	DDA-NW-6D-SO-0001	DDA-NW-6D-SO-0204	DDA-NW-6E-SO-0001-D	DDA-NW-6E-SO-0001	DDA-NW-6E-SO-0204	DDA-NW-6F-SO-0002	DDA-NW-6F-SO-0204	DDA-NW-06R-SO-0002-D	DDA-NW-06R-SO-0002	DDA-NW-06R-SO-0406	DDA-NW-7B-SO-0002	DDA-NW-7D-SO-0204	DDA-NW-7E-SO-0002	DDA-NW-08I-SO-0204-D	DDA-NW-08I-SO-0204
		sample_type_code	N	N	FD	N	N	N	N	FD	N	N	N	N	N	FD	N
		depth_interval	0 - 1 ft	2 - 4 ft	0 - 1 ft	0 - 1 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	2 - 4 ft
Compound	CAS	Units															
SVOCs																	
1,1-BIPHENYL	92-52-4	mg/kg															
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg															
1,4-DIOXANE	123-91-1	mg/kg															
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg															
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg															
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg															
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg															
2,4-DICHLOROPHENOL	120-83-2	mg/kg															
2,4-DIMETHYLPHENOL	105-67-9	mg/kg															
2,4-DINITROPHENOL	51-28-5	mg/kg															
2,4-DINITROTOLUENE	121-14-2	mg/kg															
2,6-DINITROTOLUENE	606-20-2	mg/kg															
2-CHLORONAPHTHALENE	91-58-7	mg/kg															
2-CHLOROPHENOL	95-57-8	mg/kg															
2-METHYLNAPHTHALENE	91-57-6	mg/kg															
2-METHYLPHENOL	95-48-7	mg/kg															
2-NITROANILINE	88-74-4	mg/kg															
2-NITROPHENOL	88-75-5	mg/kg															
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg															
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg															
3-NITROANILINE	99-09-2	mg/kg															
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg															
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg															
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg															
4-CHLOROANILINE	106-47-8	mg/kg															
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg															
4-NITROANILINE	100-01-6	mg/kg															
4-NITROPHENOL	100-02-7	mg/kg															
ACENAPHTHENE	83-32-9	mg/kg															
ACENAPHTHYLENE	208-96-8	mg/kg															
ACETOPHENONE	98-86-2	mg/kg															
ANTHRACENE	120-12-7	mg/kg															
ATRAZINE	1912-24-9	mg/kg															
BENZALDEHYDE	100-52-7	mg/kg															
BENZO[A]ANTHRACENE	56-55-3	mg/kg															
BENZO[A]PYRENE	50-32-8	mg/kg															
BENZO[B]FLUORANTHENE	205-99-2	mg/kg															
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg															
BENZO[K]FLUORANTHENE	207-08-9	mg/kg															
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg															
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg															
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg															
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg															
CAPROLACTAM	105-60-2	mg/kg															
CARBAZOLE	86-74-8	mg/kg															
CHRYSENE	218-01-9	mg/kg															
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg															
DIBENZOFURAN	132-64-9	mg/kg															
DIETHYLPHTHALATE	84-66-2	mg/kg															
DIMETHYL PHTHALATE	131-11-3	mg/kg															
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg															
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg															
FLUORANTHENE	206-44-0	mg/kg															
FLUORENE	86-73-7	mg/kg															
HEXACHLOROBENZENE	118-74-1	mg/kg															
HEXACHLOROBUTADIENE	87-68-3	mg/kg															
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg															
HEXACHLOROETHANE	67-72-1	mg/kg															
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg															
ISOPHORONE	78-59-1	mg/kg															
NAPHTHALENE	91-20-3	mg/kg															
NITROBENZENE	98-95-3	mg/kg															
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg															
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg															
PENTACHLOROPHENOL	87-86-5	mg/kg															
PHENANTHRENE	85-01-8	mg/kg															
PHENOL	108-95-2	mg/kg															
PYRENE	129-00-0	mg/kg															
PAHs																	
2-METHYLNAPHTHALENE	91-57-6	mg/kg															
ACENAPHTHENE	83-32-9	mg/kg															
ACENAPHTHYLENE	208-96-8	mg/kg															
ANTHRACENE	120-12-7	mg/kg															
BENZO[A]ANTHRACENE	56-55-3	mg/kg															
BENZO[A]PYRENE	50-32-8	mg/kg															
BENZO[B]FLUORANTHENE	205-99-2	mg/kg															
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg															
BENZO[K]FLUORANTHENE	207-08-9	mg/kg															
CHRYSENE	218-01-9	mg/kg															
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg															
FLUORANTHENE	206-44-0	mg/kg															
FLUORENE	86-73-7	mg/kg															
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg															
NAPHTHALENE	91-20-3	mg/kg															
PHENANTHRENE	85-01-8	mg/kg															
PYRENE	129-00-0	mg/kg															

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-6E	DDA-NW-6F	DDA-NW-6F	DDA-NW-6R	DDA-NW-6R	DDA-NW-6R	DDA-NW-7B	DDA-NW-7D	DDA-NW-7E	DDA-NW-8I	DDA-NW-8I
		sample_date	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/20/2010	8/20/2010	7/14/2011	7/14/2011	7/14/2011	8/20/2010	8/20/2010	8/20/2010	7/13/2011	7/13/2011
		sys_sample_code	DDA-NW-6D-SO-0001	DDA-NW-6D-SO-0204	DDA-NW-6E-SO-0001-D	DDA-NW-6E-SO-0001	DDA-NW-6E-SO-0204	DDA-NW-6F-SO-0002	DDA-NW-6F-SO-0204	DDA-NW-06R-SO-0002-D	DDA-NW-06R-SO-0002	DDA-NW-06R-SO-0406	DDA-NW-7B-SO-0002	DDA-NW-7D-SO-0204	DDA-NW-7E-SO-0002	DDA-NW-08I-SO-0204-D	DDA-NW-08I-SO-0204
		sample_type_code	N	N	FD	N	N	N	N	FD	N	N	N	N	N	FD	N
		depth_interval	0 - 1 ft	2 - 4 ft	0 - 1 ft	0 - 1 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	2 - 4 ft
Compound	CAS	Units																
VOCs																		
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg																
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg																
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg																
1,1-DICHLOROETHANE	75-34-3	mg/kg																
1,1-DICHLOROETHENE	75-35-4	mg/kg																
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg																
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																
1,2-DIBROMOETHANE	106-93-4	mg/kg																
1,2-DICHLOROBENZENE	95-50-1	mg/kg																
1,2-DICHLOROETHANE	107-06-2	mg/kg																
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																
1,2-DICHLOROPROPANE	78-87-5	mg/kg																
1,3-DICHLOROBENZENE	541-73-1	mg/kg																
1,4-DICHLOROBENZENE	106-46-7	mg/kg																
2-BUTANONE	78-93-3	mg/kg																
2-HEXANONE	591-78-6	mg/kg																
4-METHYL-2-PENTANONE	108-10-1	mg/kg																
ACETONE	67-64-1	mg/kg																
BENZENE	71-43-2	mg/kg																
BROMODICHLOROMETHANE	75-27-4	mg/kg																
BROMOFORM	75-25-2	mg/kg																
BROMOMETHANE	74-83-9	mg/kg																
CARBON DISULFIDE	75-15-0	mg/kg																
CARBON TETRACHLORIDE	56-23-5	mg/kg																
CHLOROBENZENE	108-90-7	mg/kg																
CHLOROETHANE	75-00-3	mg/kg																
CHLOROFORM	67-66-3	mg/kg																
CHLOROMETHANE	74-87-3	mg/kg																
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg																
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																
CYCLOHEXANE	110-82-7	mg/kg																
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																
ETHYLBENZENE	100-41-4	mg/kg																
ISOPROPYLBENZENE	98-82-8	mg/kg																
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																
METHYL ACETATE	79-20-9	mg/kg																
METHYL CYCLOHEXANE	108-87-2	mg/kg																
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																
METHYLENE CHLORIDE	75-09-2	mg/kg																
O-XYLENE	95-47-6	mg/kg																
STYRENE	100-42-5	mg/kg																
TETRACHLOROETHENE	127-18-4	mg/kg																
TOLUENE	108-88-3	mg/kg																
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg																
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																
TRICHLOROETHENE	79-01-6	mg/kg																
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																
VINYL CHLORIDE	75-01-4	mg/kg																
XYLENES, TOTAL (a)	1330-20-7	mg/kg																
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																
			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-8R	DDA-NW-8R	DDA-NW-9B	DDA-NW-9B	DDA-NW-9E	DDA-NW-9M	DDA-NW-9M	DDA-SE-2C	DDA-SE-2D	DDA-SE-3D	DDA-SE-4C	DDA-SE-4D	DDA-SE-4D	DDA-SE-5B	DDA-SE-5B	DDA-SE-5C
		sample_date	7/14/2011	7/14/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011	7/14/2011	8/19/2010	8/20/2010	8/20/2010	8/19/2010	8/20/2010	7/11/2011	7/12/2011	7/12/2011	8/20/2010
		sys_sample_code	DDA-NW-08R-SO-0002	DDA-NW-08R-SO-0204	DDA-NW-09B-SO-0002	DDA-NW-09B-SO-0406	DDA-NW-9E-SO-0002	DDA-NW-09M-SO-0002	DDA-NW-09M-SO-0608	DDA-SE-2C-SO-0608	DDA-SE-2D-SO-0608	DDA-SE-3D-SO-0810	DDA-SE-4C-SO-0608	DDA-SE-4D-SO-0810	DDA-SE-04D-SO-0810	DDA-SE-05B-SO-0002	DDA-SE-05B-SO-0204	DDA-SE-5C-SO-0810
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	0 - 2 ft	2 - 4 ft	8 - 10 ft
Compound	CAS	Units																
Metals																		
ALUMINUM	7429-90-5	mg/kg																
ANTIMONY	7440-36-0	mg/kg																
ARSENIC	7440-38-2	mg/kg																
BARIUM	7440-39-3	mg/kg																
BERYLLIUM	7440-41-7	mg/kg																
CADMIUM	7440-43-9	mg/kg																
CALCIUM	7440-70-2	mg/kg																
CHROMIUM, TOTAL	7440-47-3	mg/kg																
CHROMIUM III (c)	16065-83-1	mg/kg																
CHROMIUM VI	18540-29-9	mg/kg																
COBALT	7440-48-4	mg/kg																
COPPER	7440-50-8	mg/kg																
IRON	7439-89-6	mg/kg																
LEAD	7439-92-1	mg/kg																
MAGNESIUM	7439-95-4	mg/kg																
MANGANESE	7439-96-5	mg/kg																
MERCURY	7439-97-6	mg/kg																
NICKEL	7440-02-0	mg/kg																
POTASSIUM	7440-09-7	mg/kg																
SELENIUM	7782-49-2	mg/kg																
SILVER	7440-22-4	mg/kg																
SODIUM	7440-23-5	mg/kg																
THALLIUM	7440-28-0	mg/kg																
VANADIUM	7440-62-2	mg/kg																
ZINC	7440-66-6	mg/kg																
PCBs																		
AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U
AROCLOR-1260	11096-82-5	mg/kg	7.85	0.215	0.109	0.044	5.76	24	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	21.5	< 0.018 U	< 0.0165 U
AROCLOR-1262	37324-23-5	mg/kg																
AROCLOR-1268	11100-14-4	mg/kg																
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	7.85	0.215	0.109	0.0440	5.76	24	< 0.02 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	21.5	< 0.018 U	< 0.0165 U
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	7.949	0.314	0.208	0.143	5.889	24.099	< 0.14 U	< 0.1155 U	< 0.1155 U	< 0.1155 U	< 0.1155 U	< 0.1155 U	< 0.1155 U	21.608	< 0.126 U	< 0.1155 U
Pesticides																		
4,4-DDD	72-54-8	mg/kg														< 0.935 U	< 0.0019 U	
4,4-DDE	72-55-9	mg/kg														< 0.935 U	< 0.0019 U	
4,4-DDT	50-29-3	mg/kg														< 0.935 U	< 0.0019 U	
ALDRIN	309-00-2	mg/kg														< 0.495 U	< 0.00099 U	
ALPHA-BHC	319-84-6	mg/kg														< 0.495 U	< 0.00099 U	
ALPHA-CHLORDANE	5103-71-9	mg/kg														< 0.495 U	< 0.00099 U	
BETA-BHC	319-85-7	mg/kg														< 0.495 U	< 0.00099 U	
DELTA-BHC	319-86-8	mg/kg														< 0.495 U	< 0.00099 U	
DIELDRIN	60-57-1	mg/kg														< 0.935 U	< 0.0019 U	
ENDOSULFAN I	959-98-8	mg/kg														< 0.495 U	< 0.00099 U	
ENDOSULFAN II	33213-65-9	mg/kg														< 0.935 U	< 0.0019 U	
ENDOSULFAN SULFATE	1031-07-8	mg/kg														< 0.935 U	< 0.0019 U	
ENDRIN	72-20-8	mg/kg														< 0.935 U	< 0.0019 U	
ENDRIN ALDEHYDE	7421-93-4	mg/kg														< 0.935 U	< 0.0019 U	
ENDRIN KETONE	53494-70-5	mg/kg														< 0.935 U	< 0.0019 U	
HEPTACHLOR	76-44-8	mg/kg														< 0.495 U	< 0.00099 U	
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg														< 0.495 U	< 0.00099 U	
LINDANE	58-89-9	mg/kg														< 0.495 U	< 0.00099 U	
METHOXYCHLOR	72-43-5	mg/kg														< 4.95 U	< 0.0099 U	
TOXAPHENE	8001-35-2	mg/kg														< 49.5 U	< 0.099 U	
TRANS-CHLORDANE	5103-74-2	mg/kg														< 0.495 U	< 0.00099 U	

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-8R	DDA-NW-8R	DDA-NW-9B	DDA-NW-9B	DDA-NW-9E	DDA-NW-9M	DDA-NW-9M	DDA-SE-2C	DDA-SE-2D	DDA-SE-3D	DDA-SE-4C	DDA-SE-4D	DDA-SE-4D	DDA-SE-5B	DDA-SE-5B	DDA-SE-5C
		sample_date	7/14/2011	7/14/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011	7/14/2011	8/19/2010	8/20/2010	8/20/2010	8/19/2010	8/20/2010	7/11/2011	7/12/2011	7/12/2011	8/20/2010
		sys_sample_code	DDA-NW-08R-SO-0002	DDA-NW-08R-SO-0204	DDA-NW-09B-SO-0002	DDA-NW-09B-SO-0406	DDA-NW-9E-0002	DDA-NW-09M-SO-0002	DDA-NW-09M-SO-0608	DDA-SE-2C-SO-0608	DDA-SE-2D-SO-0608	DDA-SE-3D-SO-0810	DDA-SE-4C-SO-0608	DDA-SE-4D-SO-0810	DDA-SE-04D-SO-0810	DDA-SE-05B-SO-0002	DDA-SE-05B-SO-0204	DDA-SE-5C-SO-0810
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	0 - 2 ft	2 - 4 ft	8 - 10 ft
Compound	CAS	Units																
SVOCs																		
1,1-BIPHENYL	92-52-4	mg/kg																
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg																
1,4-DIOXANE	123-91-1	mg/kg																
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg																
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg																
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg																
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg																
2,4-DICHLOROPHENOL	120-83-2	mg/kg																
2,4-DIMETHYLPHENOL	105-67-9	mg/kg																
2,4-DINITROPHENOL	51-28-5	mg/kg																
2,4-DINITROTOLUENE	121-14-2	mg/kg																
2,6-DINITROTOLUENE	606-20-2	mg/kg																
2-CHLORONAPHTHALENE	91-58-7	mg/kg																
2-CHLOROPHENOL	95-57-8	mg/kg																
2-METHYLNAPHTHALENE	91-57-6	mg/kg																
2-METHYLPHENOL	95-48-7	mg/kg																
2-NITROANILINE	88-74-4	mg/kg																
2-NITROPHENOL	88-75-5	mg/kg																
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg																
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg																
3-NITROANILINE	99-09-2	mg/kg																
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg																
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg																
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg																
4-CHLOROANILINE	106-47-8	mg/kg																
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg																
4-NITROANILINE	100-01-6	mg/kg																
4-NITROPHENOL	100-02-7	mg/kg																
ACENAPHTHENE	83-32-9	mg/kg																
ACENAPHTHYLENE	208-96-8	mg/kg																
ACETOPHENONE	98-86-2	mg/kg																
ANTHRACENE	120-12-7	mg/kg																
ATRAZINE	1912-24-9	mg/kg																
BENZALDEHYDE	100-52-7	mg/kg																
BENZO[A]ANTHRACENE	56-55-3	mg/kg																
BENZO[A]PYRENE	50-32-8	mg/kg																
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg																
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg																
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg																
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg																
CAPROLACTAM	105-60-2	mg/kg																
CARBAZOLE	86-74-8	mg/kg																
CHRYSENE	218-01-9	mg/kg																
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																
DIBENZOFURAN	132-64-9	mg/kg																
DIETHYLPHTHALATE	84-66-2	mg/kg																
DIMETHYL PHTHALATE	131-11-3	mg/kg																
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg																
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg																
FLUORANTHENE	206-44-0	mg/kg																
FLUORENE	86-73-7	mg/kg																
HEXACHLOROBENZENE	118-74-1	mg/kg																
HEXACHLOROBUTADIENE	87-68-3	mg/kg																
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg																
HEXACHLOROETHANE	67-72-1	mg/kg																
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																
ISOPHORONE	78-59-1	mg/kg																
NAPHTHALENE	91-20-3	mg/kg																
NITROBENZENE	98-95-3	mg/kg																
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg																
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg																
PENTACHLOROPHENOL	87-86-5	mg/kg																
PHENANTHRENE	85-01-8	mg/kg																
PHENOL	108-95-2	mg/kg																
PYRENE	129-00-0	mg/kg																
PAHs																		
2-METHYLNAPHTHALENE	91-57-6	mg/kg																
ACENAPHTHENE	83-32-9	mg/kg																
ACENAPHTHYLENE	208-96-8	mg/kg																
ANTHRACENE	120-12-7	mg/kg																
BENZO[A]ANTHRACENE	56-55-3	mg/kg																
BENZO[A]PYRENE	50-32-8	mg/kg																
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																
CHRYSENE	218-01-9	mg/kg																
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																
FLUORANTHENE	206-44-0	mg/kg																
FLUORENE	86-73-7	mg/kg																
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																
NAPHTHALENE	91-20-3	mg/kg																
PHENANTHRENE	85-01-8	mg/kg																
PYRENE	129-00-0	mg/kg																

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-NW-8R	DDA-NW-8R	DDA-NW-9B	DDA-NW-9B	DDA-NW-9E	DDA-NW-9M	DDA-NW-9M	DDA-SE-2C	DDA-SE-2D	DDA-SE-3D	DDA-SE-4C	DDA-SE-4D	DDA-SE-4D	DDA-SE-5B	DDA-SE-5B	DDA-SE-5C
		sample_date	7/14/2011	7/14/2011	7/12/2011	7/12/2011	7/12/2011	7/13/2011	7/14/2011	8/19/2010	8/20/2010	8/20/2010	8/19/2010	8/20/2010	7/11/2011	7/12/2011	7/12/2011	8/20/2010
		sys_sample_code	DDA-NW-08R-SO-0002	DDA-NW-08R-SO-0204	DDA-NW-09B-SO-0002	DDA-NW-09B-SO-0406	DDA-NW-9E-SO-0002	DDA-NW-09M-SO-0002	DDA-NW-09M-SO-0608	DDA-SE-2C-SO-0608	DDA-SE-2D-SO-0608	DDA-SE-3D-SO-0810	DDA-SE-4C-SO-0608	DDA-SE-4D-SO-0810	DDA-SE-04D-SO-0810	DDA-SE-05B-SO-0002	DDA-SE-05B-SO-0204	DDA-SE-5C-SO-0810
		sample_type_code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	0 - 2 ft	2 - 4 ft	0 - 2 ft	4 - 6 ft	0 - 2 ft	0 - 2 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	0 - 2 ft	2 - 4 ft	8 - 10 ft
Compound	CAS	Units																
VOCs																		
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg														< 0.00096 U	< 0.00099 U	
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg														< 0.00096 U	< 0.00099 U	
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg														< 0.00096 U	< 0.00099 U	
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg														< 0.00096 U	< 0.00099 U	
1,1-DICHLOROETHANE	75-34-3	mg/kg														< 0.00096 U	< 0.00099 U	
1,1-DICHLOROETHENE	75-35-4	mg/kg														< 0.00096 U	< 0.00099 U	
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg														< 0.00096 U	0.0002 J	
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg														< 0.00096 U	< 0.00099 U	
1,2-DIBROMOETHANE	106-93-4	mg/kg																
1,2-DICHLOROBENZENE	95-50-1	mg/kg														< 0.00096 U	< 0.00099 U	
1,2-DICHLOROETHANE	107-06-2	mg/kg														< 0.00096 U	< 0.00099 U	
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																
1,2-DICHLOROPROPANE	78-87-5	mg/kg														< 0.00096 U	< 0.00099 U	
1,3-DICHLOROBENZENE	541-73-1	mg/kg														< 0.00096 U	< 0.00099 U	
1,4-DICHLOROBENZENE	106-46-7	mg/kg														< 0.00096 U	< 0.00099 U	
2-BUTANONE	78-93-3	mg/kg																
2-HEXANONE	591-78-6	mg/kg																
4-METHYL-2-PENTANONE	108-10-1	mg/kg																
ACETONE	67-64-1	mg/kg																
BENZENE	71-43-2	mg/kg																
BROMODICHLOROMETHANE	75-27-4	mg/kg														< 0.00096 U	< 0.00099 U	
BROMOFORM	75-25-2	mg/kg																
BROMOMETHANE	74-83-9	mg/kg																
CARBON DISULFIDE	75-15-0	mg/kg																
CARBON TETRACHLORIDE	56-23-5	mg/kg														< 0.00096 U	< 0.00099 U	
CHLOROBENZENE	108-90-7	mg/kg														< 0.00096 U	< 0.00099 U	
CHLOROETHANE	75-00-3	mg/kg														< 0.00096 U	< 0.00099 U	
CHLOROFORM	67-66-3	mg/kg														< 0.00096 U	< 0.00099 U	
CHLOROMETHANE	74-87-3	mg/kg														< 0.00096 U	< 0.00099 U	
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg														< 0.00096 U	< 0.00099 U	
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg														< 0.00096 U	< 0.00099 U	
CYCLOHEXANE	110-82-7	mg/kg																
DIBROMOCHLOROMETHANE	124-48-1	mg/kg														< 0.00096 U	< 0.00099 U	
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg														< 0.00096 U	< 0.00099 U	
ETHYLBENZENE	100-41-4	mg/kg																
ISOPROPYLBENZENE	98-82-8	mg/kg																
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																
METHYL ACETATE	79-20-9	mg/kg																
METHYL CYCLOHEXANE	108-87-2	mg/kg																
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																
METHYLENE CHLORIDE	75-09-2	mg/kg														< 0.0019 U	< 0.002 U	
O-XYLENE	95-47-6	mg/kg																
STYRENE	100-42-5	mg/kg																
TETRACHLOROETHENE	127-18-4	mg/kg														< 0.00096 U	< 0.00099 U	
TOLUENE	108-88-3	mg/kg																
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg														< 0.00096 U	< 0.00099 U	
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg														< 0.00096 U	< 0.00099 U	
TRICHLOROETHENE	79-01-6	mg/kg														< 0.00096 U	< 0.00099 U	
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg														< 0.00096 U	< 0.00099 U	
VINYL CHLORIDE	75-01-4	mg/kg														< 0.00096 U	< 0.00099 U	
XYLENES, TOTAL (a)	1330-20-7	mg/kg																
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																
			9	9	9	9	9	9	9	9	9	9	9	9	9	60	60	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-SE-5C	DDA-SE-5D	DDA-SE-5D	DDA-SE-5D	DDA-SE-5D	DDA-SW-2F	DDA-SW-2F	DDA-SW-2I	DDA-SW-3G	DDA-SW-3G	DDA-SW-3N	DDA-SW-5C	DDA-W-1B	DDA-W-1F	DDA-W-1F	DDA-W-1G	DDA-W-1G
		sample_date	7/12/2011	7/12/2011	7/12/2011	7/12/2011	8/20/2010	8/20/2010	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	8/17/2010	8/18/2010	8/18/2010	8/20/2010	8/20/2010
		sys_sample_code	DDA-SE-05C-SO-0810	DDA-SE-05D-SO-0204-D	DDA-SE-05D-SO-0204	DDA-SE-05D-SO-0406	DDA-SW-2F-SO-0002	DDA-SW-2F-SO-0204	DDA-SW-02I-SO-0002	DDA-SW-03G-SO-0002	DDA-SW-03G-SO-0406	DDA-SW-03N-SO-0406	DDA-SW-05C-SO-0406	DDA-W-1B-SO-0305	DDA-W-1F-SO-0002	DDA-W-1F-SO-0204	DDA-W-1G-SO-0002	DDA-W-1G-SO-0204
		sample_type_code	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
		depth_interval	8 - 10 ft	2 - 4 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	4 - 6 ft	3 - 5 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units																
Metals																		
ALUMINUM	7429-90-5	mg/kg				14100												
ANTIMONY	7440-36-0	mg/kg				0.3 J												
ARSENIC	7440-38-2	mg/kg				9.1												
BARIUM	7440-39-3	mg/kg				22												
BERYLLIUM	7440-41-7	mg/kg				0.36												
CADMIUM	7440-43-9	mg/kg				< 0.3 U												
CALCIUM	7440-70-2	mg/kg				3120												
CHROMIUM, TOTAL	7440-47-3	mg/kg				24												
CHROMIUM III (c)	16065-83-1	mg/kg																
CHROMIUM VI	18540-29-9	mg/kg																
COBALT	7440-48-4	mg/kg				11												
COPPER	7440-50-8	mg/kg				20												
IRON	7439-89-6	mg/kg				22900												
LEAD	7439-92-1	mg/kg				9												
MAGNESIUM	7439-95-4	mg/kg				6794												
MANGANESE	7439-96-5	mg/kg				409												
MERCURY	7439-97-6	mg/kg																
NICKEL	7440-02-0	mg/kg				23												
POTASSIUM	7440-09-7	mg/kg				1280												
SELENIUM	7782-49-2	mg/kg				1 J												
SILVER	7440-22-4	mg/kg				< 0.3 U												
SODIUM	7440-23-5	mg/kg				157												
THALLIUM	7440-28-0	mg/kg				< 0.3 U												
VANADIUM	7440-62-2	mg/kg				33												
ZINC	7440-66-6	mg/kg				49												
PCBs																		
AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.0165 U	< 0.02 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
AROCLOR-1260	11096-82-5	mg/kg	0.038	< 0.0165 U	< 0.02 U	< 0.018 U	8.48	0.569	1.11	0.323	0.014 J	2.64	0.026 J	1.9	36	0.208	15.2	1.11
AROCLOR-1262	37324-23-5	mg/kg																
AROCLOR-1268	11100-14-4	mg/kg																
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.038	< 0.0165 U	< 0.02 U	< 0.018 U	8.48	0.569	1.11	0.323	0.0140	2.64	0.026	1.9	36	0.208	15.2	1.11
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	0.146	< 0.1155 U	< 0.14 U	< 0.126 U	8.579	0.668	1.218	0.431	0.113	2.739	0.134	2.008	36.99	0.307	15.299	1.209
Pesticides																		
4,4-DDD	72-54-8	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
4,4-DDE	72-55-9	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
4,4-DDT	50-29-3	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
ALDRIN	309-00-2	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
ALPHA-BHC	319-84-6	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
BETA-BHC	319-85-7	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
DELTA-BHC	319-86-8	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
DIELDRIN	60-57-1	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
ENDOSULFAN I	959-98-8	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
ENDOSULFAN II	33213-65-9	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
ENDRIN	72-20-8	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
ENDRIN KETONE	53494-70-5	mg/kg	< 0.0019 U	< 0.0017 U	< 0.002 U	< 0.0019 U												
HEPTACHLOR	76-44-8	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
LINDANE	58-89-9	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												
METHOXYCHLOR	72-43-5	mg/kg	< 0.0099 U	< 0.009 U	< 0.011 U	< 0.0099 U												
TOXAPHENE	8001-35-2	mg/kg	< 0.099 U	< 0.09 U	< 0.108 U	< 0.099 U												
TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00099 U	< 0.0009 U	< 0.0011 U	< 0.00099 U												

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	DDA-SE-5C	DDA-SE-5D	DDA-SE-5D	DDA-SE-5D	DDA-SW-2F	DDA-SW-2F	DDA-SW-2I	DDA-SW-3G	DDA-SW-3G	DDA-SW-3N	DDA-SW-5C	DDA-W-1B	DDA-W-1F	DDA-W-1F	DDA-W-1G	DDA-W-1G
			sample_date	7/12/2011	7/12/2011	7/12/2011	7/12/2011	8/20/2010	8/20/2010	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	8/17/2010	8/18/2010	8/18/2010	8/20/2010	8/20/2010
			sys_sample_code	DDA-SE-05C-SO-0810	DDA-SE-05D-SO-0204-D	DDA-SE-05D-SO-0204	DDA-SE-05D-SO-0406	DDA-SW-2F-SO-0002	DDA-SW-2F-SO-0204	DDA-SW-02I-SO-0002	DDA-SW-03G-SO-0002	DDA-SW-03G-SO-0406	DDA-SW-03N-SO-0406	DDA-SW-05C-SO-0406	DDA-W-1B-SO-0305	DDA-W-1F-SO-0002	DDA-W-1F-SO-0204	DDA-W-1G-SO-0002	DDA-W-1G-SO-0204
			sample_type_code	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N
			depth_interval	8 - 10 ft	2 - 4 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	4 - 6 ft	3 - 5 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft
Compound	CAS	Units																	
SVOCs																			
1,1-BIPHENYL	92-52-4	mg/kg																	
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg																	
1,4-DIOXANE	123-91-1	mg/kg																	
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg																	
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg																	
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg																	
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg																	
2,4-DICHLOROPHENOL	120-83-2	mg/kg																	
2,4-DIMETHYLPHENOL	105-67-9	mg/kg																	
2,4-DINITROPHENOL	51-28-5	mg/kg																	
2,4-DINITROTOLUENE	121-14-2	mg/kg																	
2,6-DINITROTOLUENE	606-20-2	mg/kg																	
2-CHLORONAPHTHALENE	91-58-7	mg/kg																	
2-CHLOROPHENOL	95-57-8	mg/kg																	
2-METHYLNAPHTHALENE	91-57-6	mg/kg																	
2-METHYLPHENOL	95-48-7	mg/kg																	
2-NITROANILINE	88-74-4	mg/kg																	
2-NITROPHENOL	88-75-5	mg/kg																	
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg																	
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg																	
3-NITROANILINE	99-09-2	mg/kg																	
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg																	
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg																	
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg																	
4-CHLOROANILINE	106-47-8	mg/kg																	
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg																	
4-NITROANILINE	100-01-6	mg/kg																	
4-NITROPHENOL	100-02-7	mg/kg																	
ACENAPHTHENE	83-32-9	mg/kg																	
ACENAPHTHYLENE	208-96-8	mg/kg																	
ACETOPHENONE	98-86-2	mg/kg																	
ANTHRACENE	120-12-7	mg/kg																	
ATRAZINE	1912-24-9	mg/kg																	
BENZALDEHYDE	100-52-7	mg/kg																	
BENZO[A]ANTHRACENE	56-55-3	mg/kg																	
BENZO[A]PYRENE	50-32-8	mg/kg																	
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																	
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																	
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																	
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg																	
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg																	
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg																	
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg																	
CAPROLACTAM	105-60-2	mg/kg																	
CARBAZOLE	86-74-8	mg/kg																	
CHRYSENE	218-01-9	mg/kg																	
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																	
DIBENZOFURAN	132-64-9	mg/kg																	
DIETHYLPHTHALATE	84-66-2	mg/kg																	
DIMETHYL PHTHALATE	131-11-3	mg/kg																	
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg																	
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg																	
FLUORANTHENE	206-44-0	mg/kg																	
FLUORENE	86-73-7	mg/kg																	
HEXACHLOROBENZENE	118-74-1	mg/kg																	
HEXACHLOROBUTADIENE	87-68-3	mg/kg																	
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg																	
HEXACHLOROETHANE	67-72-1	mg/kg																	
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																	
ISOPHORONE	78-59-1	mg/kg																	
NAPHTHALENE	91-20-3	mg/kg																	
NITROBENZENE	98-95-3	mg/kg																	
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg																	
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg																	
PENTACHLOROPHENOL	87-86-5	mg/kg																	
PHENANTHRENE	85-01-8	mg/kg																	
PHENOL	108-95-2	mg/kg																	
PYRENE	129-00-0	mg/kg																	
PAHs																			
2-METHYLNAPHTHALENE	91-57-6	mg/kg																	
ACENAPHTHENE	83-32-9	mg/kg																	
ACENAPHTHYLENE	208-96-8	mg/kg																	
ANTHRACENE	120-12-7	mg/kg																	
BENZO[A]ANTHRACENE	56-55-3	mg/kg																	
BENZO[A]PYRENE	50-32-8	mg/kg																	
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																	
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																	
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																	
CHRYSENE	218-01-9	mg/kg																	
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																	
FLUORANTHENE	206-44-0	mg/kg																	
FLUORENE	86-73-7	mg/kg																	
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																	
NAPHTHALENE	91-20-3	mg/kg																	
PHENANTHRENE	85-01-8	mg/kg																	
PYRENE	129-00-0	mg/kg																	

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-SE-5C	DDA-SE-5D	DDA-SE-5D	DDA-SE-5D	DDA-SW-2F	DDA-SW-2F	DDA-SW-2I	DDA-SW-3G	DDA-SW-3G	DDA-SW-3N	DDA-SW-5C	DDA-W-1B	DDA-W-1F	DDA-W-1F	DDA-W-1G	DDA-W-1G	
		sample_date	7/12/2011	7/12/2011	7/12/2011	7/12/2011	8/20/2010	8/20/2010	7/13/2011	7/13/2011	7/13/2011	7/13/2011	7/13/2011	8/17/2010	8/18/2010	8/18/2010	8/20/2010	8/20/2010	
		sys_sample_code	DDA-SE-05C-SO-0810	DDA-SE-05D-SO-0204-D	FD	DDA-SE-05D-SO-0204	DDA-SW-2F-SO-0002	DDA-SW-2F-SO-0204	DDA-SW-02I-SO-0002	DDA-SW-03G-SO-0002	DDA-SW-03G-SO-0406	DDA-SW-03N-SO-0406	DDA-SW-05C-SO-0406	DDA-W-1B-SO-0305	DDA-W-1F-SO-0002	DDA-W-1F-SO-0204	DDA-W-1G-SO-0002	DDA-W-1G-SO-0204	
		sample_type_code	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
		depth_interval	8 - 10 ft	2 - 4 ft	2 - 4 ft	4 - 6 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	0 - 2 ft	4 - 6 ft	4 - 6 ft	4 - 6 ft	3 - 5 ft	0 - 2 ft	2 - 4 ft	0 - 2 ft	2 - 4 ft	
Compound	CAS	Units																	
VOCs																			
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,2-DIBROMOETHANE	106-93-4	mg/kg																	
1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																	
1,2-DICHLOROPROPANE	78-87-5	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
2-BUTANONE	78-93-3	mg/kg																	
2-HEXANONE	591-78-6	mg/kg																	
4-METHYL-2-PENTANONE	108-10-1	mg/kg																	
ACETONE	67-64-1	mg/kg																	
BENZENE	71-43-2	mg/kg																	
BROMODICHLOROMETHANE	75-27-4	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
BROMOFORM	75-25-2	mg/kg																	
BROMOMETHANE	74-83-9	mg/kg																	
CARBON DISULFIDE	75-15-0	mg/kg																	
CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
CHLOROBENZENE	108-90-7	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
CHLOROETHANE	75-00-3	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
CHLOROFORM	67-66-3	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
CHLOROMETHANE	74-87-3	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
CYCLOHEXANE	110-82-7	mg/kg																	
DIBROMOCHLOROMETHANE	124-48-1	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
ETHYLBENZENE	100-41-4	mg/kg																	
ISOPROPYLBENZENE	98-82-8	mg/kg																	
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																	
METHYL ACETATE	79-20-9	mg/kg																	
METHYL CYCLOHEXANE	108-87-2	mg/kg																	
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																	
METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.0016 U	< 0.0016 U	< 0.002 U	< 0.0018 U													
O-XYLENE	95-47-6	mg/kg																	
STYRENE	100-42-5	mg/kg																	
TETRACHLOROETHENE	127-18-4	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
TOLUENE	108-88-3	mg/kg																	
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
TRICHLOROETHENE	79-01-6	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
VINYL CHLORIDE	75-01-4	mg/kg	< 0.00081 U	< 0.00081 U	< 0.001 U	< 0.00091 U													
XYLENES, TOTAL (a)	1330-20-7	mg/kg																	
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																	
			60	60	60	82	9	9	9	9	9	9	9	9	9	9	9	9	

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrati For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-W-1L	PCBAREA1-003	PCBAREA1-003	PCBAREA1-004	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014	PCBAREA1-017	PCBAREA1-201	PCBAREA1-202	PCBAREA1-202	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-001
		sample_date	7/13/2011	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/18/2013	9/18/2013
		sys_sample_code	DDA-W-01L-SO-0406	PCBAREA1-003	PCBAREA1-093	PCBAREA1-004	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014	PCBAREA1-017	PCBAREA1-201	PCBAREA1-202	PCBAREA1P-202	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-091
		sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	FD
		depth_interval	4 - 6 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft	1 - 1 ft	1 - 1 ft	3 - 3 ft	3 - 3 ft	3 - 3 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft
Compound	CAS	Units																						
Metals																								
ALUMINUM	7429-90-5	mg/kg																						
ANTIMONY	7440-36-0	mg/kg																						
ARSENIC	7440-38-2	mg/kg																						
BARIUM	7440-39-3	mg/kg																						
BERYLLIUM	7440-41-7	mg/kg																						
CADMIUM	7440-43-9	mg/kg																						
CALCIUM	7440-70-2	mg/kg																						
CHROMIUM, TOTAL	7440-47-3	mg/kg																						
CHROMIUM III (c)	16065-83-1	mg/kg																						
CHROMIUM VI	18540-29-9	mg/kg																						
COBALT	7440-48-4	mg/kg																						
COPPER	7440-50-8	mg/kg																						
IRON	7439-89-6	mg/kg																						
LEAD	7439-92-1	mg/kg																						
MAGNESIUM	7439-95-4	mg/kg																						
MANGANESE	7439-96-5	mg/kg																						
MERCURY	7439-97-6	mg/kg																						
NICKEL	7440-02-0	mg/kg																						
POTASSIUM	7440-09-7	mg/kg																						
SELENIUM	7782-49-2	mg/kg																						
SILVER	7440-22-4	mg/kg																						
SODIUM	7440-23-5	mg/kg																						
THALLIUM	7440-28-0	mg/kg																						
VANADIUM	7440-62-2	mg/kg																						
ZINC	7440-66-6	mg/kg																						
PCBs																								
AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.42 U	< 0.83 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U	< 0.0084 U	< 0.0075 U	< 0.82 U	< 0.0085 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.42 U	< 0.83 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U	< 0.0084 U	< 0.0075 U	< 0.82 U	< 0.0085 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.5 U	< 0.98 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 1.4 U	< 0.15 U	< 2.2 U	< 0.89 U	< 0.0098 U	< 0.0088 U	< 0.96 U	< 0.01 U	< 0.01 U	< 0.99 U	< 0.0096 U	< 0.88 U	< 0.1 U	< 0.1 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.42 U	< 0.83 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U	< 0.0084 U	< 0.0075 U	< 0.82 U	< 0.0085 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.42 U	< 0.83 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U	< 0.0084 U	< 0.0075 U	< 0.82 U	< 0.0085 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.42 U	< 0.83 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U	< 0.0084 U	< 0.0075 U	< 0.82 U	< 0.0085 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U
AROCLOR-1260	11096-82-5	mg/kg	0.332	74	67	0.4	0.37	0.13	0.048	3.2	240	8.9	610	140	1.3	0.67	83	< 0.0085 U	1.1	66	1	35	5.2	4.2
AROCLOR-1262	37324-23-5	mg/kg																						
AROCLOR-1268	11100-14-4	mg/kg																						
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.332	74	67	0.40	0.37	0.13	0.048	3.2	240	8.9	610	140	1.3	0.67	83	< 0.01 U	1.1	66	1.0	35	5.2	4.2
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	0.44	76.6	72.13	0.4525	0.4225	0.1825	0.1005	3.2519	247.4	9.7	621.7	144.69	1.3518	0.7163	88.06	< 0.061 U	1.1525	71.19	1.0506	39.63	5.725	4.725
Pesticides																								
4,4-DDD	72-54-8	mg/kg																						
4,4-DDE	72-55-9	mg/kg																						
4,4-DDT	50-29-3	mg/kg																						
ALDRIN	309-00-2	mg/kg																						
ALPHA-BHC	319-84-6	mg/kg																						
ALPHA-CHLORDANE	5103-71-9	mg/kg																						
BETA-BHC	319-85-7	mg/kg																						
DELTA-BHC	319-86-8	mg/kg																						
DIELDRIN	60-57-1	mg/kg																						
ENDOSULFAN I	959-98-8	mg/kg																						
ENDOSULFAN II	33213-65-9	mg/kg																						
ENDOSULFAN SULFATE	1031-07-8	mg/kg																						
ENDRIN	72-20-8	mg/kg																						
ENDRIN ALDEHYDE	7421-93-4	mg/kg																						
ENDRIN KETONE	53494-70-5	mg/kg																						
HEPTACHLOR	76-44-8	mg/kg																						
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg																						
LINDANE	58-89-9	mg/kg																						
METHOXYCHLOR	72-43-5	mg/kg																						
TOXAPHENE	8001-35-2	mg/kg																						
TRANS-CHLORDANE	5103-74-2	mg/kg																						

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-W-1L	PCBAREA1-003	PCBAREA1-003	PCBAREA1-004	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014	PCBAREA1-017	PCBAREA1-201	PCBAREA1-202	PCBAREA1-202	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-001
		sample_date	7/13/2011	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/18/2013	9/18/2013
		sys_sample_code	DDA-W-01L-SO-0406	PCBAREA1-003	PCBAREA1-093	PCBAREA1-004	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014	PCBAREA1-017	PCBAREA1-201	PCBAREA1-202	PCBAREA1P-202	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-091
		sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	FD
		depth_interval	4 - 6 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft	1 - 1 ft	3 - 3 ft	3 - 3 ft	3 - 3 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft
Compound	CAS	Units																						
SVOCs																								
1,1-BIPHENYL	92-52-4	mg/kg																						
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg																						
1,4-DIOXANE	123-91-1	mg/kg																						
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg																						
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg																						
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg																						
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg																						
2,4-DICHLOROPHENOL	120-83-2	mg/kg																						
2,4-DIMETHYLPHENOL	105-67-9	mg/kg																						
2,4-DINITROPHENOL	51-28-5	mg/kg																						
2,4-DINITROTOLUENE	121-14-2	mg/kg																						
2,6-DINITROTOLUENE	606-20-2	mg/kg																						
2-CHLORONAPHTHALENE	91-58-7	mg/kg																						
2-CHLOROPHENOL	95-57-8	mg/kg																						
2-METHYLNAPHTHALENE	91-57-6	mg/kg																						
2-METHYLPHENOL	95-48-7	mg/kg																						
2-NITROANILINE	88-74-4	mg/kg																						
2-NITROPHENOL	88-75-5	mg/kg																						
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg																						
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg																						
3-NITROANILINE	99-09-2	mg/kg																						
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg																						
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg																						
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg																						
4-CHLOROANILINE	106-47-8	mg/kg																						
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg																						
4-NITROANILINE	100-01-6	mg/kg																						
4-NITROPHENOL	100-02-7	mg/kg																						
ACENAPHTHENE	83-32-9	mg/kg																						
ACENAPHTHYLENE	208-96-8	mg/kg																						
ACETOPHENONE	98-86-2	mg/kg																						
ANTHRACENE	120-12-7	mg/kg																						
ATRAZINE	1912-24-9	mg/kg																						
BENZALDEHYDE	100-52-7	mg/kg																						
BENZO[A]ANTHRACENE	56-55-3	mg/kg																						
BENZO[A]PYRENE	50-32-8	mg/kg																						
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																						
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																						
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																						
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg																						
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg																						
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg																						
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg																						
CAPROLACTAM	105-60-2	mg/kg																						
CARBAZOLE	86-74-8	mg/kg																						
CHRYSENE	218-01-9	mg/kg																						
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																						
DIBENZOFURAN	132-64-9	mg/kg																						
DIETHYLPHTHALATE	84-66-2	mg/kg																						
DIMETHYL PHTHALATE	131-11-3	mg/kg																						
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg																						
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg																						
FLUORANTHENE	206-44-0	mg/kg																						
FLUORENE	86-73-7	mg/kg																						
HEXACHLOROBENZENE	118-74-1	mg/kg																						
HEXACHLOROBUTADIENE	87-68-3	mg/kg																						
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg																						
HEXACHLOROETHANE	67-72-1	mg/kg																						
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																						
ISOPHORONE	78-59-1	mg/kg																						
NAPHTHALENE	91-20-3	mg/kg																						
NITROBENZENE	98-95-3	mg/kg																						
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg																						
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg																						
PENTACHLOROPHENOL	87-86-5	mg/kg																						
PHENANTHRENE	85-01-8	mg/kg																						
PHENOL	108-95-2	mg/kg																						
PYRENE	129-00-0	mg/kg																						
PAHs																								
2-METHYLNAPHTHALENE	91-57-6	mg/kg																						
ACENAPHTHENE	83-32-9	mg/kg																						
ACENAPHTHYLENE	208-96-8	mg/kg																						
ANTHRACENE	120-12-7	mg/kg																						
BENZO[A]ANTHRACENE	56-55-3	mg/kg																						
BENZO[A]PYRENE	50-32-8	mg/kg																						
BENZO[B]FLUORANTHENE	205-99-2	mg/kg																						
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg																						
BENZO[K]FLUORANTHENE	207-08-9	mg/kg																						
CHRYSENE	218-01-9	mg/kg																						
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg																						
FLUORANTHENE	206-44-0	mg/kg																						
FLUORENE	86-73-7	mg/kg																						
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg																						
NAPHTHALENE	91-20-3	mg/kg																						
PHENANTHRENE	85-01-8	mg/kg																						
PYRENE	129-00-0	mg/kg																						

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	DDA-W-1L	PCBAREA1-003	PCBAREA1-003	PCBAREA1-004	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014	PCBAREA1-017	PCBAREA1-201	PCBAREA1-202	PCBAREA1-202	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-001
		sample_date	7/13/2011	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/18/2013	9/18/2013
		sys_sample_code	DDA-W-01L-SO-0406	PCBAREA1-003	PCBAREA1-093	PCBAREA1-004	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014	PCBAREA1-017	PCBAREA1-201	PCBAREA1-202	PCBAREA1P-202	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-091
		sample_type_code	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	FD
		depth_interval	4 - 6 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft	1 - 1 ft	3 - 3 ft	3 - 3 ft	3 - 3 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft
Compound	CAS	Units																						
VOCs																								
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg																						
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg																						
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg																						
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg																						
1,1-DICHLOROETHANE	75-34-3	mg/kg																						
1,1-DICHLOROETHENE	75-35-4	mg/kg																						
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg																						
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg																						
1,2-DIBROMOETHANE	106-93-4	mg/kg																						
1,2-DICHLOROBENZENE	95-50-1	mg/kg																						
1,2-DICHLOROETHANE	107-06-2	mg/kg																						
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg																						
1,2-DICHLOROPROPANE	78-87-5	mg/kg																						
1,3-DICHLOROBENZENE	541-73-1	mg/kg																						
1,4-DICHLOROBENZENE	106-46-7	mg/kg																						
2-BUTANONE	78-93-3	mg/kg																						
2-HEXANONE	591-78-6	mg/kg																						
4-METHYL-2-PENTANONE	108-10-1	mg/kg																						
ACETONE	67-64-1	mg/kg																						
BENZENE	71-43-2	mg/kg																						
BROMODICHLOROMETHANE	75-27-4	mg/kg																						
BROMOFORM	75-25-2	mg/kg																						
BROMOMETHANE	74-83-9	mg/kg																						
CARBON DISULFIDE	75-15-0	mg/kg																						
CARBON TETRACHLORIDE	56-23-5	mg/kg																						
CHLOROBENZENE	108-90-7	mg/kg																						
CHLOROETHANE	75-00-3	mg/kg																						
CHLOROFORM	67-66-3	mg/kg																						
CHLOROMETHANE	74-87-3	mg/kg																						
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg																						
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg																						
CYCLOHEXANE	110-82-7	mg/kg																						
DIBROMOCHLOROMETHANE	124-48-1	mg/kg																						
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg																						
ETHYLBENZENE	100-41-4	mg/kg																						
ISOPROPYLBENZENE	98-82-8	mg/kg																						
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg																						
METHYL ACETATE	79-20-9	mg/kg																						
METHYL CYCLOHEXANE	108-87-2	mg/kg																						
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg																						
METHYLENE CHLORIDE	75-09-2	mg/kg																						
O-XYLENE	95-47-6	mg/kg																						
STYRENE	100-42-5	mg/kg																						
TETRACHLOROETHENE	127-18-4	mg/kg																						
TOLUENE	108-88-3	mg/kg																						
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg																						
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg																						
TRICHLOROETHENE	79-01-6	mg/kg																						
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg																						
VINYL CHLORIDE	75-01-4	mg/kg																						
XYLENES, TOTAL (a)	1330-20-7	mg/kg																						
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg																						
			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

loc_group			Area 2	Area 2	Area 2	Area 2
sys_loc_code			PCBAREA2-002	PCBAREA2-003	PCBAREA2-004	PCBAREA2-005
sample_date			9/18/2013	9/18/2013	9/18/2013	9/18/2013
sys_sample_code			PCBAREA2-002	PCBAREA2-003	PCBAREA2-004	PCBAREA2-005
sample_type_code			N	N	N	N
depth_interval			1 - 1 ft	1 - 1 ft	1 - 1 ft	1 - 1 ft
Compound	CAS	Units				
Metals						
ALUMINUM	7429-90-5	mg/kg				
ANTIMONY	7440-36-0	mg/kg				
ARSENIC	7440-38-2	mg/kg				
BARIUM	7440-39-3	mg/kg				
BERYLLIUM	7440-41-7	mg/kg				
CADMIUM	7440-43-9	mg/kg				
CALCIUM	7440-70-2	mg/kg				
CHROMIUM, TOTAL	7440-47-3	mg/kg				
CHROMIUM III (c)	16065-83-1	mg/kg				
CHROMIUM VI	18540-29-9	mg/kg				
COBALT	7440-48-4	mg/kg				
COPPER	7440-50-8	mg/kg				
IRON	7439-89-6	mg/kg				
LEAD	7439-92-1	mg/kg				
MAGNESIUM	7439-95-4	mg/kg				
MANGANESE	7439-96-5	mg/kg				
MERCURY	7439-97-6	mg/kg				
NICKEL	7440-02-0	mg/kg				
POTASSIUM	7440-09-7	mg/kg				
SELENIUM	7782-49-2	mg/kg				
SILVER	7440-22-4	mg/kg				
SODIUM	7440-23-5	mg/kg				
THALLIUM	7440-28-0	mg/kg				
VANADIUM	7440-62-2	mg/kg				
ZINC	7440-66-6	mg/kg				
PCBs						
AROCLOR-1016	12674-11-2	mg/kg	< 0.0085 U	< 0.0085 U	< 0.34 U	< 0.085 U
AROCLOR-1221	11104-28-2	mg/kg	< 0.0085 U	< 0.0085 U	< 0.34 U	< 0.085 U
AROCLOR-1232	11141-16-5	mg/kg	< 0.01 U	< 0.01 U	< 0.4 U	< 0.1 U
AROCLOR-1242	53469-21-9	mg/kg	< 0.0085 U	< 0.0085 U	< 0.34 U	< 0.085 U
AROCLOR-1248	12672-29-6	mg/kg	< 0.0085 U	< 0.0085 U	< 0.34 U	< 0.085 U
AROCLOR-1254	11097-69-1	mg/kg	< 0.0085 U	< 0.0085 U	< 0.34 U	< 0.085 U
AROCLOR-1260	11096-82-5	mg/kg	1.7	2.4	19	5
AROCLOR-1262	37324-23-5	mg/kg				
AROCLOR-1268	11100-14-4	mg/kg				
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.7	2.4	19	5.0
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	1.7525	2.4525	21.1	5.525
Pesticides						
4,4-DDD	72-54-8	mg/kg				
4,4-DDE	72-55-9	mg/kg				
4,4-DDT	50-29-3	mg/kg				
ALDRIN	309-00-2	mg/kg				
ALPHA-BHC	319-84-6	mg/kg				
ALPHA-CHLORDANE	5103-71-9	mg/kg				
BETA-BHC	319-85-7	mg/kg				
DELTA-BHC	319-86-8	mg/kg				
DIELDRIN	60-57-1	mg/kg				
ENDOSULFAN I	959-98-8	mg/kg				
ENDOSULFAN II	33213-65-9	mg/kg				
ENDOSULFAN SULFATE	1031-07-8	mg/kg				
ENDRIN	72-20-8	mg/kg				
ENDRIN ALDEHYDE	7421-93-4	mg/kg				
ENDRIN KETONE	53494-70-5	mg/kg				
HEPTACHLOR	76-44-8	mg/kg				
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg				
LINDANE	58-89-9	mg/kg				
METHOXYCHLOR	72-43-5	mg/kg				
TOXAPHENE	8001-35-2	mg/kg				
TRANS-CHLORDANE	5103-74-2	mg/kg				

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		loc_group	Area 2	Area 2	Area 2	Area 2
		sys_loc_code	PCBAREA2-002	PCBAREA2-003	PCBAREA2-004	PCBAREA2-005
		sample_date	9/18/2013	9/18/2013	9/18/2013	9/18/2013
		sys_sample_code	PCBAREA2-002	PCBAREA2-003	PCBAREA2-004	PCBAREA2-005
		sample_type_code	N	N	N	N
		depth_interval	1 - 1 ft	1 - 1 ft	1 - 1 ft	1 - 1 ft
Compound	CAS	Units				
SVOCs						
1,1-BIPHENYL	92-52-4	mg/kg				
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg				
1,4-DIOXANE	123-91-1	mg/kg				
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg				
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg				
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg				
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg				
2,4-DICHLOROPHENOL	120-83-2	mg/kg				
2,4-DIMETHYLPHENOL	105-67-9	mg/kg				
2,4-DINITROPHENOL	51-28-5	mg/kg				
2,4-DINITROTOLUENE	121-14-2	mg/kg				
2,6-DINITROTOLUENE	606-20-2	mg/kg				
2-CHLORONAPHTHALENE	91-58-7	mg/kg				
2-CHLOROPHENOL	95-57-8	mg/kg				
2-METHYLNAPHTHALENE	91-57-6	mg/kg				
2-METHYLPHENOL	95-48-7	mg/kg				
2-NITROANILINE	88-74-4	mg/kg				
2-NITROPHENOL	88-75-5	mg/kg				
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg				
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg				
3-NITROANILINE	99-09-2	mg/kg				
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg				
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg				
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg				
4-CHLOROANILINE	106-47-8	mg/kg				
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg				
4-NITROANILINE	100-01-6	mg/kg				
4-NITROPHENOL	100-02-7	mg/kg				
ACENAPHTHENE	83-32-9	mg/kg				
ACENAPHTHYLENE	208-96-8	mg/kg				
ACETOPHENONE	98-86-2	mg/kg				
ANTHRACENE	120-12-7	mg/kg				
ATRAZINE	1912-24-9	mg/kg				
BENZALDEHYDE	100-52-7	mg/kg				
BENZO[A]ANTHRACENE	56-55-3	mg/kg				
BENZO[A]PYRENE	50-32-8	mg/kg				
BENZO[B]FLUORANTHENE	205-99-2	mg/kg				
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg				
BENZO[K]FLUORANTHENE	207-08-9	mg/kg				
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg				
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg				
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg				
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg				
CAPROLACTAM	105-60-2	mg/kg				
CARBAZOLE	86-74-8	mg/kg				
CHRYSENE	218-01-9	mg/kg				
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg				
DIBENZOFURAN	132-64-9	mg/kg				
DIETHYLPHTHALATE	84-66-2	mg/kg				
DIMETHYL PHTHALATE	131-11-3	mg/kg				
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg				
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg				
FLUORANTHENE	206-44-0	mg/kg				
FLUORENE	86-73-7	mg/kg				
HEXACHLOROBENZENE	118-74-1	mg/kg				
HEXACHLOROBUTADIENE	87-68-3	mg/kg				
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg				
HEXACHLOROETHANE	67-72-1	mg/kg				
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg				
ISOPHORONE	78-59-1	mg/kg				
NAPHTHALENE	91-20-3	mg/kg				
NITROBENZENE	98-95-3	mg/kg				
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg				
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg				
PENTACHLOROPHENOL	87-86-5	mg/kg				
PHENANTHRENE	85-01-8	mg/kg				
PHENOL	108-95-2	mg/kg				
PYRENE	129-00-0	mg/kg				
PAHs						
2-METHYLNAPHTHALENE	91-57-6	mg/kg				
ACENAPHTHENE	83-32-9	mg/kg				
ACENAPHTHYLENE	208-96-8	mg/kg				
ANTHRACENE	120-12-7	mg/kg				
BENZO[A]ANTHRACENE	56-55-3	mg/kg				
BENZO[A]PYRENE	50-32-8	mg/kg				
BENZO[B]FLUORANTHENE	205-99-2	mg/kg				
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg				
BENZO[K]FLUORANTHENE	207-08-9	mg/kg				
CHRYSENE	218-01-9	mg/kg				
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg				
FLUORANTHENE	206-44-0	mg/kg				
FLUORENE	86-73-7	mg/kg				
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg				
NAPHTHALENE	91-20-3	mg/kg				
PHENANTHRENE	85-01-8	mg/kg				
PYRENE	129-00-0	mg/kg				

TABLE A-1b
ANALYTICAL SOIL DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			loc_group	Area 2	Area 2	Area 2	Area 2
			sys_loc_code	PCBAREA2-002	PCBAREA2-003	PCBAREA2-004	PCBAREA2-005
			sample_date	9/18/2013	9/18/2013	9/18/2013	9/18/2013
			sys_sample_code	PCBAREA2-002	PCBAREA2-003	PCBAREA2-004	PCBAREA2-005
			sample_type_code	N	N	N	N
			depth_interval	1 - 1 ft	1 - 1 ft	1 - 1 ft	1 - 1 ft
Compound	CAS	Units					
VOCs							
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg					
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg					
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg					
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg					
1,1-DICHLOROETHANE	75-34-3	mg/kg					
1,1-DICHLOROETHENE	75-35-4	mg/kg					
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg					
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg					
1,2-DIBROMOETHANE	106-93-4	mg/kg					
1,2-DICHLOROBENZENE	95-50-1	mg/kg					
1,2-DICHLOROETHANE	107-06-2	mg/kg					
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg					
1,2-DICHLOROPROPANE	78-87-5	mg/kg					
1,3-DICHLOROBENZENE	541-73-1	mg/kg					
1,4-DICHLOROBENZENE	106-46-7	mg/kg					
2-BUTANONE	78-93-3	mg/kg					
2-HEXANONE	591-78-6	mg/kg					
4-METHYL-2-PENTANONE	108-10-1	mg/kg					
ACETONE	67-64-1	mg/kg					
BENZENE	71-43-2	mg/kg					
BROMODICHLOROMETHANE	75-27-4	mg/kg					
BROMOFORM	75-25-2	mg/kg					
BROMOMETHANE	74-83-9	mg/kg					
CARBON DISULFIDE	75-15-0	mg/kg					
CARBON TETRACHLORIDE	56-23-5	mg/kg					
CHLOROBENZENE	108-90-7	mg/kg					
CHLOROETHANE	75-00-3	mg/kg					
CHLOROFORM	67-66-3	mg/kg					
CHLOROMETHANE	74-87-3	mg/kg					
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg					
CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg					
CYCLOHEXANE	110-82-7	mg/kg					
DIBROMOCHLOROMETHANE	124-48-1	mg/kg					
DICHLORODIFLUOROMETHANE	75-71-8	mg/kg					
ETHYLBENZENE	100-41-4	mg/kg					
ISOPROPYLBENZENE	98-82-8	mg/kg					
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg					
METHYL ACETATE	79-20-9	mg/kg					
METHYL CYCLOHEXANE	108-87-2	mg/kg					
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg					
METHYLENE CHLORIDE	75-09-2	mg/kg					
O-XYLENE	95-47-6	mg/kg					
STYRENE	100-42-5	mg/kg					
TETRACHLOROETHENE	127-18-4	mg/kg					
TOLUENE	108-88-3	mg/kg					
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg					
TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg					
TRICHLOROETHENE	79-01-6	mg/kg					
TRICHLOROFLUOROMETHANE	75-69-4	mg/kg					
VINYL CHLORIDE	75-01-4	mg/kg					
XYLENES, TOTAL (a)	1330-20-7	mg/kg					
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg					
				9	9	9	9

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentratio For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

TABLE A-2a
GROUNDWATER SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID
FTA-DP-35	9/21/2015	FTA-DP-35-092115	N	
FTA-MW-1	11/28/2012	FTA-MW-1-112812	N	
	6/18/2014	FTA-MW-1-061814	N	
	9/18/2015	FTA-MW-1-091815	N	
FTA-MW-5	11/27/2012	FTA-MW-5-112712	N	
	6/18/2014	FTA-MW-5-061814-D	FD	FTA-MW-5-061814
	6/18/2014	FTA-MW-5-061814	N	
	9/18/2015	FTA-MW-5-091815	N	
FTA-MW-9	11/27/2012	FTA-MW-9-112712	N	
	6/17/2014	FTA-MW-9-061714	N	
	9/15/2015	FTA-MW-9-091515	N	
FTA-MW-10	11/27/2012	FTA-MW-10-112712	N	
	6/17/2014	FTA-MW-10-061714	N	
	9/21/2015	FTA-MW-10-092115	N	
FTA-MW-11	11/27/2012	FTA-MW-11-112712	N	
	6/17/2014	FTA-MW-11-061714	N	
	9/21/2015	FTA-MW-11-092115	N	
FTA-MW-12	11/27/2012	FTA-MW-12-112712	N	
	6/17/2014	FTA-MW-12-061714	N	
	9/21/2015	FTA-MW-12-092115	N	
FTA-MW-14	11/27/2012	FTA-MW-14-112712-D	FD	FTA-MW-14-112712
	11/27/2012	FTA-MW-14-112712	N	
	6/17/2014	FTA-MW-14-061714	N	
	9/21/2015	FTA-MW-14-092115	N	
	9/21/2015	FTA-MW-14-092115-D	FD	FTA-MW-14-092115
FTA-MW-206	11/28/2012	FTA-MW-206-112812	N	
	9/26/2013	FTA-MW206-092613	N	
	6/18/2014	FTA-MW-206-061814	N	
	9/18/2015	FTA-MW-206-091815	N	
	9/18/2015	FTA-MW-206-091815-D	FD	FTA-MW-206-091815
FTA-MW-210	11/29/2012	FTA-MW-210-112912-D	FD	FTA-MW-210-112912
	11/29/2012	FTA-MW-210-112912	N	
	9/26/2013	FTA-MW210-092613-D	FD	FTA-MW210-092613
	9/26/2013	FTA-MW210-092613	N	
	6/19/2014	FTA-MW-210-061814	N	
	9/21/2015	FTA-MW-210-092115	N	

Notes:
FD - Field duplicate.
ft - feet.
N - Normal sample.

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-DP-35	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
			sample_date	9/21/2015	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
			sample_type_code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
			sys_sample_code	FTA-DP-35-092115	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814-D	FTA-MW-5-061814	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
Compound	fraction	CAS	Units																	
Metals (Total)																				
ALUMINUM	N	7429-90-5	ug/L	41 J	3080	1660	1420	58.8 J	< 100 U	< 100 U	214 J	87.8 J	< 100 U	60 J	36.7 J	< 100 U	58 J	76.6 J	< 100 U	27 J
ANTIMONY	N	7440-36-0	ug/L	0.3 J	< 0.5 U	0.15 J	0.26 J	< 0.5 U	< 0.5 U	< 0.5 U	0.39 J	< 0.5 U	< 0.5 U	0.24 J	< 0.5 U	< 0.5 U	0.37 J	< 0.5 U	< 0.5 U	0.32 J
ARSENIC	N	7440-38-2	ug/L	11	< 6 U	7.9	8.8	7.6	4.9 J	3.9 J	16	2.7 J	2.7 J	2.6 J	4 J	4.3 J	6.7	< 4 U	< 4 U	< 4 U
BARIUM	N	7440-39-3	ug/L	2.64 J	14.4	8.98	21.2	6.4	4.89 J	3.74 J	6.53	5.1	4.97 J	6.11	1.7 J	< 3 U	2 J	1.4 J	< 3 U	1.7 J
BERYLLIUM	N	7440-41-7	ug/L	0.049 J	0.14 J	0.078 J	0.28 J	< 0.2 U	< 0.2 U	< 0.2 U	0.064 J	< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	0.038 J	< 0.2 U	< 0.2 UJ	0.036 J
CADMIUM	N	7440-43-9	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	0.059 J	< 0.2 U	< 0.2 U	< 0.2 U	0.16 J	< 0.2 U	< 0.2 U	0.043 J	0.09 J	< 0.2 U	0.042 J	< 0.2 U	< 0.2 U	< 0.2 U
CALCIUM	N	7440-70-2	ug/L	23100	10500	19200	19600	4890	6720	6530	7320	7830	7010	9940	3490	3670	4180	5220	4580	7490
CHROMIUM, TOTAL	N	7440-47-3	ug/L	2.99 J	7.6	< 4.08 U	6.7	< 4 U	< 4 U	5.15	2.72 J	< 4 U	4.28 J	1.6 J	< 4 U	4.41 J	3.72 J	< 4 U	4.61 J	3.57 J
COBALT	N	7440-48-4	ug/L	0.12 J	1.4	0.899 J	2.48	2.1	2.05	2.09	3.65	4.2	4.22	5.16	4.9	5.07	8.02	0.1 J	0.1 J	0.087 J
COPPER	N	7440-50-8	ug/L	1.7 J	4.6	3.36	8.3	1.2 J	< 2 U	< 2 U	3.06	3.9	< 2 U	1 J	2.6 J	2.64 J	5.81	< 2 U	< 2 U	1.6 J
IRON	N	7439-89-6	ug/L	79 J	3020	1890	1890	1850	1520	1520	3800	3340	3210	4100	1180	1350	2430	277	241	341
LEAD	N	7439-92-1	ug/L	0.29 J	3	2.5	12.8	0.78 J	0.56 J	0.5 J	2.8	0.87 J	0.19 J	0.15 J	< 0.56 U	0.4 J	0.44 J	< 0.58 U	0.13 J	0.13 J
MAGNESIUM	N	7439-95-4	ug/L	3840	2700	2880	2860	1360	1540	1520	1720	2180	1930	2670	1110	1040	1250	1990	1630	2590
MANGANESE	N	7439-96-5	ug/L	49.3	55.6	34.8	94	249	217	208	578 J	3510	3060	3850	1680	1690	2150	513	488	794
MERCURY	N	7439-97-6	ug/L	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	0.017 J	< 0.1 UJ	< 0.1 U	< 0.1 U
NICKEL	N	7440-02-0	ug/L	0.69 J	12.8	6.24	21	1 J	1.73 J	2.39	2.38	0.83 J	1.71 J	1.2 J	1.4 J	30	3.42	< 1.2 U	1.3 J	0.85 J
POTASSIUM	N	7440-09-7	ug/L	2320	< 1560 U	1370	1280	667 J	728 J	735 J	820 J	422 J	553 J	576 J	757 J	662 J	701 J	574 J	500 J	456 J
SELENIUM	N	7782-49-2	ug/L	< 3 U	< 3 U	< 3 U	0.62 J	< 3 U	0.55 J	< 3 U	< 3 U	0.78 J	< 3 U	0.59 J	0.45 J	< 3 U	< 3 U	0.21 J	< 3 U	< 3 U
SILVER	N	7440-22-4	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.45 J	< 0.4 U	< 0.4 U	< 0.4 U
SODIUM	N	7440-23-5	ug/L	10400	5270	4990	5600	3520	4750	4600	4420	4470	3890	4650	4240	3630	4060	5000	4430	5350
THALLIUM	N	7440-28-0	ug/L	< 0.4 U	0.05 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
VANADIUM	N	7440-62-2	ug/L	0.67 J	< 5.4 U	< 4 U	4.1 J	1.6 J	1.5 J	1.5 J	5.1	0.8 J	1 J	0.64 J	< 4 UJ	0.6 J	1 J	0.85 J	1.4 J	0.8 J
ZINC	N	7440-66-6	ug/L	< 10 U	10.4 J	8.09 J	12.8 J	< 10 U	1.8 J	2.1 J	3.5 J	< 10 U	1.9 J	1.5 J	< 10 U	2 J	1.8 J	< 10 U	1.3 J	2.4 J
PCBs																				
AROCLOR-1016	N	12674-11-2	ug/L																	
AROCLOR-1221	N	11104-28-2	ug/L																	
AROCLOR-1232	N	11141-16-5	ug/L																	
AROCLOR-1242	N	53469-21-9	ug/L																	
AROCLOR-1248	N	12672-29-6	ug/L																	
AROCLOR-1254	N	11097-69-1	ug/L																	
AROCLOR-1260	N	11096-82-5	ug/L																	
AROCLOR-1262	N	37324-23-5	ug/L																	
AROCLOR-1268	N	11100-14-4	ug/L																	
TOTAL AROCLORS	N	RATotAroclors	ug/L																	
TOTAL AROCLORS FULL DL	N	RATotAroFLDL	ug/L																	
Pesticides																				
4,4-DDD	N	72-54-8	ug/L																	
4,4-DDE	N	72-55-9	ug/L																	
4,4-DDT	N	50-29-3	ug/L																	
ALDRIN	N	309-00-2	ug/L																	
ALPHA-BHC	N	319-84-6	ug/L																	
ALPHA-CHLORDANE	N	5103-71-9	ug/L																	
BETA-BHC	N	319-85-7	ug/L																	
DELTA-BHC	N	319-86-8	ug/L																	
DIELDRIN	N	60-57-1	ug/L																	
ENDOSULFAN I	N	959-98-8	ug/L																	
ENDOSULFAN II	N	33213-65-9	ug/L																	
ENDOSULFAN SULFATE	N	1031-07-8	ug/L																	
ENDRIN	N	72-20-8	ug/L																	
ENDRIN ALDEHYDE	N	7421-93-4	ug/L																	
ENDRIN KETONE	N	53494-70-5	ug/L																	
HEPTACHLOR	N	76-44-8	ug/L																	
HEPTACHLOR EPOXIDE	N	1024-57-3	ug/L																	
LINDANE	N	58-89-9	ug/L																	
METHOXYCHLOR	N	72-43-5	ug/L																	
TOXAPHENE	N	8001-35-2	ug/L																	
TRANS-CHLORDANE	N	5103-74-2	ug/L																	
PFASs																				
PERFLUOROOCTANESULFONIC ACID (PFOS)	N	1763-23-1	ug/L	< 0.0031 U		< 0.018 UJ	0.0016 J	< 0.02 U	< 0.018 U	< 0.018 U	< 0.0030 U	0.22	0.18	0.14		0.016 J	0.011		0.25	0.15 J+
PERFLUOROOCTANOIC ACID (PFOA)	N	335-67-1	ug/L	0.018		0.011 J	0.015	0.24	0.26	0.28	0.3	0.036	0.026	0.021		0.027	0.022		0.016 J	0.017 J+

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-DP-35	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
			sample_date	9/21/2015	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
			sample_type_code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
			sys_sample_code	FTA-DP-35-092115	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814-D	FTA-MW-5-061814	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
Compound	fraction	CAS	Units																	
SVOCs																				
1,1-BIPHENYL	N	92-52-4	ug/L		< 0.1 UJ	< 0.1 UJ		< 0.095 UJ	< 0.094 UJ	< 0.094 UJ		0.14 J	0.12 J		0.21 J	0.11 J		< 0.095 UJ	< 0.095 UJ	
1,2,4,5-TETRACHLOROBENZENE	N	95-94-3	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
1,4-DIOXANE	N	123-91-1	ug/L		< 0.52 U	< 0.5 U		< 0.48 U	< 0.47 U	< 0.47 U		< 0.47 U	< 0.47 U		< 0.48 U	< 0.48 U		< 0.48 U	< 0.48 U	
2,2'-OXYBIS(1-CHLOROPROPANE)	N	108-60-1	ug/L		< 0.15 UJ	< 0.15 UJ		< 0.14 UJ	< 0.14 UJ	< 0.14 UJ		< 0.14 UJ	< 0.14 UJ		< 0.14 UJ	< 0.14 UJ		< 0.14 UJ	< 0.14 UJ	
2,3,4,6-TETRACHLOROPHENOL	N	58-90-2	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	UR	< 7.1 U	< 7.1 UJ	< 7.2 U	< 7.1 U	< 7.1 UJ		< 7.1 U
2,4,5-TRICHLOROPHENOL	N	95-95-4	ug/L	< 18 U	< 19 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U	< 18 UJ	UR	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 UJ		< 18 U
2,4,6-TRICHLOROPHENOL	N	88-06-2	ug/L		< 0.52 U	< 0.5 U		< 0.48 UJ	< 0.47 U	< 0.47 U		< 0.47 UJ	< 0.47 U		< 0.48 UJ	< 0.48 U		< 0.48 UJ	< 0.48 U	
2,4-DICHLOROPHENOL	N	120-83-2	ug/L		< 0.52 U	< 0.5 U		< 0.48 U	< 0.47 U	< 0.47 U		< 0.47 U	< 0.47 U		< 0.48 U	< 0.48 U		< 0.48 U	< 0.48 U	
2,4-DIMETHYLPHENOL	N	105-67-9	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
2,4-DINITROPHENOL	N	51-28-5	ug/L		< 0.52 U	< 0.5 U		< 0.48 U	< 0.47 U	< 0.47 U		< 0.47 U	< 0.47 U		< 0.48 U	< 0.48 U		< 0.48 U	< 0.48 U	
2,4-DINITROTOLUENE	N	121-14-2	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
2,6-DINITROTOLUENE	N	606-20-2	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
2-CHLORONAPHTHALENE	N	91-58-7	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
2-CHLOROPHENOL	N	95-57-8	ug/L		< 0.52 U	< 0.5 U		< 0.48 U	< 0.47 U	< 0.47 U		< 0.47 U	< 0.47 U		< 0.48 U	< 0.48 U		< 0.48 U	< 0.48 U	
2-METHYLNAPHTHALENE	N	91-57-6	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
2-METHYLPHENOL	N	95-48-7	ug/L	< 7.1 UJ	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 UJ	< 7.1 U		< 7.1 UJ
2-NITROANILINE	N	88-74-4	ug/L		< 0.15 U	< 0.15 U		< 0.14 U	< 0.14 U	< 0.14 U		< 0.14 U	< 0.14 U		< 0.14 U	< 0.14 U		< 0.14 U	< 0.14 U	
2-NITROPHENOL	N	88-75-5	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
3- AND 4-METHYLPHENOL	N	108-39-4/106-44	ug/L		< 0.52 U	< 0.5 U		< 0.48 U	< 0.47 U	< 0.47 U		< 0.47 U	< 0.47 U		< 0.48 U	< 0.48 U		< 0.48 U	< 0.48 U	
3,3-DICHLOROBENZIDINE	N	91-94-1	ug/L		< 0.1 U	< 0.1 U		< 0.095 UJ	< 0.094 U	< 0.094 U		< 0.094 UJ	< 0.094 U		< 0.095 UJ	< 0.096 U		< 0.095 UJ	< 0.095 U	
3-NITROANILINE	N	99-09-2	ug/L		< 19 U	< 0.1 U		< 18 U	< 0.094 U	< 0.094 U		< 18 U	< 0.094 U		< 18 U	< 0.096 U		< 18 U	< 0.095 U	
4,6-DINITRO-2-METHYLPHENOL	N	534-52-1	ug/L		< 0.77 U	< 0.76 U		< 0.71 UJ	< 0.71 U	< 0.71 U		< 0.71 UJ	< 0.71 U		< 0.71 UJ	< 0.72 U		< 0.71 UJ	< 0.71 U	
4-BROMOPHENYL-PHENYLETHER	N	101-55-3	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
4-CHLORO-3-METHYLPHENOL	N	59-50-7	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
4-CHLOROANILINE	N	106-47-8	ug/L		< 0.52 U	< 0.5 U		< 0.48 U	< 0.47 U	< 0.47 U		< 0.47 U	< 0.47 U		< 0.48 U	< 0.48 U		< 0.48 U	< 0.48 U	
4-CHLOROPHENYL-PHENYLETHER	N	7005-72-3	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
4-NITROANILINE	N	100-01-6	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
4-NITROPHENOL	N	100-02-7	ug/L	< 18 U	< 19 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U	< 18 UJ	UR	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 UJ		< 18 U
ACENAPHTHENE	N	83-32-9	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
ACENAPHTHYLENE	N	208-96-8	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
ACETOPHENONE	N	98-86-2	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
ANTHRACENE	N	120-12-7	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
ATRAZINE	N	1912-24-9	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		0.07 J	< 0.094 U		0.055 J	< 0.096 U		< 0.095 U	< 0.095 U	
BENZALDEHYDE	N	100-52-7	ug/L	< 7.1 U	< 7.7 UJ	< 7.6 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.2 UJ	< 7.1 U	< 7.1 U		< 7.1 U
BENZO[A]ANTHRACENE	N	56-55-3	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
BENZO[A]PYRENE	N	50-32-8	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
BENZO[B]FLUORANTHENE	N	205-99-2	ug/L		< 0.2 U	< 0.1 U		< 0.18 U	< 0.094 U	< 0.094 U		< 0.094 UJ	< 0.094 U		< 0.18 U	< 0.096 U		< 0.18 U	< 0.095 U	
BENZO[G,H,I]PERYLENE	N	191-24-2	ug/L	< 7.1 U	< 0.1 U	< 7.6 U	< 7.1 U	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.2 U	< 7.1 U	< 0.095 U		< 7.1 U
BENZO[K]FLUORANTHENE	N	207-08-9	ug/L	< 7.1 U	< 0.1 U	< 7.6 U	< 7.1 U	< 0.095 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 UJ	< 7.1 U	< 7.1 U	< 0.095 UJ	< 7.2 U	< 7.1 U	< 0.095 UJ		< 7.1 U
BIS(2-CHLOROETHOXY)METHANE	N	111-91-1	ug/L	< 7.1 U	< 0.1 U	< 7.6 U	< 7.1 U	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.2 U	< 7.1 U	< 0.095 U		< 7.1 U
BIS(2-CHLOROETHYL)ETHER	N	111-44-4	ug/L		< 0.1 UJ	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
BIS(2-ETHYLHEXYL)PHTHALATE	N	117-81-7	ug/L		< 0.79 U	< 0.5 UJ		0.5 J	< 0.47 UJ	< 0.47 UJ		0.72 J	< 0.47 UJ		< 0.48 U	< 0.48 UJ		< 0.48 U	< 0.48 UJ	
BUTYLBENZYLPHTHALATE	N	85-68-7	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
CAPROLACTAM	N	105-60-2	ug/L	< 7.1 UJ	UR	UR	< 7.1 U	< 7.1 U	UR	UR	< 7.1 UJ	< 7.1 U	UR	< 7.1 U	< 7.1 U	UR	< 7.1 UJ	< 7.1 U		< 7.1 UJ
CARBAZOLE	N	86-74-8	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
CHRYSENE	N	218-01-9	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 UJ	< 0.094 UJ		< 0.094 U	< 0.094 UJ		< 0.095 U	< 0.096 UJ		< 0.095 U	< 0.095 UJ	
DIBENZ[A,H]ANTHRACENE	N	53-70-3	ug/L		< 0.1 U	< 0.1 UJ		< 0.095 U	< 0.094 UJ	< 0.094 UJ		< 0.094 U	< 0.094 UJ		< 0.095 U	< 0.096 UJ		< 0.095 U	< 0.095 UJ	
DIBENZOFURAN	N	132-64-9	ug/L		< 0.1 U	< 0.1 U		0.074 J	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		0.086 J	< 0.096 U		< 0.095 U	< 0.095 U	
DIETHYLPHTHALATE	N	84-66-2	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
DIMETHYL PHTHALATE	N	131-11-3	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.2 U	< 7.1 U	< 7.1 UJ		< 7.1 U
DI-N-BUTYLPHTHALATE	N	84-74-2	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
DI-N-OCTYLPHTHALATE	N	117-84-0	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
FLUORANTHENE	N	206-44-0	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
FLUORENE	N	86-73-7	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
HEXACHLOROBENZENE	N	118-74-1	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
HEXACHLOROBUTADIENE	N	87-68-3	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
HEXACHLOROCYCLOPENTADIENE	N	77-47-4	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	0.11 J	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
HEXACHLOROETHANE	N	67-72-1	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
INDENO[1,2,3-CD]PYRENE	N	193-39-5	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
ISOPHORONE	N	78-59-1	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
NAPHTHALENE	N	91-20-3	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	0.081 J		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
NITROBENZENE	N	98-95-3	ug/L		< 0.15 U	< 0.15 U		< 0.14 U	< 0.14 UJ	< 0.14 UJ		< 0.14 U	< 0.14 UJ		< 0.14 U	< 0.14 UJ		< 0.14 U	< 0.14 UJ	
N-NITROSODINPROPYLAMINE	N	621-64-7	ug/L		< 0.1 U	< 0.1 U		< 0.095 U	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
N-NITROSODIPHENYLAMINE	N	86-30-6	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
PENTACHLOROPHENOL	N	87-86-5	ug/L		< 0.52 U	< 0.5 U		< 0.48 U	< 0.47 U	< 0.47 U		< 0.47 U	< 0.47 U		< 0.48 U	< 0.48 U		< 0.48 U	< 0.48 U	
PHENANTHRENE	N	85-01-8	ug/L		< 0.1 U	< 0.1 U		0.14 J	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	
PHENOL	N	108-95-2	ug/L	< 7.1 U	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
PYRENE	N	129-00-0	ug/L		< 0.1 U	< 0.1 U		0.069 J	< 0.094 U	< 0.094 U		< 0.094 U	< 0.094 U		< 0.095 U	< 0.096 U		< 0.095 U	< 0.095 U	

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-DP-35	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
			sample_date	9/21/2015	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
			sample_type_code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
			sys_sample_code	FTA-DP-35-092115	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814-D	FTA-MW-5-061814	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
Compound	fraction	CAS	Units																	
VOCs																				
1,1,1-TRICHLOROETHANE	N	71-55-6	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-TETRACHLOROETHANE	N	79-34-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-TRICHLOROETHANE	N	79-00-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHANE	N	75-34-3	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHENE	N	75-35-4	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-TRICHLOROBENZENE	N	120-82-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROBENZENE	N	95-50-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHANE	N	107-06-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHENE, TOTAL	N	540-59-0	ug/L		< 0.5 U			< 0.5 UJ				0.58 J			0.4 J			0.34 J		
1,3-DICHLOROBENZENE	N	541-73-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-DICHLOROBENZENE	N	106-46-7	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-HEXANONE	N	591-78-6	ug/L	< 2.5 U	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
ACETONE	N	67-64-1	ug/L	< 2.5 U	< 2.5 U	3 J	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	2.4 J	< 2.5 U	< 2.5 U	3.7 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	5.1
BENZENE	N	71-43-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CARBON TETRACHLORIDE	N	56-23-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROBENZENE	N	108-90-7	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROETHANE	N	75-00-3	ug/L	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 UJ	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U
CHLOROFORM	N	67-66-3	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROMETHANE	N	74-87-3	ug/L	0.4 J	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	0.63 J	< 1 U	< 1 U	< 1 U
CIS-1,2-DICHLOROETHENE	N	156-59-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	0.58 J	0.38 J	0.62 J	0.4 J	< 0.5 U	0.4 J	0.34 J	0.24 J	< 0.5 U
ETHYLBENZENE	N	100-41-4	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ISOPROPYLBENZENE	N	98-82-8	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U
M- AND P-XYLENE	N	108-38-3/106-42	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
METHYL CYCLOHEXANE	N	108-87-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYL TERT-BUTYL ETHER	N	1634-04-4	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYLENE CHLORIDE	N	75-09-2	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	N	95-47-6	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
STYRENE	N	100-42-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TETRACHLOROETHENE	N	127-18-4	ug/L	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 U	0.024 J	0.012 J	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 UJ
TOLUENE	N	108-88-3	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRANS-1,2-DICHLOROETHENE	N	156-60-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRICHLOROETHENE	N	79-01-6	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VINYL CHLORIDE	N	75-01-4	ug/L		< 0.025 U	< 0.05 U		< 0.025 U	< 0.05 U	< 0.05 U		0.72	0.84		0.069	0.081 J		< 0.025 U	< 0.05 U	
XYLENES, TOTAL CALC	N	1330-20-7	ug/L		< 1 U	< 1 U		< 1 U	< 1 U	< 1 U		< 1 U	< 1 U		< 1 U	< 1 U		< 1 U	< 1 U	
XYLENES, TOTAL CALC FULL DL	N	RA-1330-20-7	ug/L		< 1.5 U	< 1.5 U		< 1.5 U	< 1.5 U	< 1.5 U		< 1.5 U	< 1.5 U		< 1.5 U	< 1.5 U		< 1.5 U	< 1.5 U	

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

B - The analyte was found in the associated blank at a significant level relative to the sample result.

D - The reported value is from a dilution.

E - The reported value exceeded the instrument calibration range; estimated value.

FD - Field duplicate.

J - Estimated value.

N - Normal sample.

PCB - Polychlorinated Biphenyl.

PFASs - Poly- and Perfluoroalkyl Substances.

SVOC - Semivolatile organic compound.

ug/L - microgram per liter.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-MW-12			FTA-MW-14					FTA-MW-206				
			sample_date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
			sample_type_code	N	N	N	FD	N	N	N	FD	N	N	N	N	FD
			sys_sample_code	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712-D	FTA-MW-14-112712	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
Compound	fraction	CAS	Units													
Metals (Total)																
ALUMINUM	N	7429-90-5	ug/L	116 J	269 J	91 J	246 J	504	279 J	120 J	110 J	36 J		< 100 U	< 100 UJ	37 J
ANTIMONY	N	7440-36-0	ug/L	< 0.5 U	< 0.5 U	0.4 J	< 0.5 U	< 0.5 U	< 0.5 U	0.32 J	0.3 J	< 0.5 U		0.14 J	0.13 J	0.15 J
ARSENIC	N	7440-38-2	ug/L	2.5 J	< 4 U	3 J	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 6.6 U		2.5 J	2.4 J	2.9 J
BARIUM	N	7440-39-3	ug/L	5.8	7.67	6.15	6.1	11.6	5.82	4.76 J	4.48 J	11.6		7.17	9.35 J	6.24 J
BERYLLIUM	N	7440-41-7	ug/L	< 0.2 U	< 0.2 U	0.047 J	< 0.2 U	0.05 J	< 0.2 U	0.072 J	0.078 J	< 0.2 U		< 0.2 U	< 0.2 U	< 0.2 U
CADMIUM	N	7440-43-9	ug/L	0.08 J	1.6	1.34	0.04 J	0.05 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	0.043 J	0.049 J
CALCIUM	N	7440-70-2	ug/L	5960	3780	4480	8220	8660	6660	8810	8710	39500		41700	44400	45900
CHROMIUM, TOTAL	N	7440-47-3	ug/L	< 4 U	4.32 J	4.51 J	4 J	< 4 U	< 4 U	3.77 J	3.25 J	< 4 U		< 4 U	1.2 J	1.5 J
COBALT	N	7440-48-4	ug/L	2.5	1.49	1.42	0.32 J	0.33 J	0.27 J	0.27 J	0.26 J	1.3		1.02	0.928 J	0.949 J
COPPER	N	7440-50-8	ug/L	< 2 U	< 2 U	2.61 J	< 2 U	< 2 U	< 2 U	6 J	1.7 J	< 2 U		< 2 U	0.52 J	0.58 J
IRON	N	7439-89-6	ug/L	3330	744	390	878	1050	827	1230	1240	< 80 U		< 80 U	8.6 J	9.8 J
LEAD	N	7439-92-1	ug/L	< 0.5 U	0.63 J	0.41 J	< 0.5 U	0.68 J	< 0.5 U	0.23 J	0.23 J	< 0.5 U		0.12 J	< 0.5 U	0.078 J
MAGNESIUM	N	7439-95-4	ug/L	2000	1330	1590	2810	3000	2430	2910	2900	7540		7590	8640	8920
MANGANESE	N	7439-96-5	ug/L	3190	1500	1460	94	99.8	70	88.5	86.5	308		220	176	184
MERCURY	N	7439-97-6	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ		< 0.1 U	< 0.1 U	< 0.1 U
NICKEL	N	7440-02-0	ug/L	0.62 J	1.79 J	1.85 J	0.62 J	0.59 J	0.62 J	1 J	1.2 J	1.3 J		0.84 J	1.2 J	1.3 J
POTASSIUM	N	7440-09-7	ug/L	705 J	663 J	621 J	857 J	893 J	893 J	1050	979 J	< 2150 U		1560	1680	1770
SELENIUM	N	7782-49-2	ug/L	0.43 J	< 3 U	< 3 U	0.27 J	0.65 J	< 3 U	< 3 U	< 3 U	0.26 J		< 3 U	< 3 U	< 3 U
SILVER	N	7440-22-4	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
SODIUM	N	7440-23-5	ug/L	5470	3960	4980	7370	7400	6090	7420	7120	8470		7850	8660	8910
THALLIUM	N	7440-28-0	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.14 J	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
VANADIUM	N	7440-62-2	ug/L	0.77 J	1.6 J	1.5 J	3 J	1.6 J	< 4 U	1.8 J	1.8 J	< 4 U		0.61 J	< 4 U	0.62 J
ZINC	N	7440-66-6	ug/L	< 10 U	3.8 J	5.5 J	< 10 U	< 10 U	< 10 U	2.6 J	3.4 J	< 10 U		4.6 J	3.1 J	< 10 U
PCBs																
AROCLOR-1016	N	12674-11-2	ug/L									< 0.24 U	< 0.24 UJ			
AROCLOR-1221	N	11104-28-2	ug/L									< 0.24 U	< 0.24 U			
AROCLOR-1232	N	11141-16-5	ug/L									< 0.24 U	< 0.24 U			
AROCLOR-1242	N	53469-21-9	ug/L									< 0.24 U	< 0.24 U			
AROCLOR-1248	N	12672-29-6	ug/L									< 0.24 U	< 0.24 U			
AROCLOR-1254	N	11097-69-1	ug/L									< 0.24 U	< 0.24 U			
AROCLOR-1260	N	11096-82-5	ug/L									< 0.24 U	< 0.24 UJ			
AROCLOR-1262	N	37324-23-5	ug/L									< 0.24 U	< 0.24 U			
AROCLOR-1268	N	11100-14-4	ug/L									< 0.24 U	< 0.24 U			
TOTAL AROCLORS	N	RATotAroclors	ug/L									< 0.24 U	< 0.24 U			
TOTAL AROCLORS FULL DL	N	RATotAroFLDL	ug/L									< 2.16 U	< 2.16 U			
Pesticides																
4,4-DDD	N	72-54-8	ug/L										< 0.048 UJ			
4,4-DDE	N	72-55-9	ug/L										< 0.048 UJ			
4,4-DDT	N	50-29-3	ug/L										< 0.048 UJ			
ALDRIN	N	309-00-2	ug/L										< 0.024 UJ			
ALPHA-BHC	N	319-84-6	ug/L										< 0.024 UJ			
ALPHA-CHLORDANE	N	5103-71-9	ug/L										< 0.024 UJ			
BETA-BHC	N	319-85-7	ug/L										< 0.024 UJ			
DELTA-BHC	N	319-86-8	ug/L										< 0.024 UJ			
DIELDRIN	N	60-57-1	ug/L										< 0.048 UJ			
ENDOSULFAN I	N	959-98-8	ug/L										< 0.024 UJ			
ENDOSULFAN II	N	33213-65-9	ug/L										< 0.048 UJ			
ENDOSULFAN SULFATE	N	1031-07-8	ug/L										< 0.048 UJ			
ENDRIN	N	72-20-8	ug/L										< 0.048 UJ			
ENDRIN ALDEHYDE	N	7421-93-4	ug/L										< 0.048 UJ			
ENDRIN KETONE	N	53494-70-5	ug/L										< 0.048 UJ			
HEPTACHLOR	N	76-44-8	ug/L										< 0.024 UJ			
HEPTACHLOR EPOXIDE	N	1024-57-3	ug/L										< 0.024 UJ			
LINDANE	N	58-89-9	ug/L										< 0.024 UJ			
METHOXYCHLOR	N	72-43-5	ug/L										< 0.24 UJ			
TOXAPHENE	N	8001-35-2	ug/L										< 0.48 U			
TRANS-CHLORDANE	N	5103-74-2	ug/L										< 0.024 UJ			
PFASs																
PERFLUOROOCTANESULFONIC ACID (PFOS)	N	1763-23-1	ug/L		0.015 J	0.011	< 0.02 U	< 0.019 U	< 0.018 U	< 0.0031 UJ	0.0013 J			0.011 J	< 0.0030 U	< 0.0030 U
PERFLUOROOCTANOIC ACID (PFOA)	N	335-67-1	ug/L		< 0.0074 U	0.0056	0.41	0.48	0.43	0.35	0.35			< 0.0075 U	0.0014 J	0.0013 J

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-MW-12			FTA-MW-14					FTA-MW-206				
			sample_date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
			sample_type_code	N	N	N	FD	N	N	N	FD	N	N	N	N	FD
			sys_sample_code	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712-D	FTA-MW-14-112712	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
Compound	fraction	CAS	Units													
SVOCs																
1,1-BIPHENYL	N	92-52-4	ug/L	< 0.095 UJ	< 0.11 UJ		< 0.1 UJ	< 0.097 UJ	< 0.094 UJ			< 0.095 UJ		< 0.094 UJ		
1,2,4,5-TETRACHLOROBENZENE	N	95-94-3	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
1,4-DIOXANE	N	123-91-1	ug/L	< 0.48 U	< 0.53 U		< 0.5 U	< 0.48 U	< 0.47 U			< 0.48 U		< 0.47 U		
2,2'-OXYBIS(1-CHLOROPROPANE)	N	108-60-1	ug/L	< 0.14 UJ	< 0.16 UJ		< 0.15 UJ	< 0.14 UJ	< 0.14 UJ			< 0.14 UJ		< 0.14 UJ		
2,3,4,6-TETRACHLOROPHENOL	N	58-90-2	ug/L	< 7.1 UJ		< 7.2 U	< 7.5 UJ	< 7.3 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
2,4,5-TRICHLOROPHENOL	N	95-95-4	ug/L	< 18 UJ		< 18 U	< 19 UJ	< 18 UJ	< 18 U	< 19 U	< 18 U	< 18 U		< 18 U	< 18 U	< 18 U
2,4,6-TRICHLOROPHENOL	N	88-06-2	ug/L	< 0.48 UJ	< 0.53 U		< 0.5 UJ	< 0.48 UJ	< 0.47 U			< 0.48 U		< 0.47 U		
2,4-DICHLOROPHENOL	N	120-83-2	ug/L	< 0.48 U	< 0.53 U		< 0.5 U	< 0.48 U	< 0.47 U			< 0.48 U		< 0.47 U		
2,4-DIMETHYLPHENOL	N	105-67-9	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 UJ		< 7.1 U	< 7.1 U	< 7.1 U
2,4-DINITROPHENOL	N	51-28-5	ug/L	< 0.48 U	< 0.53 U		< 0.5 U	< 0.48 U	< 0.47 U			< 0.48 U		< 0.47 U		
2,4-DINITROTOLUENE	N	121-14-2	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
2,6-DINITROTOLUENE	N	606-20-2	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
2-CHLORONAPHTHALENE	N	91-58-7	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
2-CHLOROPHENOL	N	95-57-8	ug/L	< 0.48 U	< 0.53 U		< 0.5 U	< 0.48 U	< 0.47 U			< 0.48 U		< 0.47 U		
2-METHYLNAPHTHALENE	N	91-57-6	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U	< 1.4 U	< 0.094 U		
2-METHYLPHENOL	N	95-48-7	ug/L	< 7.1 U		< 7.2 UJ	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 UJ	< 7.3 UJ	< 7.1 U		< 7.1 U	< 7.1 UJ	< 7.1 UJ
2-NITROANILINE	N	88-74-4	ug/L	< 0.14 U	< 0.16 U		< 0.15 U	< 0.14 U	< 0.14 U			< 0.14 U		< 0.14 U		
2-NITROPHENOL	N	88-75-5	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
3- AND 4-METHYLPHENOL	N	108-39-4/106-44	ug/L	< 0.48 U	< 0.53 U		< 0.5 U	< 0.48 U	< 0.47 U			UR		< 0.47 U		
3,3-DICHLOROBENZIDINE	N	91-94-1	ug/L	< 0.095 UJ	< 0.11 U		< 0.1 UJ	< 0.097 UJ	< 0.094 U			UR		< 0.094 U		
3-NITROANILINE	N	99-09-2	ug/L	< 18 U	< 0.11 U		< 19 U	< 18 U	< 0.094 U			< 18 U		< 0.094 U		
4,6-DINITRO-2-METHYLPHENOL	N	534-52-1	ug/L	< 0.71 UJ	< 0.8 U		< 0.75 UJ	< 0.73 UJ	< 0.71 U			< 0.71 U		< 0.71 U		
4-BROMOPHENYL-PHENYLETHER	N	101-55-3	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
4-CHLORO-3-METHYLPHENOL	N	59-50-7	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
4-CHLOROANILINE	N	106-47-8	ug/L	< 0.48 U	< 0.53 U		< 0.5 U	< 0.48 U	< 0.47 U			< 0.48 U		< 0.47 U		
4-CHLOROPHENYL-PHENYLETHER	N	7005-72-3	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
4-NITROANILINE	N	100-01-6	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
4-NITROPHENOL	N	100-02-7	ug/L	< 18 UJ		< 18 U	< 19 UJ	< 18 UJ	< 18 U	< 19 U	< 18 U	< 18 U		< 18 U	< 18 U	< 18 U
ACENAPHTHENE	N	83-32-9	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 1.8 U	< 7.1 U	< 7.1 U	< 7.1 U
ACENAPHTHYLENE	N	208-96-8	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
ACETOPHENONE	N	98-86-2	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
ANTHRACENE	N	120-12-7	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
ATRAZINE	N	1912-24-9	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
BENZALDEHYDE	N	100-52-7	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 UJ	< 7.4 U	< 7.3 U	< 7.1 UJ		< 7.1 UJ	< 7.1 U	< 7.1 U
BENZO[A]ANTHRACENE	N	56-55-3	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U	< 1.4 U	< 0.094 U		
BENZO[A]PYRENE	N	50-32-8	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 UJ	< 1.4 U	< 0.094 U		
BENZO[B]FLUORANTHENE	N	205-99-2	ug/L	< 0.17 U	< 0.11 U		< 0.1 UJ	< 0.17 U	< 0.094 U			< 0.095 UJ	< 1.4 U	< 0.094 U		
BENZO[G,H,I]PERYLENE	N	191-24-2	ug/L	< 0.095 U		< 7.2 U	< 0.1 U	< 0.097 U	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
BENZO[K]FLUORANTHENE	N	207-08-9	ug/L	< 0.095 UJ		< 7.2 U	< 0.1 UJ	< 0.097 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 UJ	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
BIS(2-CHLOROETHOXY)METHANE	N	111-91-1	ug/L	< 0.095 U		< 7.2 U	< 0.1 U	< 0.097 U	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 U		< 7.1 U	< 7.1 U	< 7.1 U
BIS(2-CHLOROETHYL)ETHER	N	111-44-4	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 UJ		< 0.094 U		
BIS(2-ETHYLHEXYL)PHTHALATE	N	117-81-7	ug/L	< 0.48 U	< 0.53 UJ		0.97 J	< 0.48 U	< 0.47 UJ			< 1.5 U		< 0.47 UJ		
BUTYLBENZYLPHTHALATE	N	85-68-7	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
CAPROLACTAM	N	105-60-2	ug/L	< 7.1 U		< 7.2 UJ	< 7.5 U	< 7.3 U	UR	< 7.4 UJ	< 7.3 UJ	UR		UR	< 7.1 UJ	< 7.1 UJ
CARBAZOLE	N	86-74-8	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
CHRYSENE	N	218-01-9	ug/L	< 0.095 U	< 0.11 UJ		< 0.1 U	< 0.097 U	< 0.094 UJ			< 0.095 U	< 1.4 U	< 0.094 UJ		
DIBENZ[A,H]ANTHRACENE	N	53-70-3	ug/L	< 0.095 U	< 0.11 UJ		< 0.1 U	< 0.097 U	< 0.094 UJ			< 0.095 U	< 1.4 U	< 0.094 UJ		
DIBENZOFURAN	N	132-64-9	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
DIETHYLPHTHALATE	N	84-66-2	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
DIMETHYL PHTHALATE	N	131-11-3	ug/L	< 7.1 UJ		< 7.2 U	< 7.5 UJ	< 7.3 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
DI-N-BUTYLPHTHALATE	N	84-74-2	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
DI-N-OCTYLPHTHALATE	N	117-84-0	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
FLUORANTHENE	N	206-44-0	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
FLUORENE	N	86-73-7	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
HEXACHLOROBENZENE	N	118-74-1	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
HEXACHLOROBUTADIENE	N	87-68-3	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
HEXACHLOROCYCLOPENTADIENE	N	77-47-4	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
HEXACHLOROETHANE	N	67-72-1	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 UJ		< 0.094 U		
INDENO[1,2,3-CD]PYRENE	N	193-39-5	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U	< 1.4 U	< 0.094 U		
ISOPHORONE	N	78-59-1	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
NAPHTHALENE	N	91-20-3	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U	< 1.4 U	< 0.094 U		
NITROBENZENE	N	98-95-3	ug/L	< 0.14 U	< 0.16 UJ		< 0.15 U	< 0.14 U	< 0.14 UJ			< 0.14 U		< 0.14 UJ		
N-NITROSODINPROPYLAMINE	N	621-64-7	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U		< 0.094 U		
N-NITROSODIPHENYLAMINE	N	86-30-6	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
PENTACHLOROPHENOL	N	87-86-5	ug/L	< 0.48 U	< 0.53 U		< 0.5 U	< 0.48 U	< 0.47 U			< 0.48 U		< 0.47 U		
PHENANTHRENE	N	85-01-8	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U	< 1.4 U	< 0.094 U		
PHENOL	N	108-95-2	ug/L	< 7.1 U		< 7.2 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
PYRENE	N	129-00-0	ug/L	< 0.095 U	< 0.11 U		< 0.1 U	< 0.097 U	< 0.094 U			< 0.095 U	< 1.4 U	< 0.094 U		

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-MW-12			FTA-MW-14					FTA-MW-206				
			sample_date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
			sample_type_code	N	N	N	FD	N	N	N	FD	N	N	N	N	FD
			sys_sample_code	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712-D	FTA-MW-14-112712	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
Compound	fraction	CAS	Units													
VOCs																
1,1,1-TRICHLOROETHANE	N	71-55-6	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-TETRACHLOROETHANE	N	79-34-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-TRICHLOROETHANE	N	79-00-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHANE	N	75-34-3	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHENE	N	75-35-4	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-TRICHLOROBENZENE	N	120-82-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROBENZENE	N	95-50-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHANE	N	107-06-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHENE, TOTAL	N	540-59-0	ug/L	0.43 J			< 0.5 U	< 0.5 U				18				
1,3-DICHLOROBENZENE	N	541-73-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-DICHLOROBENZENE	N	106-46-7	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-HEXANONE	N	591-78-6	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U
ACETONE	N	67-64-1	ug/L	< 2.5 UJ	< 2.5 U	3.5 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	2.3 J	< 2.5 U	< 2.5 U	< 2.5 U	2.8 J	3 J
BENZENE	N	71-43-2	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CARBON TETRACHLORIDE	N	56-23-5	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROBENZENE	N	108-90-7	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROETHANE	N	75-00-3	ug/L	< 1 UJ	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U
CHLOROFORM	N	67-66-3	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROMETHANE	N	74-87-3	ug/L	< 1 UJ	< 1 U	0.86 J	< 1 U	< 1 U	< 1 U	0.91 J	1.3 J	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U
CIS-1,2-DICHLOROETHENE	N	156-59-2	ug/L	0.43 J	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	18	26	22	22	20
ETHYLBENZENE	N	100-41-4	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ISOPROPYLBENZENE	N	98-82-8	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
M- AND P-XYLENE	N	108-38-3/106-42	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
METHYL CYCLOHEXANE	N	108-87-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYL TERT-BUTYL ETHER	N	1634-04-4	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYLENE CHLORIDE	N	75-09-2	ug/L	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	N	95-47-6	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
STYRENE	N	100-42-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TETRACHLOROETHENE	N	127-18-4	ug/L	< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 UJ	< 0.025 UJ	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 U
TOLUENE	N	108-88-3	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRANS-1,2-DICHLOROETHENE	N	156-60-5	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRICHLOROETHENE	N	79-01-6	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	6.9	7.5	8.2	11	9.4
VINYL CHLORIDE	N	75-01-4	ug/L	< 0.025 U	< 0.05 U		< 0.025 U	< 0.025 U	< 0.05 U			0.053 J	0.069	0.054 J		
XYLENES, TOTAL CALC	N	1330-20-7	ug/L	< 1 U	< 1 U		< 1 U	< 1 U	< 1 U			< 1 U	< 1 U	< 1 U		
XYLENES, TOTAL CALC FULL DL	N	RA-1330-20-7	ug/L	< 1.5 U	< 1.5 U		< 1.5 U	< 1.5 U	< 1.5 U			< 1.5 U	< 1.5 U	< 1.5 U		

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

B - The analyte was found in the associated blank at a significant level relative to the sample result.

D - The reported value is from a dilution.

E - The reported value exceeded the instrument calibration range; estimated value.

FD - Field duplicate.

J - Estimated value.

N - Normal sample.

PCB - Polychlorinated Biphenyl.

PFASs - Poly- and Perfluoroalkyl Substances.

SVOC - Semivolatile organic compound.

ug/L - microgram per liter.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-MW-210					
			sample_date	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015
			sample_type_code	FD	N	FD	N	N	N
			sys_sample_code	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115
Compound	fraction	CAS	Units						
Metals (Total)									
ALUMINUM	N	7429-90-5	ug/L	62.8 J	66.9 J			24 J	< 100 U
ANTIMONY	N	7440-36-0	ug/L	< 0.5 U	< 0.5 U			0.13 J	0.59 J
ARSENIC	N	7440-38-2	ug/L	< 4 U	< 4 U			< 4 U	3.6 J
BARIUM	N	7440-39-3	ug/L	9.8	12.2			6.06	7.95
BERYLLIUM	N	7440-41-7	ug/L	< 0.2 U	< 0.2 U			< 0.2 U	0.038 J
CADMIUM	N	7440-43-9	ug/L	0.04 J	< 0.2 U			< 0.2 U	0.11 J
CALCIUM	N	7440-70-2	ug/L	34800	37000			33000	39900 J+
CHROMIUM, TOTAL	N	7440-47-3	ug/L	< 4 U	< 4 U			< 4 U	5.72
COBALT	N	7440-48-4	ug/L	0.22 J	0.25 J			0.15 J	0.36 J
COPPER	N	7440-50-8	ug/L	< 2 U	< 2 U			4.26	2.74 J
IRON	N	7439-89-6	ug/L	< 80 U	39.8 J			< 80 U	18 J
LEAD	N	7439-92-1	ug/L	< 0.5 U	< 0.5 U			< 0.5 U	3.46 J+
MAGNESIUM	N	7439-95-4	ug/L	6310	6520			6100	7060
MANGANESE	N	7439-96-5	ug/L	47.3	56.3			47	87.1
MERCURY	N	7439-97-6	ug/L	< 0.1 UJ	< 0.1 UJ			< 0.1 U	< 0.1 U
NICKEL	N	7440-02-0	ug/L	1.3 J	1.4 J			1.86 J	3.54
POTASSIUM	N	7440-09-7	ug/L	< 1810 U	< 2010 U			1540	2050
SELENIUM	N	7782-49-2	ug/L	< 3 U	< 3 U			< 3 U	< 3 U
SILVER	N	7440-22-4	ug/L	< 0.4 U	< 0.4 U			< 0.4 U	< 0.4 U
SODIUM	N	7440-23-5	ug/L	8710	9240			7990	9310
THALLIUM	N	7440-28-0	ug/L	< 0.4 U	< 0.4 U			< 0.4 U	0.065 J
VANADIUM	N	7440-62-2	ug/L	< 4 U	< 4 U			< 4 U	1.6 J
ZINC	N	7440-66-6	ug/L	< 10 U	< 10 U			4.9 J	1.4 J
PCBs									
AROCLOR-1016	N	12674-11-2	ug/L	< 0.26 U	< 0.24 U	< 0.26 UJ	< 0.26 UJ		
AROCLOR-1221	N	11104-28-2	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
AROCLOR-1232	N	11141-16-5	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
AROCLOR-1242	N	53469-21-9	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
AROCLOR-1248	N	12672-29-6	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
AROCLOR-1254	N	11097-69-1	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
AROCLOR-1260	N	11096-82-5	ug/L	< 0.26 U	< 0.24 U	< 0.26 UJ	< 0.26 UJ		
AROCLOR-1262	N	37324-23-5	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
AROCLOR-1268	N	11100-14-4	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
TOTAL AROCLORS	N	RATotAroclors	ug/L	< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		
TOTAL AROCLORS FULL DL	N	RATotAroFLDL	ug/L	< 2.34 U	< 2.16 U	< 2.34 U	< 2.34 U		
Pesticides									
4,4-DDD	N	72-54-8	ug/L			< 0.052 UJ	< 0.052 UJ		
4,4-DDE	N	72-55-9	ug/L			< 0.052 UJ	< 0.052 UJ		
4,4-DDT	N	50-29-3	ug/L			< 0.052 UJ	< 0.052 UJ		
ALDRIN	N	309-00-2	ug/L			< 0.026 UJ	< 0.026 UJ		
ALPHA-BHC	N	319-84-6	ug/L			< 0.026 UJ	< 0.026 UJ		
ALPHA-CHLORDANE	N	5103-71-9	ug/L			< 0.026 UJ	< 0.026 UJ		
BETA-BHC	N	319-85-7	ug/L			< 0.026 UJ	< 0.026 UJ		
DELTA-BHC	N	319-86-8	ug/L			< 0.026 UJ	< 0.026 UJ		
DIELDRIN	N	60-57-1	ug/L			< 0.052 UJ	< 0.052 UJ		
ENDOSULFAN I	N	959-98-8	ug/L			< 0.026 UJ	< 0.026 UJ		
ENDOSULFAN II	N	33213-65-9	ug/L			< 0.052 UJ	< 0.052 UJ		
ENDOSULFAN SULFATE	N	1031-07-8	ug/L			< 0.052 UJ	< 0.052 UJ		
ENDRIN	N	72-20-8	ug/L			< 0.052 UJ	< 0.052 UJ		
ENDRIN ALDEHYDE	N	7421-93-4	ug/L			< 0.052 UJ	< 0.052 UJ		
ENDRIN KETONE	N	53494-70-5	ug/L			< 0.052 UJ	< 0.052 UJ		
HEPTACHLOR	N	76-44-8	ug/L			< 0.026 UJ	< 0.026 UJ		
HEPTACHLOR EPOXIDE	N	1024-57-3	ug/L			< 0.026 UJ	< 0.026 UJ		
LINDANE	N	58-89-9	ug/L			< 0.026 UJ	< 0.026 UJ		
METHOXYCHLOR	N	72-43-5	ug/L			< 0.26 UJ	< 0.26 UJ		
TOXAPHENE	N	8001-35-2	ug/L			< 0.52 U	< 0.52 U		
TRANS-CHLORDANE	N	5103-74-2	ug/L			< 0.026 UJ	< 0.026 UJ		
PFASs									
PERFLUOROOCTANESULFONIC ACID (PFOS)	N	1763-23-1	ug/L					< 0.018 UJ	0.0036 J
PERFLUOROOCTANOIC ACID (PFOA)	N	335-67-1	ug/L					0.0099 J	0.012

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-MW-210					
			sample_date	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015
			sample_type_code	FD	N	FD	N	N	N
			sys_sample_code	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115
Compound	fraction	CAS	Units						
SVOCs									
1,1-BIPHENYL	N	92-52-4	ug/L	< 0.097 UJ	< 0.1 UJ			< 0.094 UJ	
1,2,4,5-TETRACHLOROBENZENE	N	95-94-3	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
1,4-DIOXANE	N	123-91-1	ug/L	< 0.48 U	< 0.5 U			< 0.47 U	
2,2'-OXYBIS(1-CHLOROPROPANE)	N	108-60-1	ug/L	< 0.14 UJ	< 0.15 UJ			< 0.14 UJ	
2,3,4,6-TETRACHLOROPHENOL	N	58-90-2	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
2,4,5-TRICHLOROPHENOL	N	95-95-4	ug/L	< 18 U	< 19 U			< 18 U	< 18 U
2,4,6-TRICHLOROPHENOL	N	88-06-2	ug/L	< 0.48 U	< 0.5 U			< 0.47 U	
2,4-DICHLOROPHENOL	N	120-83-2	ug/L	< 0.48 U	< 0.5 U			< 0.47 U	
2,4-DIMETHYLPHENOL	N	105-67-9	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
2,4-DINITROPHENOL	N	51-28-5	ug/L	< 0.48 U	< 0.5 U			< 0.47 U	
2,4-DINITROTOLUENE	N	121-14-2	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
2,6-DINITROTOLUENE	N	606-20-2	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
2-CHLORONAPHTHALENE	N	91-58-7	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
2-CHLOROPHENOL	N	95-57-8	ug/L	< 0.48 U	< 0.5 U			< 0.47 U	
2-METHYLNAPHTHALENE	N	91-57-6	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	
2-METHYLPHENOL	N	95-48-7	ug/L	< 7.3 U	< 7.5 U			UR	< 7.1 UJ
2-NITROANILINE	N	88-74-4	ug/L	< 0.14 U	< 0.15 U			< 0.14 U	
2-NITROPHENOL	N	88-75-5	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
3- AND 4-METHYLPHENOL	N	108-39-4/106-44	ug/L	< 0.48 U	< 0.5 U			< 0.47 U	
3,3-DICHLOROBENZIDINE	N	91-94-1	ug/L	< 0.097 U	< 0.1 U			UR	
3-NITROANILINE	N	99-09-2	ug/L	< 18 U	< 19 U			< 0.094 U	
4,6-DINITRO-2-METHYLPHENOL	N	534-52-1	ug/L	< 0.73 U	< 0.75 U			< 0.71 U	
4-BROMOPHENYL-PHENYLETHER	N	101-55-3	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
4-CHLORO-3-METHYLPHENOL	N	59-50-7	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
4-CHLOROANILINE	N	106-47-8	ug/L	< 0.48 U	< 0.5 U			< 0.47 UJ	
4-CHLOROPHENYL-PHENYLETHER	N	7005-72-3	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
4-NITROANILINE	N	100-01-6	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
4-NITROPHENOL	N	100-02-7	ug/L	< 18 U	< 19 U			< 18 UJ	< 18 U
ACENAPHTHENE	N	83-32-9	ug/L	< 7.3 U	< 7.5 U	< 2 U	< 2 U	< 7.1 U	< 7.1 U
ACENAPHTHYLENE	N	208-96-8	ug/L	< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U
ACETOPHENONE	N	98-86-2	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
ANTHRACENE	N	120-12-7	ug/L	< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U
ATRAZINE	N	1912-24-9	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
BENZALDEHYDE	N	100-52-7	ug/L	< 7.3 UJ	< 7.5 UJ			< 7.1 UJ	< 7.1 U
BENZO[A]ANTHRACENE	N	56-55-3	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	
BENZO[A]PYRENE	N	50-32-8	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 UJ	
BENZO[B]FLUORANTHENE	N	205-99-2	ug/L	< 0.097 UJ	< 0.1 UJ	< 1.6 U	< 1.5 U	< 0.094 U	
BENZO[G,H,I]PERYLENE	N	191-24-2	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U
BENZO[K]FLUORANTHENE	N	207-08-9	ug/L	< 0.097 UJ	< 0.1 UJ	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U
BIS(2-CHLOROETHOXY)METHANE	N	111-91-1	ug/L	< 0.097 U	< 0.1 U			< 7.1 U	< 7.1 U
BIS(2-CHLOROETHYL)ETHER	N	111-44-4	ug/L	< 0.097 UJ	< 0.1 UJ			< 0.094 U	
BIS(2-ETHYLHEXYL)PHTHALATE	N	117-81-7	ug/L	< 0.7 U	< 1.3 U			< 0.47 UJ	
BUTYLBENZYLPHTHALATE	N	85-68-7	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
CAPROLACTAM	N	105-60-2	ug/L	UR	UR			UR	< 7.1 UJ
CARBAZOLE	N	86-74-8	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
CHRYSENE	N	218-01-9	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	
DIBENZ[A,H]ANTHRACENE	N	53-70-3	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 UJ	
DIBENZOFURAN	N	132-64-9	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
DIETHYLPHTHALATE	N	84-66-2	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
DIMETHYL PHTHALATE	N	131-11-3	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
DI-N-BUTYLPHTHALATE	N	84-74-2	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
DI-N-OCTYLPHTHALATE	N	117-84-0	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
FLUORANTHENE	N	206-44-0	ug/L	< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U
FLUORENE	N	86-73-7	ug/L	< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U
HEXACHLOROBENZENE	N	118-74-1	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
HEXACHLOROBUTADIENE	N	87-68-3	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
HEXACHLOROCYCLOPENTADIENE	N	77-47-4	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
HEXACHLOROETHANE	N	67-72-1	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
INDENO[1,2,3-CD]PYRENE	N	193-39-5	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	
ISOPHORONE	N	78-59-1	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
NAPHTHALENE	N	91-20-3	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	
NITROBENZENE	N	98-95-3	ug/L	< 0.14 U	< 0.15 U			< 0.14 U	
N-NITROSODINPROPYLAMINE	N	621-64-7	ug/L	< 0.097 U	< 0.1 U			< 0.094 U	
N-NITROSODIPHENYLAMINE	N	86-30-6	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
PENTACHLOROPHENOL	N	87-86-5	ug/L	< 0.48 U	< 0.5 U			< 0.47 U	
PHENANTHRENE	N	85-01-8	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	
PHENOL	N	108-95-2	ug/L	< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U
PYRENE	N	129-00-0	ug/L	< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	

TABLE A-2b
ANALYTICAL GROUNDWATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-MW-210					
			sample_date	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015
			sample_type_code	FD	N	FD	N	N	N
			sys_sample_code	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115
Compound	fraction	CAS	Units						
VOCs									
1,1,1-TRICHLOROETHANE	N	71-55-6	ug/L	< 0.5 U	< 0.5 U	1.4	1.5	1	< 0.5 U
1,1,2,2-TETRACHLOROETHANE	N	79-34-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-TRICHLOROETHANE	N	79-00-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHANE	N	75-34-3	ug/L	0.78 J	0.82 J	1.5	1.4	1	1
1,1-DICHLOROETHENE	N	75-35-4	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-TRICHLOROBENZENE	N	120-82-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROBENZENE	N	95-50-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHANE	N	107-06-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHENE, TOTAL	N	540-59-0	ug/L	< 0.5 U	< 0.5 U				
1,3-DICHLOROBENZENE	N	541-73-1	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-DICHLOROBENZENE	N	106-46-7	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-HEXANONE	N	591-78-6	ug/L	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 U
ACETONE	N	67-64-1	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	3.4 J
BENZENE	N	71-43-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CARBON TETRACHLORIDE	N	56-23-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROBENZENE	N	108-90-7	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROETHANE	N	75-00-3	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U
CHLOROFORM	N	67-66-3	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROMETHANE	N	74-87-3	ug/L	< 1 U	< 1 U	< 1 UJ	< 1 UJ	< 1 U	0.42 J
CIS-1,2-DICHLOROETHENE	N	156-59-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ETHYLBENZENE	N	100-41-4	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ISOPROPYLBENZENE	N	98-82-8	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
M- AND P-XYLENE	N	108-38-3/106-42	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
METHYL CYCLOHEXANE	N	108-87-2	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYL TERT-BUTYL ETHER	N	1634-04-4	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYLENE CHLORIDE	N	75-09-2	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	N	95-47-6	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
STYRENE	N	100-42-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TETRACHLOROETHENE	N	127-18-4	ug/L	0.014 J	0.019 J	< 0.025 U	< 0.025 U	0.011 J	< 0.5 U
TOLUENE	N	108-88-3	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRANS-1,2-DICHLOROETHENE	N	156-60-5	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRICHLOROETHENE	N	79-01-6	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VINYL CHLORIDE	N	75-01-4	ug/L	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.05 U	
XYLENES, TOTAL CALC	N	1330-20-7	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	
XYLENES, TOTAL CALC FULL DL	N	RA-1330-20-7	ug/L	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	

Notes:

< - Result not detected above laboratory reporting limit.

CAS - Chemical Abstracts Service.

B - The analyte was found in the associated blank at a significant level relative to the sample result.

D - The reported value is from a dilution.

E - The reported value exceeded the instrument calibration range; estimated value.

FD - Field duplicate.

J - Estimated value.

N - Normal sample.

PCB - Polychlorinated Biphenyl.

PFASs - Poly- and Perfluoroalkyl Substances.

SVOC - Semivolatile organic compound.

ug/L - microgram per liter.

U - Not detected.

UJ - The analyte was not detected; and the reporting limit is approximate.

UR - Unreported/rejected.

VOC - Volatile organic compound.

(a) Lab calculated value; only used when individual compound data not available.

(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE A-3a
SURFACE WATER SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID
FTA-SW-01	11/27/2012	FTA-SW01-112712	N	
FTA-SW-01	6/19/2014	FTA-SW-01-061914	N	
FTA-SW-02	11/27/2012	FTA-SW02-112712-D	FD	FTA-SW02-112712
FTA-SW-02	11/27/2012	FTA-SW02-112712	N	
FTA-SW-02	6/19/2014	FTA-SW-02-061914	N	
FTA-SW-03	11/27/2012	FTA-SW03-112712	N	
FTA-SW-03	6/19/2014	FTA-SW-03-061914	N	
FTA-SW-04	11/27/2012	FTA-SW04-112712	N	
FTA-SW-05	11/27/2012	FTA-SW05-112712	N	
FTA-SW-06	11/27/2012	FTA-SW06-112712	N	
FTA-SW-06	6/19/2014	FTA-SW-06-061914-D	FD	FTA-SW-06-061914
FTA-SW-06	6/19/2014	FTA-SW-06-061914	N	
FTA-SW-07	11/28/2012	FTA-SW07-112812	N	
FTA-SW-07	6/19/2014	FTA-SW-07-061914	N	
FTA-SW-08	11/28/2012	FTA-SW08-112812	N	
FTA-SW-08	6/19/2014	FTA-SW-08-061914	N	

Notes:
FD - Field duplicate.
N - Normal sample.

TABLE A-3b
ANALYTICAL SURFACE WATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		sys_loc_code	FTA-SW-01	FTA-SW-01	FTA-SW-02	FTA-SW-02	FTA-SW-02	FTA-SW-03	FTA-SW-03	FTA-SW-04	FTA-SW-05	FTA-SW-06	FTA-SW-06	FTA-SW-06	FTA-SW-07	FTA-SW-07
		sample_date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	11/27/2012	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014
		sample_type_code	N	N	N	FD	N	N	N	N	N	N	N	FD	N	N
		sys_sample_code	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914
Compound	CAS	Units														
Metals (Total)																
ALUMINUM	7429-90-5	ug/L	145 J	< 100 U	368	342	1590	257 J	120 J	531	54.4 J	104 J	< 100 U	97 J	68.4 J	< 110 U
ANTIMONY	7440-36-0	ug/L	< 0.5 U	0.14 J	< 0.5 U	< 0.5 U	0.16 J	< 0.5 U	0.096 J	< 0.5 U	< 0.5 U	< 0.5 U	0.15 J	0.11 J	< 0.5 U	0.19 J
ARSENIC	7440-38-2	ug/L	< 4 U	< 4 U	6	4.9 J	3.6 J	< 4 U	< 4 U	4 J	< 3 U	3.8 J	7.9	7.9	3.6 J	7.9
BARIUM	7440-39-3	ug/L	4.4 J	4.44 J	6.4	6.4	11.5	17.8	12.8	20.6	3.8 J	4.2 J	17.4	20.9	0.99 J	4.29 J
BERYLLIUM	7440-41-7	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
CADMIUM	7440-43-9	ug/L	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	2.14	0.15 J	0.18 J	0.08 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
CALCIUM	7440-70-2	ug/L	4630	7880	20100	20100	8660	7620	6280	73000	87800	62600	46200	54500	67700	52500
CHROMIUM, TOTAL	7440-47-3	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
COBALT	7440-48-4	ug/L	3.4	0.851 J	2.5	2.4	1	2.2	1.24	2.5	0.93 J	1.4	5.06	5.52	0.76 J	1.38
COPPER	7440-50-8	ug/L	1.8 J	2.74 J	3.1	3.3	9.42	9.4	8.54	8.1	1.3 J	2.8 J	3.21	3.85	< 2 U	2.3 J
IRON	7439-89-6	ug/L	748	335	2110	2100	1650	946	380	5620	536	1500	5890	7060	291	2340
LEAD	7439-92-1	ug/L	< 0.5 U	< 0.5 U	0.52 J	0.56 J	2.02	2.1	1.59	1.5	< 0.5 U	< 0.5 U	0.41 J	0.41 J	0.07 J	< 0.5 U
MAGNESIUM	7439-95-4	ug/L	1740	1990	2810	2760	1860	1780	1360	5840	7340	4230	3990	4770	6550	5260
MANGANESE	7439-96-5	ug/L	124	57.4	840	835	31.1	67.8	41.3	1190	496	815	1080	1240	365	432
MERCURY	7439-97-6	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U
NICKEL	7440-02-0	ug/L	1.5 J	0.93 J	1.4 J	1.3 J	8.09	1.6 J	2.24	2.1	1.5 J	1.1 J	1.87 J	2.09	< 1.2 U	1.66 J
POTASSIUM	7440-09-7	ug/L	1080	947 J	902 J	855 J	1360	2120	1490	3570	4000	4180	1240	1310	3780	3180
SELENIUM	7782-49-2	ug/L	0.82 J	< 3 U	0.51 J	0.31 J	< 3 U	< 3 U	< 3 U	0.35 J	0.77 J	0.59 J	< 3 U	< 3 U	< 3 UJ	< 3 U
SILVER	7440-22-4	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.1 J	0.07 J	0.11 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
SODIUM	7440-23-5	ug/L	3720	3680	4540	4560	3770	3910	3470	5580	6530	6540	3490	4030	6220	3660
THALLIUM	7440-28-0	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.32 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
VANADIUM	7440-62-2	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
ZINC	7440-66-6	ug/L	< 10 U	3.3 J	< 10 U	< 10 U	5.7 J	19 J	13.7 J	23	< 10 U	8.3 J	4.6 J	6.3 J	< 10 U	5.4 J
PCBs																
AROCLOR-1016	12674-11-2	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
AROCLOR-1221	11104-28-2	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
AROCLOR-1232	11141-16-5	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
AROCLOR-1242	53469-21-9	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
AROCLOR-1248	12672-29-6	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
AROCLOR-1254	11097-69-1	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				0.38 J	< 0.047 UJ		< 0.047 U
AROCLOR-1260	11096-82-5	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
AROCLOR-1262	37324-23-5	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
AROCLOR-1268	11100-14-4	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ				< 0.048 U	< 0.047 UJ		< 0.047 U
TOTAL AROCLORS (b)	RATotAroclors	ug/L		< 0.024 U			< 0.048 U		< 0.05 U				0.38	< 0.047 U		< 0.047 U
TOTAL AROCLORS FULL DL	RATotAroFLDL	ug/L		< 0.216 U			< 0.432 U		< 0.45 U				0.764	< 0.423 U		< 0.423 U
SVOCs																
1,1-BIPHENYL	92-52-4	ug/L	< 0.095 UJ	< 0.096 UJ	< 0.095 UJ	< 0.094 UJ	< 0.095 UJ	< 0.094 UJ	< 0.1 UJ	< 0.096 UJ	< 0.095 UJ	< 0.096 UJ	0.082 J	< 0.097 UJ	< 0.095 UJ	< 0.094 UJ
1,2,4,5-TETRACHLOROBENZENE	95-94-3	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	0.11 J	< 0.097 U	< 0.095 U	< 0.094 U
1,4-DIOXANE	123-91-1	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	ug/L	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.15 UJ	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ
2,3,4,6-TETRACHLOROPHENOL	58-90-2	ug/L	< 0.48 U	< 7.2 U	< 0.48 U	< 0.47 U	< 7.1 U	< 0.47 U	< 7.6 U	< 0.48 U	< 0.48 U	< 0.48 U	< 7.5 U	< 7.3 U	< 0.48 U	< 7.1 U
2,4,5-TRICHLOROPHENOL	95-95-4	ug/L	< 18 UJ	< 18 U	< 18 UJ	< 18 UJ	< 18 U	< 18 UJ	< 19 U	< 18 UJ	< 18 UJ	< 18 UJ	< 19 U	< 18 U	< 18 U	< 18 U
2,4,6-TRICHLOROPHENOL	88-06-2	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	0.22 J	< 0.48 U	< 0.48 U	< 0.47 U
2,4-DICHLOROPHENOL	120-83-2	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
2,4-DIMETHYLPHENOL	105-67-9	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 UJ	< 7.1 U
2,4-DINITROPHENOL	51-28-5	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
2,4-DINITROTOLUENE	121-14-2	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
2,6-DINITROTOLUENE	606-20-2	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
2-CHLORONAPHTHALENE	91-58-7	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
2-CHLOROPHENOL	95-57-8	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
2-METHYLNAPHTHALENE	91-57-6	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
2-METHYLPHENOL	95-48-7	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
2-NITROANILINE	88-74-4	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U
2-NITROPHENOL	88-75-5	ug/L	< 7.3 UJ	< 7.2 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.6 U	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U
3,3-DICHLOROBENZIDINE	91-94-1	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 UJ	UR	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U
3-NITROANILINE	99-09-2	ug/L	< 18 U	< 0.096 U	< 18 U	< 18 U	< 0.095 U	< 18 U	< 0.1 UJ	< 18 U	< 18 U	< 18 U	< 0.1 U	< 0.097 U	< 18 U	< 0.094 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	ug/L	< 0.71 U	< 0.72 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.76 U	< 0.72 U	< 0.71 U	< 0.72 U	< 0.75 U	< 0.73 U	< 0.71 U	< 0.71 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
4-CHLORO-3-METHYLPHENOL	59-50-7	ug/L	< 7.3 UJ	< 7.2 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.6 U	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
4-CHLOROANILINE	106-47-8	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	UR	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
4-NITROANILINE	100-01-6	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
4-NITROPHENOL	100-02-7	ug/L	< 18 UJ	< 18 U	< 18 UJ	< 18 UJ	< 18 UJ	< 18 UJ	< 19 UJ	< 18 UJ	< 18 UJ	< 18 UJ	< 19 UJ	< 18 UJ	< 18 U	< 18 UJ
ACENAPHTHENE	83-32-9	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
ACENAPHTHYLENE	208-96-8	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
ACETOPHENONE	98-86-2	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
ANTHRACENE	120-12-7	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
ATRAZINE	1912-24-9	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	0.06 J	< 0.097 U	< 0.095 U	< 0.094 U
BENZALDEHYDE	100-52-7	ug/L	< 7.3 U	< 7.2 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.6 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 UJ	< 7.3 UJ	< 7.1 UJ	< 7.1 UJ
BENZO[A]ANTHRACENE	56-55-3	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	0.065 J	< 0.097 U	< 0.095 U	< 0.094 U
BENZO[A]PYRENE	50-32-8	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	0.076 J	< 0.097 U	< 0.095 U	< 0.094 U
BENZO[B]FLUORANTHENE	205-99-2	ug/L	< 0.19 U	< 0.096 U	< 0.2 U	< 0.19 U	< 0.095 U	< 0.19 U	< 0.1 UJ	< 0.096 UJ	< 0.19 U	< 0.22 U	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U
BENZO[G,H,I]PERYLENE	191-24-2	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
BENZO[K]FLUORANTHENE	207-08-9	ug/L	< 0.095 UJ	< 7.2 U	< 0.095 UJ	< 0.094 UJ	< 7.1 U	< 0.094 UJ	< 7.6 U	< 0.096 UJ	< 0.095 UJ	0.052 J	< 7.5 U	< 7.3 U	< 0.095 UJ	< 7.1 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	0.044 J	< 0.097 U	< 0.095 UJ	< 0.094 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	ug/L	< 0.49 U	< 0.48 UJ	< 0.51 U	< 0.48 U	< 0.48 UJ	< 0.77 U	< 0.51 UJ	< 0.95 U	< 0.52 U	< 0.82 U	< 0.5 UJ	< 0.48 UJ	< 0.48 U	< 0.47 UJ
BUTYLBENZYLPHTHALATE	85-68-7	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
CAPROLACTAM	105-60-2	ug/L	< 7.3 U	UR	< 7.1 U	< 7.1 U	UR	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.1 U	UR	UR	< 7.1 U	UR
CARBAZOLE	86-74-8	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
CHRYSENE	218-01-9	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
DIBENZ[A,H]ANTHRACENE	53-70-3	ug/L	< 0.095 U	< 0.096 UJ	< 0.095 U	< 0.094 U	< 0.095 UJ	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 UJ	< 0.097 UJ	< 0.095 U	< 0.094 UJ
DIBENZOFURAN	132-64-9	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	0.087 J	< 0.097 U	< 0.095 U	< 0.094 U

TABLE A-3b
ANALYTICAL SURFACE WATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-SW-01	FTA-SW-01	FTA-SW-02	FTA-SW-02	FTA-SW-02	FTA-SW-03	FTA-SW-03	FTA-SW-04	FTA-SW-05	FTA-SW-06	FTA-SW-06	FTA-SW-06	FTA-SW-07	FTA-SW-07
			sample_date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	11/27/2012	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014
			sample_type_code	N	N	N	FD	N	N	N	N	N	N	N	FD	N	N
			sys_sample_code	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914
Compound	CAS	Units															
DIETHYLPHTHALATE	84-66-2	ug/L		< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
DIMETHYL PHTHALATE	131-11-3	ug/L		< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U
DI-N-BUTYLPHTHALATE	84-74-2	ug/L		< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
DI-N-OCTYLPHTHALATE	117-84-0	ug/L		< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
FLUORANTHENE	206-44-0	ug/L		< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	< 7.5 U	< 7.3 U	< 0.095 UJ	< 7.1 U
FLUORENE	86-73-7	ug/L		< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
HEXACHLOROBENZENE	118-74-1	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
HEXACHLOROBUTADIENE	87-68-3	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
HEXACHLOROETHANE	67-72-1	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U
INDENO[1,2,3-CD]PYRENE	193-39-5	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	0.14 J	< 0.1 UJ	0.15 J	< 0.095 U	0.16 J	0.12 J	< 0.097 U	< 0.095 U	< 0.094 U
ISOPHORONE	78-59-1	ug/L		< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
NAPHTHALENE	91-20-3	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	0.1 J	< 0.097 U	< 0.095 U	< 0.094 U
NITROBENZENE	98-95-3	ug/L		< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U
N-NITROSODINPROPYLAMINE	621-64-7	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
N-NITROSODIPHENYLAMINE	86-30-6	ug/L		< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U
PENTACHLOROPHENOL	87-86-5	ug/L		< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 UJ	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U
PHENANTHRENE	85-01-8	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	0.095 J	< 0.097 U	< 0.095 U	< 0.094 U
PHENOL	108-95-2	ug/L		< 0.48 U	< 7.2 U	< 0.48 U	< 0.47 U	< 7.1 U	< 0.47 U	< 7.6 U	< 0.48 U	< 0.48 U	< 0.48 U	< 7.5 U	< 7.3 U	< 0.48 U	< 7.1 U
PYRENE	129-00-0	ug/L		< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U
VOCs																	
1,1,1-TRICHLOROETHANE	71-55-6	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-TRICHLOROETHANE	79-00-5	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHANE	75-34-3	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHENE	75-35-4	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ
1,2,4-TRICHLOROBENZENE	120-82-1	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U
1,2-DICHLOROBENZENE	95-50-1	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHANE	107-06-2	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	ug/L		< 0.5 U		< 0.5 U	< 0.5 UJ		< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U			< 0.5 U	
1,3-DICHLOROBENZENE	541-73-1	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-DICHLOROBENZENE	106-46-7	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U
2-HEXANONE	591-78-6	ug/L		< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U
ACETONE	67-64-1	ug/L		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	2.3 J	< 2.5 UJ	< 2.5 U	7.3	2.3 J	7.5 J	11 J	< 2.5 U	6
BENZENE	71-43-2	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CARBON TETRACHLORIDE	56-23-5	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U
CHLOROBENZENE	108-90-7	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROETHANE	75-00-3	ug/L		< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 UJ	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U
CHLOROFORM	67-66-3	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROMETHANE	74-87-3	ug/L		< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
CIS-1,2-DICHLOROETHENE	156-59-2	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ETHYLBENZENE	100-41-4	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ISOPROPYLBENZENE	98-82-8	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 UJ	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ
M- AND P-XYLENE	108-38-3/106-42-3	ug/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
METHYL CYCLOHEXANE	108-87-2	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYL TERT-BUTYL ETHER	1634-04-4	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYLENE CHLORIDE	75-09-2	ug/L		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE	95-47-6	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
STYRENE	100-42-5	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TETRACHLOROETHENE	127-18-4	ug/L		< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 UJ	< 0.025 U
TOLUENE	108-88-3	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.43 J	< 0.5 U	1.9	< 0.5 U	0.35 J	0.86 J	1	< 0.5 U	5.1
TRANS-1,2-DICHLOROETHENE	156-60-5	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRICHLOROETHENE	79-01-6	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VINYL CHLORIDE	75-01-4	ug/L		< 0.005 U	< 0.05 U	< 0.005 U	< 0.005 U	< 0.05 U	< 0.005 U	< 0.05 U	< 0.005 U	< 0.005 U	< 0.005 U	< 0.05 U	< 0.05 U	< 0.005 UJ	< 0.05 U
XYLENES, TOTAL (a)	1330-20-7	ug/L		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	ug/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
J - Estimated value.
N - Normal sample.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE A-3b
ANALYTICAL SURFACE WATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		sys_loc_code	FTA-SW-08	FTA-SW-08
		sample_date	11/28/2012	6/19/2014
		sample_type_code	N	N
		sys_sample_code	FTA-SW08-112812	FTA-SW-08-061914
Compound	CAS	Units		
Metals (Total)				
ALUMINUM	7429-90-5	ug/L	44.2 J	< 100 U
ANTIMONY	7440-36-0	ug/L	< 0.5 U	< 0.09 U
ARSENIC	7440-38-2	ug/L	3.3 J	5.1
BARIUM	7440-39-3	ug/L	1.1 J	1.8 J
BERYLLIUM	7440-41-7	ug/L	< 0.2 U	< 0.2 U
CADMIUM	7440-43-9	ug/L	0.03 J	< 0.2 U
CALCIUM	7440-70-2	ug/L	54900	27600
CHROMIUM, TOTAL	7440-47-3	ug/L	< 4 U	< 4 U
COBALT	7440-48-4	ug/L	0.49 J	0.53 J
COPPER	7440-50-8	ug/L	< 2.4 U	2.27 J
IRON	7439-89-6	ug/L	344	1250
LEAD	7439-92-1	ug/L	0.32 J	< 0.5 U
MAGNESIUM	7439-95-4	ug/L	5540	2560
MANGANESE	7439-96-5	ug/L	52.2	28.3
MERCURY	7439-97-6	ug/L	< 0.1 UJ	< 0.1 U
NICKEL	7440-02-0	ug/L	< 1.2 U	1.1 J
POTASSIUM	7440-09-7	ug/L	3880	810 J
SELENIUM	7782-49-2	ug/L	< 3 UJ	< 3 U
SILVER	7440-22-4	ug/L	< 0.4 U	< 0.4 U
SODIUM	7440-23-5	ug/L	5940	2730
THALLIUM	7440-28-0	ug/L	< 0.4 U	< 0.4 U
VANADIUM	7440-62-2	ug/L	< 4 U	< 4 U
ZINC	7440-66-6	ug/L	< 10 U	2.2 J
PCBs				
AROCLOR-1016	12674-11-2	ug/L		< 0.047 U
AROCLOR-1221	11104-28-2	ug/L		< 0.047 U
AROCLOR-1232	11141-16-5	ug/L		< 0.047 U
AROCLOR-1242	53469-21-9	ug/L		< 0.047 U
AROCLOR-1248	12672-29-6	ug/L		< 0.047 U
AROCLOR-1254	11097-69-1	ug/L		< 0.047 U
AROCLOR-1260	11096-82-5	ug/L		< 0.047 U
AROCLOR-1262	37324-23-5	ug/L		< 0.047 U
AROCLOR-1268	11100-14-4	ug/L		< 0.047 U
TOTAL AROCLORS (b)	RATotAroclors	ug/L		< 0.047 U
TOTAL AROCLORS FULL DL	RATotAroFLDL	ug/L		< 0.423 U
SVOCs				
1,1-BIPHENYL	92-52-4	ug/L	< 0.095 UJ	< 0.098 UJ
1,2,4,5-TETRACHLOROBENZENE	95-94-3	ug/L	< 0.095 U	< 0.098 U
1,4-DIOXANE	123-91-1	ug/L	< 0.48 U	< 0.49 U
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	ug/L	< 0.14 UJ	< 0.15 UJ
2,3,4,6-TETRACHLOROPHENOL	58-90-2	ug/L	< 0.48 U	< 7.4 U
2,4,5-TRICHLOROPHENOL	95-95-4	ug/L	< 18 U	< 18 U
2,4,6-TRICHLOROPHENOL	88-06-2	ug/L	< 0.48 U	< 0.49 U
2,4-DICHLOROPHENOL	120-83-2	ug/L	< 0.48 U	< 0.49 U
2,4-DIMETHYLPHENOL	105-67-9	ug/L	< 7.1 UJ	< 7.4 U
2,4-DINITROPHENOL	51-28-5	ug/L	< 0.48 U	< 0.49 U
2,4-DINITROTOLUENE	121-14-2	ug/L	< 0.095 U	< 0.098 U
2,6-DINITROTOLUENE	606-20-2	ug/L	< 0.095 U	< 0.098 U
2-CHLORONAPHTHALENE	91-58-7	ug/L	< 0.095 U	< 7.4 U
2-CHLOROPHENOL	95-57-8	ug/L	< 0.48 U	< 0.49 U
2-METHYLNAPHTHALENE	91-57-6	ug/L	< 0.095 U	< 0.098 U
2-METHYLPHENOL	95-48-7	ug/L	< 7.1 U	< 7.4 U
2-NITROANILINE	88-74-4	ug/L	< 0.14 U	< 0.15 U
2-NITROPHENOL	88-75-5	ug/L	< 7.1 U	< 7.4 U
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	ug/L	< 0.48 U	< 0.49 U
3,3-DICHLOROBENZIDINE	91-94-1	ug/L	< 0.095 U	< 0.098 U
3-NITROANILINE	99-09-2	ug/L	< 18 U	< 0.098 U
4,6-DINITRO-2-METHYLPHENOL	534-52-1	ug/L	< 0.71 U	< 0.74 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	ug/L	< 0.095 U	< 7.4 U
4-CHLORO-3-METHYLPHENOL	59-50-7	ug/L	< 7.1 U	< 7.4 U
4-CHLOROANILINE	106-47-8	ug/L	< 0.48 U	< 0.49 U
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	ug/L	< 7.1 U	< 7.4 U
4-NITROANILINE	100-01-6	ug/L	< 0.095 U	< 0.098 U
4-NITROPHENOL	100-02-7	ug/L	< 18 U	< 18 UJ
ACENAPHTHENE	83-32-9	ug/L	< 7.1 U	< 7.4 U
ACENAPHTHYLENE	208-96-8	ug/L	< 7.1 U	< 7.4 U
ACETOPHENONE	98-86-2	ug/L	< 7.1 U	< 7.4 U
ANTHRACENE	120-12-7	ug/L	< 7.1 U	< 7.4 U
ATRAZINE	1912-24-9	ug/L	0.047 J	< 0.098 U
BENZALDEHYDE	100-52-7	ug/L	< 7.1 UJ	< 7.4 UJ
BENZO[A]ANTHRACENE	56-55-3	ug/L	< 0.095 U	< 0.098 U
BENZO[A]PYRENE	50-32-8	ug/L	< 0.095 U	< 0.098 U
BENZO[B]FLUORANTHENE	205-99-2	ug/L	< 0.095 UJ	< 0.098 U
BENZO[G,H,I]PERYLENE	191-24-2	ug/L	< 0.095 U	< 7.4 U
BENZO[K]FLUORANTHENE	207-08-9	ug/L	< 0.095 UJ	< 7.4 U
BIS(2-CHLOROETHOXY)METHANE	111-91-1	ug/L	< 0.095 U	< 7.4 U
BIS(2-CHLOROETHYL)ETHER	111-44-4	ug/L	< 0.095 UJ	< 0.098 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	ug/L	< 0.48 U	< 0.49 UJ
BUTYLBENZYLPHTHALATE	85-68-7	ug/L	< 7.1 U	< 7.4 U
CAPROLACTAM	105-60-2	ug/L	< 7.1 U	UR
CARBAZOLE	86-74-8	ug/L	< 7.1 U	< 7.4 U
CHRYSENE	218-01-9	ug/L	< 0.095 U	< 0.098 U
DIBENZ[A,H]ANTHRACENE	53-70-3	ug/L	< 0.095 U	< 0.098 UJ
DIBENZOFURAN	132-64-9	ug/L	< 0.095 U	< 0.098 U

TABLE A-3b
ANALYTICAL SURFACE WATER DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		sys_loc_code	FTA-SW-08	FTA-SW-08
		sample_date	11/28/2012	6/19/2014
		sample_type_code	N	N
		sys_sample_code	FTA-SW08-112812	FTA-SW-08-061914
Compound	CAS	Units		
DIETHYLPHTHALATE	84-66-2	ug/L	< 7.1 U	< 7.4 U
DIMETHYL PHTHALATE	131-11-3	ug/L	< 0.095 U	< 7.4 U
DI-N-BUTYLPHTHALATE	84-74-2	ug/L	< 7.1 U	< 7.4 U
DI-N-OCTYLPHTHALATE	117-84-0	ug/L	< 7.1 U	< 7.4 U
FLUORANTHENE	206-44-0	ug/L	< 0.095 UJ	< 7.4 U
FLUORENE	86-73-7	ug/L	< 7.1 U	< 7.4 U
HEXACHLOROBENZENE	118-74-1	ug/L	< 0.095 U	< 0.098 U
HEXACHLOROBUTADIENE	87-68-3	ug/L	< 0.095 U	< 0.098 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	ug/L	< 0.095 U	< 0.098 U
HEXACHLOROETHANE	67-72-1	ug/L	< 0.095 U	< 0.098 U
INDENO[1,2,3-CD]PYRENE	193-39-5	ug/L	< 0.095 U	< 0.098 U
ISOPHORONE	78-59-1	ug/L	< 7.1 U	< 7.4 U
NAPHTHALENE	91-20-3	ug/L	< 0.095 U	< 0.098 U
NITROBENZENE	98-95-3	ug/L	< 0.14 U	< 0.15 U
N-NITROSODINPROPYLAMINE	621-64-7	ug/L	< 0.095 U	< 0.098 U
N-NITROSODIPHENYLAMINE	86-30-6	ug/L	< 7.1 U	< 7.4 U
PENTACHLOROPHENOL	87-86-5	ug/L	< 0.48 UJ	< 0.49 U
PHENANTHRENE	85-01-8	ug/L	< 0.095 U	< 0.098 U
PHENOL	108-95-2	ug/L	< 0.48 U	< 7.4 U
PYRENE	129-00-0	ug/L	< 0.095 U	< 0.098 U
VOCs				
1,1,1-TRICHLOROETHANE	71-55-6	ug/L	< 0.5 U	< 0.5 U
1,1,2,2-TETRACHLOROETHANE	79-34-5	ug/L	< 0.5 U	< 0.5 U
1,1,2-TRICHLOROETHANE	79-00-5	ug/L	< 0.5 U	< 0.5 U
1,1-DICHLOROETHANE	75-34-3	ug/L	< 0.5 U	< 0.5 U
1,1-DICHLOROETHENE	75-35-4	ug/L	< 0.5 U	< 0.5 UJ
1,2,4-TRICHLOROBENZENE	120-82-1	ug/L	< 0.5 U	< 0.5 U
1,2-DICHLOROBENZENE	95-50-1	ug/L	< 0.5 U	< 0.5 U
1,2-DICHLOROETHANE	107-06-2	ug/L	< 0.5 U	< 0.5 U
1,2-DICHLOROETHENE, TOTAL	540-59-0	ug/L	< 0.5 U	
1,3-DICHLOROBENZENE	541-73-1	ug/L	< 0.5 U	< 0.5 U
1,4-DICHLOROBENZENE	106-46-7	ug/L	< 0.5 U	< 0.5 U
2-HEXANONE	591-78-6	ug/L	< 2.5 UJ	< 2.5 U
ACETONE	67-64-1	ug/L	< 2.5 U	4.1 J
BENZENE	71-43-2	ug/L	< 0.5 U	< 0.5 U
CARBON TETRACHLORIDE	56-23-5	ug/L	< 0.5 U	< 0.5 U
CHLOROBENZENE	108-90-7	ug/L	< 0.5 U	< 0.5 U
CHLOROETHANE	75-00-3	ug/L	< 1 UJ	< 1 U
CHLOROFORM	67-66-3	ug/L	< 0.5 U	< 0.5 U
CHLOROMETHANE	74-87-3	ug/L	< 1 U	< 1 U
CIS-1,2-DICHLOROETHENE	156-59-2	ug/L	< 0.5 U	< 0.5 U
ETHYLBENZENE	100-41-4	ug/L	< 0.5 U	< 0.5 U
ISOPROPYLBENZENE	98-82-8	ug/L	< 0.5 U	< 0.5 UJ
M- AND P-XYLENE	108-38-3/106-42-3	ug/L	< 1 U	< 1 U
METHYL CYCLOHEXANE	108-87-2	ug/L	< 0.5 U	< 0.5 U
METHYL TERT-BUTYL ETHER	1634-04-4	ug/L	< 0.5 U	< 0.5 U
METHYLENE CHLORIDE	75-09-2	ug/L	< 2.5 U	< 2.5 U
O-XYLENE	95-47-6	ug/L	< 0.5 U	< 0.5 U
STYRENE	100-42-5	ug/L	< 0.5 U	< 0.5 U
TETRACHLOROETHENE	127-18-4	ug/L	< 0.025 U	< 0.025 U
TOLUENE	108-88-3	ug/L	< 0.5 U	< 0.5 U
TRANS-1,2-DICHLOROETHENE	156-60-5	ug/L	< 0.5 U	< 0.5 U
TRICHLOROETHENE	79-01-6	ug/L	< 0.5 U	< 0.5 U
VINYL CHLORIDE	75-01-4	ug/L	< 0.005 U	< 0.05 U
XYLENES, TOTAL (a)	1330-20-7	ug/L	< 1.5 U	< 1.5 U
XYLENES, TOTAL CALC (b)	RA-1330-20-7	ug/L	< 1 U	< 1 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
J - Estimated value.
N - Normal sample.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE A-4a
SEDIMENT SAMPLES USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample Date	Sample ID	Sample Type	Parent Sample ID	Depth Interval
FTA-SED-01	11/27/2012	FTA-SED-01-0005	N		0 - 0.5 ft
FTA-SED-01	6/19/2014	FTA-SD-01-000.5	N		0 - 0.5 ft
FTA-SED-02	11/27/2012	FTA-SED-02-0005-D	FD	FTA-SED-02-0005	0 - 0.5 ft
FTA-SED-02	11/27/2012	FTA-SED-02-0005	N		0 - 0.5 ft
FTA-SED-02	6/19/2014	FTA-SD-02-000.5	N		0 - 0.5 ft
FTA-SED-03	11/27/2012	FTA-SED-03-0005	N		0 - 0.5 ft
FTA-SED-03	6/19/2014	FTA-SD-03-000.5	N		0 - 0.5 ft
FTA-SED-04	11/27/2012	FTA-SED-04-0005	N		0 - 0.5 ft
FTA-SED-04	6/21/2014	FTA-SD-04-000.5	N		0 - 0.5 ft
FTA-SED-05	11/27/2012	FTA-SED-05-0005	N		0 - 0.5 ft
FTA-SED-05	6/20/2014	FTA-SD-05-000.5	N		0 - 0.5 ft
FTA-SED-06	11/27/2012	FTA-SED-06-0005	N		0 - 0.5 ft
FTA-SED-06	6/19/2014	FTA-SD-06-000.5-D	FD	FTA-SD-06-000.5	0 - 0.5 ft
FTA-SED-06	6/19/2014	FTA-SD-06-000.5	N		0 - 0.5 ft
FTA-SED-07	11/28/2012	FTA-SED-07-0005	N		0 - 0.5 ft
FTA-SED-07	6/19/2014	FTA-SD-07-000.5	N		0 - 0.5 ft
FTA-SED-07	11/2/2016	FTA-SED-07-N-110216	N		0 - 0.5 ft
FTA-SED-08	11/28/2012	FTA-SED-08-0005	N		0 - 0.5 ft
FTA-SED-08	6/19/2014	FTA-SD-08-000.5	N		0 - 0.5 ft

Notes:
FD - Field duplicate.
ft - feet.
N - Normal sample.

TABLE A-4b
ANALYTICAL SEDIMENT DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		sys_loc_code	FTA-SED-01	FTA-SED-01	FTA-SED-02	FTA-SED-02	FTA-SED-02	FTA-SED-03	FTA-SED-03	FTA-SED-04	FTA-SED-04	FTA-SED-05	FTA-SED-05	FTA-SED-06	FTA-SED-06	FTA-SED-06	FTA-SED-07	FTA-SED-07	FTA-SED-07	FTA-SED-08	FTA-SED-08
		sample_date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	6/21/2014	11/27/2012	6/20/2014	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/2/2016	11/28/2012	6/19/2014
		sample_type_code	N	N	N	FD	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N
		sys_sample_code	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
		depth_interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Compound	CAS	Units																			
Metals																					
ALUMINUM	7429-90-5	mg/kg	10600	10100 J	11500	9890	11100 J	11300	4690 J	20400	12500 J	9660	7170 J	8650 J	10400 J	4970 J	16900	5880 J		9290	10500 J
ANTIMONY	7440-36-0	mg/kg	0.2	0.12 J	0.11	0.14	0.095 J	0.23	0.1 J	0.21	0.2	0.34	0.576 J	0.73 J	0.54 J	0.42 J	0.14 J	0.31 J		0.15 J	0.086 J
ARSENIC	7440-38-2	mg/kg	8.3	4.21 J	5.9	4.9	6.22 J	3.3	1.6 J	19	8.98 J	5.6	5.03 J	4.4 J	8.25 J	4.56 J	9.3	4.3 J		7.1	7.08 J
BARIUM	7440-39-3	mg/kg	30.5	29.3 J	35.5	31.7	22.2 J	28	15.2 J	62	41.5 J	53.5	82.6 J	89.1 J	96.6 J	56.2 J	55	31.7 J		25.8	18.6 J
BERYLLIUM	7440-41-7	mg/kg	0.4	0.337	0.32	0.28	0.375	0.54	0.283	0.77	0.433	0.32 J	0.266 J	0.26 J	0.4 J	0.2 J	0.84 J	0.832 J		0.4 J	0.24
CADMIUM	7440-43-9	mg/kg	0.31	0.102	0.17	0.16	0.061 J	0.46	0.226	0.22	0.208	0.33	0.582 J	0.59 J	0.529 J	0.379 J	0.55 J	0.673 J		0.17 J	0.0701 J
CALCIUM	7440-70-2	mg/kg	2720	2730	6210	7040	2310	4250	1510	4240	8520	14800	28500 J	33700 J	26400 J	17800 J	9380	13400 J		9870	2740
CHROMIUM, TOTAL	7440-47-3	mg/kg	20.8	16.3 J	24.6	29.9	21.5 J	27.6	12.2 J	33.2	24.9 J	17.3	16.6 J	17.9 J	20.8 J	12.1 J	33.7	23.8 J	17.2 J	11.3	14.7 J
CHROMIUM III (c)	16065-83-1	mg/kg																	17		
CHROMIUM VI	18540-29-9	mg/kg																	10 U		
COBALT	7440-48-4	mg/kg	12	6.57 J	8.4	7	8.33 J	11.7	4.32 J	19	10.5 J	6.2	4.56 J	5.8 J	7.95 J	4.01 J	7.5	3.56 J		3.6	3.73 J
COPPER	7440-50-8	mg/kg	40.4	19.2 J	31.4	31.6	16	51.1	22.8 J	55.8	40.2	67.5	99.3 J	108 J	97.2 J	66.9 J	22.8	18.6 J		9	5.59
IRON	7439-89-6	mg/kg	15200	16200 J	17100	14900	19400 J	15600	8100 J	25600	20400 J	14300	12000 J	13400 J	18300 J	10700 J	22300	9700 J		10300	12000 J
LEAD	7439-92-1	mg/kg	12.8	7.36 J	10.4	10.1	7.5	13.3	6.21 J	25.6	13.3	12.4	17.5 J	16.7 J	18 J	11.6 J	9.5	5.55 J		5.2	8
MAGNESIUM	7439-95-4	mg/kg	4880	5230 J	5730	5240	5720 J	6350	2570 J	6870	5830 J	4510	3520 J	4700 J	4820 J	2370 J	7580	2600 J		3480	2940 J
MANGANESE	7439-96-5	mg/kg	284	298 J	415	369	354	278	116 J	714	439	373	421 J	500 J	775 J	473 J	496	378 J		427	197
MERCURY	7439-97-6	mg/kg	0.03 J	0.043	0.01 J	0.02 J	0.01 J	0.04 J	0.047	0.04 J	0.0864	0.08 J	0.213 J	0.32 J	0.206 J	0.125 J	0.07	0.134 J		0.07 J	0.039
NICKEL	7440-02-0	mg/kg	27.4	14.6 J	19.4	17	19.7 J	25	10.9 J	34.5	22.6 J	17.7	15.2 J	21.1 J	19.2 J	10.5 J	12.2	7.55 J		7.6	9.42 J
POTASSIUM	7440-09-7	mg/kg	1010	1090 J	1040	734	1040 J	544	372 J	1960	1030 J	888	1020 J	701 J	1280 J	722 J	2500 J	430 J		380 J	531 J
SELENIUM	7782-49-2	mg/kg	0.46	< 0.24 U	0.36	0.29	< 0.21 U	0.55	< 0.414 U	0.7	< 0.56 U	0.69 J	< 1.31 U	1 J	< 1.19 U	< 1.04 U	3.2	5.5 J		< 1.5 U	< 0.595 U
SILVER	7440-22-4	mg/kg	0.22	0.118	0.24	0.39	< 0.0608 U	0.23	0.164	0.16	0.353	0.81	2.34 J	1.6 J	1.5 J	1.11 J	0.18	0.18 J		0.06 J	< 0.033 U
SODIUM	7440-23-5	mg/kg	138	92.2 J	114	104	118 J	161	44.4 J	150	153 J	142 J	284 J	218 J	273 J	149 J	159 J	103 J		77.3 J	71.4 J
THALLIUM	7440-28-0	mg/kg	0.15	0.07 J	0.07	0.05 J	0.064 J	0.3	0.069 J	0.16	0.087 J	0.06 J	< 0.074 U	0.06 J	0.1 J	0.049 J	0.19	0.077 J		0.06 J	0.0826
VANADIUM	7440-62-2	mg/kg	29	27.3 J	30.4	27.6	27.6	36.4	14.5 J	46.2	32.3	21.8	17.5 J	20.6 J	21.7 J	13.1 J	43.7	16.6 J		15.8	20.4
ZINC	7440-66-6	mg/kg	59.9	46.8 J	62.4	61.8	42.1	69.6	35.4 J	82	78.1	120	166 J	198 J	191 J	119 J	76.4	35 J		25.7	28.6
PCBs																					
AROCLOR-1016	12674-11-2	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
AROCLOR-1221	11104-28-2	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
AROCLOR-1232	11141-16-5	mg/kg	< 0.013 U	< 0.034 U	< 0.016 U	< 0.016 U	< 0.0024 U	< 0.013 U	< 0.0039 UJ	< 0.018 U	< 0.0041 U	< 0.028 U	< 0.0098 UJ	< 0.038 UJ	< 0.0088 UJ	< 0.0069 UJ	< 0.023 U	< 0.009 UJ		< 0.026 U	< 0.003 UJ
AROCLOR-1242	53469-21-9	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
AROCLOR-1248	12672-29-6	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
AROCLOR-1254	11097-69-1	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
AROCLOR-1260	11096-82-5	mg/kg	1.4	1.2 J	1.3	1.3	0.079 J	0.22	0.23 J	2.1	0.6 J	0.76	0.44 J	0.29 J	0.63 J	1.1 J	0.066	0.16 J		< 0.022 U	0.028 J
AROCLOR-1262	37324-23-5	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
AROCLOR-1268	11100-14-4	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.4	1.2	1.3	1.3	0.079	0.22	0.23	2.1	0.60	0.76	0.44	0.29	0.63	1.1	0.066	0.16		< 0.026 U	0.028
TOTAL AROCLORS FULL DL	RATotAroFLDL	mg/kg	1.49	1.437	1.414	1.407	0.0954	0.31	0.257	2.23	0.6286	0.956	0.5079	0.552	0.6913	1.1482	0.222	0.2229		< 0.202 U	0.0492
Pesticides																					
4,4-DDD	72-54-8	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	0.015 J	< 0.003 U	0.043 J	< 0.0046 U	0.026 J	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	0.0016 J	< 0.0015 UJ		0.0096	0.0023 J
4,4-DDE	72-55-9	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	0.00086 J	0.00095 J	< 0.003 U	0.0023 J	< 0.0046 U	< 0.0016 UJ	0.0018 J	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	0.0017 J		0.0061 J	0.0033 J
4,4-DDT	50-29-3	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	0.006 J	< 0.0022 U	0.011 J	< 0.003 U	0.043 J	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	0.031 J	< 0.001 UJ	< 0.0036 U	0.0065 J		0.0058 J	0.0031 J
ALDRIN	309-00-2	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
ALPHA-BHC	319-84-6	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
BETA-BHC	319-85-7	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
DELTA-BHC	319-86-8	mg/kg	< 0.0011 UJ	< 0.00029 UJ	< 0.0014 UJ	< 0.0013 UJ	< 0.0002 UJ	< 0.0011 UJ	< 0.00033 UJ	< 0.0016 UJ	< 0.00035 U	< 0.0024 UJ	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
DIELDRIN	60-57-1	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 U	< 0.0046 U	0.0071 J	< 0.0063 UJ	0.01 J	0.0055 J	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
ENDOSULFAN I	959-98-8	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	0.00073 J	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
ENDOSULFAN II	33213-65-9	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 U	< 0.0046 U	0.013 J	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0021 U	< 0.0056 UJ	< 0.0026 U	< 0.0026 U	0.007 J	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 UJ	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	0.043 J	0.026 J	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
ENDRIN	72-20-8	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 U	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	0.0072 J	< 0.003 U	< 0.00067 U	< 0.0046 U	< 0.0016 UJ	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
ENDRIN KETONE	53494-70-5	mg/kg	0.21 J	0.13 J	0.18 J	0.17 J	0.014 J	0.037 J	< 0.00064 UJ	0.29 J	< 0.00067 U	0.088 J	0.061 J	< 0.0063 UJ	< 0.0014 UJ	0.055 J	< 0.0036 U	0.022 J		< 0.0042 U	< 0.0005 UJ
HEPTACHLOR	76-44-8	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
LINDANE	58-89-9	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
METHOXYCHLOR	72-43-5	mg/kg	< 0.011 U	< 0.0029 UJ	< 0.014 U	< 0.013 U	< 0.002 UJ	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	< 0.032 UJ	< 0.0075 UJ	< 0.0054 UJ	< 0.018 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
TOXAPHENE	8001-35-2	mg/kg	< 0.021 U	< 0.0056 UJ	< 0.026 U	< 0.026 U	< 0.004 UJ	< 0.022 U	< 0.0064 UJ	< 0.03 U	< 0.0067 U	< 0.046 U	< 0.016 UJ	< 0.063 UJ	< 0.014 UJ	< 0.01 UJ	< 0.036 U	< 0.015 UJ		< 0.042 U	< 0.005 UJ
TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ

TABLE A-4b
ANALYTICAL SEDIMENT DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		sys_loc_code	FTA-SED-01	FTA-SED-01	FTA-SED-02	FTA-SED-02	FTA-SED-02	FTA-SED-03	FTA-SED-03	FTA-SED-04	FTA-SED-04	FTA-SED-05	FTA-SED-05	FTA-SED-06	FTA-SED-06	FTA-SED-06	FTA-SED-07	FTA-SED-07	FTA-SED-07	FTA-SED-08	FTA-SED-08
		sample_date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	6/21/2014	11/27/2012	6/20/2014	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/2/2016	11/28/2012	6/19/2014
		sample_type_code	N	N	N	FD	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N
		sys_sample_code	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
		depth_interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Compound	CAS	Units																			
SVOCs																					
1,1-BIPHENYL	92-52-4	mg/kg	< 0.38 U	0.0089 J	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	0.013 J	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
1,4-DIOXANE	123-91-1	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 UJ	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	< 1 UJ	0.013 J	< 0.17 UJ	< 0.59 U	< 0.21 UJ		< 0.59 U	< 0.079 U
2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.38 UJ	< 0.018 UJ	< 0.4 UJ	< 0.38 UJ	< 0.012 UJ	< 0.37 UJ	< 0.019 UJ	< 0.42 UJ	< 0.02 UJ	< 0.66 UJ	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 UJ	< 0.042 UJ		< 0.59 UJ	< 0.016 UJ
2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	0.0066 J	< 0.088 U	< 0.08 U	0.006 J	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	0.045 J	< 0.2 UJ	0.023 J	< 0.17 UJ	0.011 J	< 0.21 UJ		< 0.12 U	< 0.079 U
2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	< 1.4 U	< 2.8 UJ		< 1.4 U	< 1 UJ
2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	0.02 J	< 0.088 U	< 0.08 U	0.02 J	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	0.02 J	< 0.2 UJ	0.017 J	< 0.17 UJ	0.0079 J	< 0.21 UJ		< 0.12 U	< 0.079 U
2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	0.0055 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		< 0.024 U	< 0.42 UJ
2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.94 U	UR	< 0.99 U	< 0.95 U	UR	< 0.91 U	UR	< 1 U	UR	< 1.6 U	UR	< 2.5 UJ	UR	UR	< 1.4 U	UR		< 1.4 U	UR
2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.015 U	0.027 J	0.018 J	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	0.15	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 U	< 0.042 UJ		< 0.024 U	< 0.016 U
2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 UJ	< 0.042 UJ		< 0.59 U	< 0.016 U
2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
2-CHLOROPHENOL	95-57-8	mg/kg	< 0.076 U	< 0.088 U	< 0.08 U	< 0.077 U	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	< 0.24 UJ	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ	< 0.12 UJ	< 0.21 UJ		< 0.12 U	< 0.079 U
2-METHYLNAPHTHALENE	91-57-6	mg/kg	0.29	< 0.44 U	< 0.016 U	0.022 J	< 0.3 U	< 0.015 U	< 0.47 U	0.33	< 0.53 UJ	0.033 J	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		0.072	< 0.42 UJ
2-METHYLPHENOL	95-48-7	mg/kg	< 0.076 U	< 0.088 U	< 0.08 U	< 0.077 U	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	< 0.24 UJ	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ	< 0.12 UJ	< 0.21 UJ		< 0.12 U	< 0.079 U
2-NITROANILINE	88-74-4	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	< 1.4 U	< 2.8 UJ		< 1.4 U	< 1 UJ
2-NITROPHENOL	88-75-5	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.38 U	0.029 J	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	0.22	< 0.42 U	< 0.1 U	< 0.66 U	0.16 J	< 1 UJ	0.34 J	0.36 J	< 0.59 U	< 0.21 UJ		< 0.59 U	< 0.079 U
3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	UR	< 0.017 U	< 0.02 U	< 0.026 UJ	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	UR	< 0.042 UJ		< 0.024 U	< 0.016 U
3-NITROANILINE	99-09-2	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	UR	< 2.8 UJ		< 1.4 U	< 1 UJ
4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.15 U	< 0.18 U	< 0.16 U	< 0.15 U	< 0.12 U	< 0.15 U	UR	< 0.17 U	< 0.2 U	< 0.26 U	< 0.48 UJ	< 0.41 UJ	< 0.45 UJ	< 0.34 UJ	UR	< 0.42 UJ		< 0.24 U	< 0.16 U
4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
4-CHLOROANILINE	106-47-8	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 U	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	< 1 UJ	< 0.22 UJ	< 0.17 UJ	UR	< 0.21 UJ		< 0.59 U	< 0.079 U
4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
4-NITROANILINE	100-01-6	mg/kg	< 0.94 U	< 0.018 U	< 0.99 U	< 0.95 U	< 0.012 U	< 0.91 U	UR	< 1 U	< 0.02 U	< 1.6 U	< 0.048 UJ	< 2.5 UJ	< 0.045 UJ	< 0.034 UJ	< 1.4 U	< 0.042 UJ		< 1.4 U	< 0.016 U
4-NITROPHENOL	100-02-7	mg/kg	< 0.94 U	< 1.1 UJ	< 0.99 U	< 0.95 U	< 0.74 UJ	< 0.91 U	< 1.2 UJ	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	< 1.4 UJ	< 2.8 UJ		< 1.4 UJ	< 1 UJ
ACENAPHTHENE	83-32-9	mg/kg	1.5	0.071	0.024 J	0.042 J	0.0028 J	< 0.015 U	< 0.019 U	0.12	0.0092 J	0.11	0.033 J	0.027 J	0.19 J	0.013 J	< 0.024 U	0.037 J		0.037 J	< 0.016 U
ACENAPHTHYLENE	208-96-8	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	< 0.024 UJ	< 1.1 UJ		< 0.024 U	< 0.42 UJ
ACETOPHENONE	98-86-2	mg/kg	< 0.38 U		< 0.4 U	< 0.38 U		< 0.37 U		< 0.42 U		< 0.66 U		< 1 UJ			< 0.59 U			< 0.59 U	
ANTHRACENE	120-12-7	mg/kg	1.7	< 0.44 U	0.03 J	0.063 J	< 0.3 U	0.0087 J	< 0.47 U	0.1	< 0.53 UJ	0.14	< 1.2 UJ	0.037 J	< 1.1 UJ	< 0.9 UJ	0.0049 J	< 1.1 UJ		0.0098 J	< 0.42 UJ
ATRAZINE	1912-24-9	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	0.0059 J	< 0.042 UJ		< 0.024 U	< 0.016 U
BENZALDEHYDE	100-52-7	mg/kg	< 0.38 U	< 0.44 UJ	< 0.4 U	< 0.38 U	< 0.3 UJ	< 0.37 U	< 0.47 UJ	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
BENZO[A]ANTHRACENE	56-55-3	mg/kg	3.6	0.22	0.1 J	0.18 J	0.018 J	0.028 J	0.014 J	0.22	0.055	0.34	0.16 J	0.11 J	0.42 J	0.064 J	< 0.024 U	0.073 J		< 0.024 U	0.0078 J
BENZO[A]PYRENE	50-32-8	mg/kg	2.4	0.16	0.085	0.14	0.015 J	0.027 J	0.014 J	0.18	0.052	0.25	0.13 J	0.09 J	0.28 J	0.053 J	0.011 J	0.049 J		< 0.024 U	0.0072 J
BENZO[B]FLUORANTHENE	205-99-2	mg/kg	3.2	0.25	0.11 J	0.23 J	0.023 J	< 0.042 U	0.024 J	0.24	0.079	0.39	0.24 J	0.14 J	0.46 J	0.1 J	< 0.024 U	0.083 J		< 0.024 U	0.013 J
BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	1.2	< 0.44 U	0.045	0.064	< 0.3 U	0.017 J	< 0.47 U	0.078	< 0.53 UJ	0.11	< 1.2 UJ	0.044 J	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		< 0.024 U	< 0.42 UJ
BENZO[K]FLUORANTHENE	207-08-9	mg/kg	1.4 J	< 0.44 U	0.043 J	0.057 J	< 0.3 U	0.014 J	< 0.47 U	0.091 J	< 0.53 UJ	0.12 J	< 1.2 UJ	0.048 J	< 1.1 UJ	< 0.9 UJ	0.011 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 UJ	< 0.042 UJ		< 0.024 U	< 0.016 U
BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.35 U	0.6	< 0.26 U	< 0.31 U	< 0.3 U	< 0.49 U	0.48 J	< 0.23 U	0.89 J	< 0.59 U	2.9 J	< 0.87 U	1.4 J	1.4 J	< 0.12 U	< 1.1 UJ		< 0.12 U	< 0.42 UJ
BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.38 UJ	< 0.088 U	< 0.4 UJ	< 0.38 UJ	< 0.06 U	< 0.37 UJ	< 0.095 U	< 0.42 UJ	< 0.1 U	< 0.66 UJ	< 0.24 UJ	< 1 UJ	< 0.22 UJ	< 0.17 UJ	< 0.59 UJ	0.059 J		< 0.59 UJ	< 0.079 U
CAPROLACTAM	105-60-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	UR	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
CARBAZOLE	86-74-8	mg/kg	1.2	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
CHRYSENE	218-01-9	mg/kg	3.2	0.27 J	0.1 J	0.17 J	< 0.3 U	0.03 J	< 0.47 U	0.24	< 0.53 UJ	0.32	< 1.2 UJ	0.11 J	0.52 J	< 0.9 UJ	0.0045 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.51 J	< 0.44 U	0.018 J	0.026 J	< 0.3 U	0.0058 J	< 0.47 U	0.038	< 0.53 UJ	0.048 J	< 1.2 UJ	0.022 J	< 1.1 UJ	< 0.9 UJ	0.009 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
DIBENZOFURAN	132-64-9	mg/kg	0.79	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 U	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	< 1 UJ	< 0.22 UJ	< 0.17 UJ	< 0.59 U	0.11 J		< 0.59 U	< 0.079 U
DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FLUORANTHENE	206-44-0	mg/kg	7.3	0.46 J	0.19 J	0.37 J	< 0.3 U	< 0.37 U	< 0.47 U	0.46 J	< 0.53 UJ	0.76 J	< 1.2 UJ	< 1 UJ	0.84 J	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FLUORENE	86-73-7	mg/kg	1.3	< 0.44 U	0.027 J	0.046	< 0.3 U	< 0.015 U	< 0.47 U	0.15	< 0.53 UJ	0.097	< 1.2 UJ	0.026 J	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		0.06	< 0.42 UJ
HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 UJ	< 0.042 UJ		< 0.024 U	< 0.016 U
HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	UR	< 1.1 UJ		< 0.59 U	< 0.42 UJ
HEXACHLOROETHANE	67-72-1	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	0.015 J	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	2.4	0.15	0.086	0.12	0.018 J	< 0.031 U	0.021 J	0.17	0.053	0.23	0.16 J	0.1 J	0.25 J	0.076 J	< 0.028 U	0.058 J		< 0.024 U	0.012 J
ISOPHORONE	78-59-1	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
NAPHTHALENE	91-20-3	mg/kg	0.57 J	0.022 J	< 0.016 U	0.0066 J	< 0.012 U	< 0.015 U	< 0.019 U	0.038	< 0.02 U	0.03 J	< 0.048 UJ	< 0.041 UJ	0.074 J	< 0.034 UJ	< 0.024 U	< 0.042 UJ		0.014 J	< 0.016 U
NITROBENZENE	98-95-3	mg/kg	< 0.38 U	< 0.018 UJ	< 0.4 U	< 0.38 U	< 0.012 UJ	< 0.37 U	< 0.019 UJ	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 UJ	< 0.042 UJ		< 0.024 U	< 0.016 U
N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 UJ	< 0.042 UJ		< 0.59 U	< 0.016 U
PENTACHLOROPHENOL	87-86-5	mg/kg	0.028 J	< 0.088 U	< 0.08 UJ	< 0.077 UJ	< 0.06 U	< 0.074 UJ	< 0.095 U	< 0.084 UJ	< 0.1 U	< 0.13 UJ	0.078 J	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ	< 0.12 U	< 0.21 UJ		< 0.12 U	< 0.079 U
PHENANTHRENE	85-01-8	mg/kg	7	0.39 J	0.12 J	0.27 J	< 0.3 U	0.036	< 0.47 U	0.57	< 0.53 UJ	0.55	< 1.2 UJ	0.16 J	0.98 J	< 0.9 UJ	0.012 J	< 1.1 UJ		0.068	< 0.42 UJ
PHENOL	108-95-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
PYRENE	129-00-0	mg/kg	5.1	0.46 J	0.21	0.33	< 0.3 U	0.13	< 0.47 U	0.5	0.31 J	0.58	< 1.2 UJ	0.2 J	0.86 J	< 0.9 UJ	< 0.024 U	< 1.1 UJ		< 0.024 U	< 0.42 UJ

TABLE A-4b
ANALYTICAL SEDIMENT DATA USED IN HHRA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			sys_loc_code	FTA-SED-01	FTA-SED-01	FTA-SED-02	FTA-SED-02	FTA-SED-02	FTA-SED-03	FTA-SED-03	FTA-SED-04	FTA-SED-04	FTA-SED-05	FTA-SED-05	FTA-SED-06	FTA-SED-06	FTA-SED-06	FTA-SED-07	FTA-SED-07	FTA-SED-07	FTA-SED-08	FTA-SED-08
			sample_date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	6/21/2014	11/27/2012	6/20/2014	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/2/2016	11/28/2012	6/19/2014
			sample_type_code	N	N	N	FD	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N
			sys_sample_code	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
			depth_interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Compound	CAS	Units																				
VOCs																						
1,1,1-TRICHLOROETHANE	71-55-6	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,1,2-TRICHLOROETHANE	79-00-5	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,1-DICHLOROETHANE	75-34-3	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,1-DICHLOROETHENE	75-35-4	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,2-DICHLOROBENZENE	95-50-1	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,2-DICHLOROETHANE	107-06-2	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg		< 0.0028 U		< 0.0038 U	< 0.004 U		< 0.0068 U		< 0.0052 U		< 0.0098 UJ		< 0.016 UJ			0.006 J			< 0.011 UJ	
1,3-DICHLOROBENZENE	541-73-1	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
1,4-DICHLOROBENZENE	106-46-7	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
2-HEXANONE	591-78-6	mg/kg		< 0.014 U	< 0.018 U	< 0.019 U	< 0.02 U	< 0.014 U	< 0.034 U	< 0.022 U	< 0.026 U	< 0.021 UJ	< 0.049 UJ	< 0.071 UJ	< 0.082 UJ	< 0.064 UJ	< 0.061 UJ	< 0.052 U	< 0.082 UJ		< 0.054 UJ	< 0.018 UJ
ACETONE	67-64-1	mg/kg		< 0.043 U	< 0.06 U	0.27 J	0.12 J	0.026 J	0.2	0.23 J	0.32	0.42 J	0.38 J	3 J	1.3 J	2.2 J	2 J	0.34	2.9 J		0.88 J	0.47 J
BENZENE	71-43-2	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
CARBON TETRACHLORIDE	56-23-5	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
CHLOROBENZENE	108-90-7	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
CHLOROETHANE	75-00-3	mg/kg		< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 U	< 0.01 U	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 U	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
CHLOROFORM	67-66-3	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
CHLOROMETHANE	74-87-3	mg/kg		< 0.0055 UJ	< 0.007 U	< 0.0075 UJ	< 0.008 UJ	< 0.0055 U	< 0.014 UJ	< 0.009 U	< 0.01 UJ	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 UJ	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	0.006 J	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
ETHYLBENZENE	100-41-4	mg/kg		0.00093 J	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 UJ	0.002 J	< 0.0042 UJ	0.011 J	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
ISOPROPYLBENZENE	98-82-8	mg/kg		0.0016 J	< 0.0035 U	< 0.0038 UJ	0.0025 J	< 0.0028 U	< 0.0068 UJ	< 0.0045 U	0.0039 J	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
M- AND P-XYLENE	108-38-3/106-42-3	mg/kg		< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 UJ	< 0.01 U	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 U	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
METHYL CYCLOHEXANE	108-87-2	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	0.0028 J	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
METHYLENE CHLORIDE	75-09-2	mg/kg		< 0.014 U	< 0.018 U	< 0.019 U	< 0.02 U	< 0.014 U	< 0.034 U	< 0.022 U	< 0.026 U	< 0.021 UJ	< 0.049 UJ	< 0.071 UJ	< 0.082 UJ	< 0.064 UJ	< 0.061 UJ	< 0.052 U	< 0.082 UJ		< 0.054 UJ	< 0.018 UJ
O-XYLENE	95-47-6	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.013 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
STYRENE	100-42-5	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 UJ	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	UR	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
TETRACHLOROETHENE	127-18-4	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
TOLUENE	108-88-3	mg/kg		0.0032 J	0.0029 J	0.029 J	0.0087 J	< 0.0028 U	0.01 J	0.0032 J	0.024	0.012 J	0.047 J	0.31 J	0.14 J	0.14 J	0.12 J	< 0.01 U	0.012 J		0.012 J	0.011 J
TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
TRICHLOROETHENE	79-01-6	mg/kg		< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
VINYL CHLORIDE	75-01-4	mg/kg		< 0.0055 UJ	< 0.007 U	< 0.0075 UJ	< 0.008 UJ	< 0.0055 U	< 0.014 UJ	< 0.009 U	< 0.01 U	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 U	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
XYLENES, TOTAL (a)	1330-20-7	mg/kg		< 0.0082 U	< 0.01 U	< 0.011 U	< 0.012 U	< 0.0082 U	< 0.02 U	< 0.014 UJ	< 0.016 U	< 0.013 UJ	< 0.029 UJ	< 0.043 UJ	< 0.05 UJ	< 0.038 UJ	< 0.037 UJ	< 0.032 U	< 0.05 UJ		< 0.032 UJ	< 0.01 UJ
XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg		< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 U	< 0.01 U	< 0.0085 U	< 0.02 U	< 0.028 U	< 0.033 U	< 0.026 U	< 0.024 U	< 0.021 U	< 0.033 U		< 0.022 U	< 0.007 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
mg/kg - milligram per kilogram.
N - Normal sample.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT B

PROUCL INPUT AND OUTPUT

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ProUCL Input

Soil Exposure Area 1 - Surface Soil

Units	Location	Collected	Depth	ALUMINUM	D_ALUMINUM	ARSENIC	D_ARSENIC	COBALT	D_COBALT	IRON	D_IRON	MANGANESE	D_MANGANESE	THALLIUM	D_THALLIUM	VANADIUM	D_VANADIUM	TOTAL AROCLORS	D_TOTAL AROCLORS
MG_KG	FTA-SB-200	11/8/2012	0 - 2 ft	4320	1	5.6	1	9.8	1	6840	1	2680	1	0.07	1	17.8	1	0.58	1
MG_KG	FTA-SB-201	11/13/2012	0 - 2 ft	5870	1	6.6	1	24.2	1	9160	1	8600	1	0.09	1	18.9	1	0.87	1
MG_KG	FTA-SB-202	11/7/2012	0 - 2 ft	12700	1	8.2	1	7.7	1	19800	1	628	1	0.08	1	28.2	1	0.012	0
MG_KG	FTA-SB-203	11/7/2012	0 - 2 ft	15000	1	7.3	1	11.8	1	22000	1	503	1	0.06	1	35.6	1	0.0097	0
MG_KG	FTA-SB-204	11/8/2012	0 - 2 ft	15100	1	7.3	1	12.1	1	23100	1	602	1	0.07	1	32.1	1	0.1	1
MG_KG	FTA-SB-205	11/8/2012	0 - 2 ft	14800	1	12	1	11.5	1	24800	1	521	1	0.09	1	36.1	1	0.048	1
MG_KG	FTA-SB-208	11/6/2012	0 - 2 ft	17000	1	4.9	1	6.8	1	23400	1	476	1	0.09	1	42.7	1	0.015	1
MG_KG	FTA-SB-217	11/7/2012	0 - 2 ft	12500	1	6.9	1	10.4	1	18900	1	461	1	0.07	1	28.8	1	0.011	0
MG_KG	FTA-SB-218	11/7/2012	0 - 2 ft	16600	1	5.5	1	8.2	1	19500	1	342	1	0.05	1	28.4	1	0.012	0
MG_KG	FTA-SB-219	11/8/2012	0 - 2 ft	8460	1	3.6	1	11.9	1	18300	1	2220	1	0.1	1	34.2	1	0.041	1

Soil Exposure Area 1 - Subsurface Soil

Units	Location	Collected	Depth	ALUMINUM	ALUMINUM	ARSENIC	ARSENIC	COBALT	COBALT	IRON	IRON	MANGANESE	MANGANESE	THALLIUM	THALLIUM	VANADIUM	VANADIUM
MG_KG	FTA-SB-200	11/8/2012	2 - 6 ft	3550	1	3.7	1	2.2	1	2490	1	249	1	0.05	0	11.6	1
MG_KG	FTA-SB-200	11/8/2012	6 - 10 ft	13100	1	7.4	1	8.7	1	22500	1	453	1	0.1	1	33.4	1
MG_KG	FTA-SB-201	11/13/2012	2 - 6 ft	8720	1	3.4	1	5	1	10400	1	1460	1	0.09	1	22	1
MG_KG	FTA-SB-202	11/7/2012	2 - 6 ft	14400	1	7.5	1	10.6	1	21300	1	484	1	0.1	1	37.1	1
MG_KG	FTA-SB-203	11/7/2012	2 - 6 ft	11200	1	6.2	1	9.8	1	18700	1	400	1	0.05	1	41	1
MG_KG	FTA-SB-204	11/8/2012	6 - 10 ft	18600	1	11.9	1	13.2	1	31100	1	617	1	0.15	1	39.1	1
MG_KG	FTA-SB-205	11/8/2012	2 - 6 ft	18900	1	12.9	1	15.8	1	34700	1	666	1	0.14	1	39.6	1
MG_KG	FTA-SB-208	11/6/2012	6 - 10 ft	14800	1	8.7	1	12.6	1	27400	1	569	1	0.07	1	38.1	1
MG_KG	FTA-SB-217	11/7/2012	2 - 6 ft	15300	1	8.5	1	12.8	1	23900	1	521	1	0.06	1	39	1
MG_KG	FTA-SB-218	11/7/2012	6 - 10 ft	19100	1	11	1	13.8	1	33000	1	630	1	0.11	1	42.4	1
MG_KG	FTA-SB-219	11/8/2012	2 - 6 ft	10700	1	8	1	8.3	1	17900	1	417	1	0.07	1	24.2	1

Soil Exposure Area 2 - Surface Soil

Units	Location	Collected	Depth	ALUMINUM	D_ALUMINUM	ARSENIC	D_ARSENIC	COBALT	D_COBALT
MG_KG	DDA-E-1E	7/15/2011	0 - 2 ft						
MG_KG	DDA-N-5A	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-10D	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-13I	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-2I	7/14/2011	0 - 2 ft						
MG_KG	DDA-NE-3E	7/13/2011	0 - 2 ft						
MG_KG	DDA-NE-5C	8/19/2010	0 - 2 ft						
MG_KG	DDA-NE-5D	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-5E	7/13/2011	0 - 2 ft						
MG_KG	DDA-NE-6C	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-6D	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-7D	7/12/2011	0 - 2 ft						
MG_KG	DDA-NE-7I	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-8B	7/13/2011	0 - 2 ft						
MG_KG	DDA-NW-10E	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-10G	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-10Q	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-2D	8/19/2010	0 - 2 ft						
MG_KG	DDA-NW-2F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-2G	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-2P	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-3E	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-3F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-3R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-4D	8/19/2010	0 - 2 ft						
MG_KG	DDA-NW-4F	8/18/2010	0 - 1 ft						
MG_KG	DDA-NW-4F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-4R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-4Y	7/15/2011	0 - 2 ft						
MG_KG	DDA-NW-5C	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-5F	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-5F	8/17/2010	0 - 2 ft						
MG_KG	DDA-NW-5G	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-6B	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6D	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6E	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6F	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-6R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-7B	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-7E	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-8R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-9B	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-9E	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-9M	7/13/2011	0 - 2 ft						
MG_KG	DDA-SE-5B	7/12/2011	0 - 2 ft						
MG_KG	DDA-SW-2F	8/20/2010	0 - 2 ft						
MG_KG	DDA-SW-2I	7/13/2011	0 - 2 ft						
MG_KG	DDA-SW-3G	7/13/2011	0 - 2 ft						
MG_KG	DDA-W-1F	8/18/2010	0 - 2 ft						
MG_KG	DDA-W-1G	8/20/2010	0 - 2 ft						
MG_KG	FTA-ANOM1C-SO-SURF	9/25/2013	0 - 2 ft	18600	1	11.3	1	11.6	1
MG_KG	FTA-ANOM1D-SO-SURF	9/25/2013	0 - 2 ft	14900	1	7.7	1	11.2	1
MG_KG	FTA-ANOM1E-SO-SURF	9/26/2013	0 - 2 ft	19700	1	11.3	1	11.8	1
MG_KG	FTA-ANOM4-SO-SURF	9/25/2013	0 - 2 ft	14900	1	9.8	1	11.7	1
MG_KG	FTA-AREAA-01	6/17/2014	0 - 2 ft	11500	1	6.33	1	8.97	1
MG_KG	FTA-AREAA-02	6/17/2014	0 - 2 ft	11000	1	6.54	1	8.95	1
MG_KG	FTA-AREAB-01	6/17/2014	0 - 2 ft	13200	1	7.4	1	10.4	1
MG_KG	FTA-AREAB-02	6/17/2014	0 - 2 ft	13600	1	7.85	1	10.6	1
MG_KG	FTA-AREAC-01	6/17/2014	0 - 2 ft	12800	1	8.31	1	11.8	1
MG_KG	FTA-AREAD-01	6/19/2014	0 - 2 ft	14200	1	9.61	1	10.2	1
MG_KG	FTA-AREAD-02	6/18/2014	0 - 2 ft	14200	1	8.5	1	11.2	1
MG_KG	FTA-AREAF-01	6/19/2014	0 - 2 ft	9720	1	7.63	1	8.09	1
MG_KG	FTA-AREAG-01	6/18/2014	0 - 2 ft	12900	1	6.82	1	11.5	1
MG_KG	FTA-AREAG-02	6/18/2014	0 - 2 ft	11800	1	5.74	1	8.47	1
MG_KG	FTA-AREAG-03	6/18/2014	0 - 2 ft	14500	1	8.29	1	11.1	1
MG_KG	FTA-AREAH-01	6/18/2014	0 - 2 ft	13700	1	9.78	1	11.2	1
MG_KG	FTA-AREAI-01	6/17/2014	0 - 2 ft	13400	1	5.82	1	12.5	1
MG_KG	FTA-SB-206	11/6/2012	0 - 2 ft	13200	1	7.8	1	11.7	1
MG_KG	FTA-SB-209	11/6/2012	0 - 2 ft	13300	1	6	1	12.3	1
MG_KG	FTA-SB-210	11/6/2012	0 - 2 ft	17800	1	9.8	1	15.2	1
MG_KG	FTA-SB-211	11/6/2012	0 - 2 ft	16800	1	10.9	1	13.9	1
MG_KG	FTA-SB-212	11/5/2012	0 - 2 ft	14400	1	7.1	1	15.1	1
MG_KG	FTA-SB-213	11/5/2012	0 - 2 ft	11700	1	9	1	11.5	1
MG_KG	FTA-SB-214	11/5/2012	0 - 2 ft	13300	1	6.6	1	11.3	1
MG_KG	FTA-SB-215	11/7/2012	0 - 2 ft	15100	1	7.6	1	9.6	1
MG_KG	FTA-SB-216	11/6/2012	0 - 2 ft	8970	1	5.3	1	7.8	1
MG_KG	FTA-SB-220	11/6/2012	0 - 2 ft	11600	1	4.6	1	8.6	1
MG_KG	PCBAREA1-003	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-004	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-005	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA1-006	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA1-009	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-010	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-011	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-012	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-013	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-014	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-017	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-207	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-208	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-219	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-220	9/27/2013	1 - 1 ft						
MG_KG	PCBAREA2-001	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA2-002	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-003	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-004	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-005	9/18/2013	1 - 1 ft						

Soil Exposure Area 2 - Surface Soil

Units	Location	Collected	Depth	IRON	D_IRON	MANGANESE	D_MANGANESE	THALLIUM	D_THALLIUM
MG_KG	DDA-E-1E	7/15/2011	0 - 2 ft						
MG_KG	DDA-N-5A	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-10D	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-13I	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-2I	7/14/2011	0 - 2 ft						
MG_KG	DDA-NE-3E	7/13/2011	0 - 2 ft						
MG_KG	DDA-NE-5C	8/19/2010	0 - 2 ft						
MG_KG	DDA-NE-5D	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-5E	7/13/2011	0 - 2 ft						
MG_KG	DDA-NE-6C	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-6D	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-7D	7/12/2011	0 - 2 ft						
MG_KG	DDA-NE-7I	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-8B	7/13/2011	0 - 2 ft						
MG_KG	DDA-NW-10E	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-10G	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-10Q	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-2D	8/19/2010	0 - 2 ft						
MG_KG	DDA-NW-2F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-2G	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-2P	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-3E	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-3F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-3R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-4D	8/19/2010	0 - 2 ft						
MG_KG	DDA-NW-4F	8/18/2010	0 - 1 ft						
MG_KG	DDA-NW-4F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-4R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-4Y	7/15/2011	0 - 2 ft						
MG_KG	DDA-NW-5C	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-5F	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-5F	8/17/2010	0 - 2 ft						
MG_KG	DDA-NW-5G	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-6B	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6D	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6E	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6F	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-6R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-7B	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-7E	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-8R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-9B	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-9E	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-9M	7/13/2011	0 - 2 ft						
MG_KG	DDA-SE-5B	7/12/2011	0 - 2 ft						
MG_KG	DDA-SW-2F	8/20/2010	0 - 2 ft						
MG_KG	DDA-SW-2I	7/13/2011	0 - 2 ft						
MG_KG	DDA-SW-3G	7/13/2011	0 - 2 ft						
MG_KG	DDA-W-1F	8/18/2010	0 - 2 ft						
MG_KG	DDA-W-1G	8/20/2010	0 - 2 ft						
MG_KG	FTA-ANOM1C-SO-SURF	9/25/2013	0 - 2 ft	26800	1	519	1	0.12	1
MG_KG	FTA-ANOM1D-SO-SURF	9/25/2013	0 - 2 ft	23800	1	648	1	0.08	1
MG_KG	FTA-ANOM1E-SO-SURF	9/26/2013	0 - 2 ft	28400	1	584	1	0.14	1
MG_KG	FTA-ANOM4-SO-SURF	9/25/2013	0 - 2 ft	24300	1	503	1	0.08	1
MG_KG	FTA-AREAA-01	6/17/2014	0 - 2 ft	19100	1	365	1	0.0766	1
MG_KG	FTA-AREAA-02	6/17/2014	0 - 2 ft	20600	1	448	1	0.053	1
MG_KG	FTA-AREAB-01	6/17/2014	0 - 2 ft	22400	1	685	1	0.067	1
MG_KG	FTA-AREAB-02	6/17/2014	0 - 2 ft	24200	1	481	1	0.0822	1
MG_KG	FTA-AREAC-01	6/17/2014	0 - 2 ft	25000	1	548	1	0.0666	1
MG_KG	FTA-AREAD-01	6/19/2014	0 - 2 ft	22500	1	392	1	0.078	1
MG_KG	FTA-AREAD-02	6/18/2014	0 - 2 ft	22800	1	497	1	0.0891	1
MG_KG	FTA-AREAF-01	6/19/2014	0 - 2 ft	18000	1	386	1	0.057	1
MG_KG	FTA-AREAG-01	6/18/2014	0 - 2 ft	22700	1	507	1	0.072	1
MG_KG	FTA-AREAG-02	6/18/2014	0 - 2 ft	21200	1	432	1	0.0774	1
MG_KG	FTA-AREAG-03	6/18/2014	0 - 2 ft	22000	1	461	1	0.113	1
MG_KG	FTA-AREAH-01	6/18/2014	0 - 2 ft	23300	1	509	1	0.0808	1
MG_KG	FTA-AREAI-01	6/17/2014	0 - 2 ft	23900	1	534	1	0.0597	1
MG_KG	FTA-SB-206	11/6/2012	0 - 2 ft	22800	1	498	1	0.07	1
MG_KG	FTA-SB-209	11/6/2012	0 - 2 ft	24400	1	476	1	0.07	1
MG_KG	FTA-SB-210	11/6/2012	0 - 2 ft	32000	1	686	1	0.11	1
MG_KG	FTA-SB-211	11/6/2012	0 - 2 ft	30200	1	631	1	0.12	1
MG_KG	FTA-SB-212	11/5/2012	0 - 2 ft	24200	1	508	1	0.08	1
MG_KG	FTA-SB-213	11/5/2012	0 - 2 ft	19200	1	470	1	0.08	1
MG_KG	FTA-SB-214	11/5/2012	0 - 2 ft	24000	1	525	1	0.06	1
MG_KG	FTA-SB-215	11/7/2012	0 - 2 ft	22300	1	498	1	0.09	1
MG_KG	FTA-SB-216	11/6/2012	0 - 2 ft	16400	1	345	1	0.06	1
MG_KG	FTA-SB-220	11/6/2012	0 - 2 ft	17200	1	315	1	0.05	1
MG_KG	PCBAREA1-003	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-004	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-005	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA1-006	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA1-009	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-010	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-011	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-012	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-013	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-014	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-017	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-207	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-208	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-219	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-220	9/27/2013	1 - 1 ft						
MG_KG	PCBAREA2-001	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA2-002	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-003	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-004	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-005	9/18/2013	1 - 1 ft						

Soil Exposure Area 2 - Surface Soil

Units	Location	Collected	Depth	VANADIUM	D_VANADIUM	DIELDRIN	D_DIELDRIN	ENDRIN KETONE	D_ENDRIN KETONE
MG_KG	DDA-E-1E	7/15/2011	0 - 2 ft						
MG_KG	DDA-N-5A	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-10D	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-13I	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-2I	7/14/2011	0 - 2 ft						
MG_KG	DDA-NE-3E	7/13/2011	0 - 2 ft						
MG_KG	DDA-NE-5C	8/19/2010	0 - 2 ft						
MG_KG	DDA-NE-5D	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-5E	7/13/2011	0 - 2 ft						
MG_KG	DDA-NE-6C	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-6D	8/20/2010	0 - 2 ft						
MG_KG	DDA-NE-7D	7/12/2011	0 - 2 ft						
MG_KG	DDA-NE-7I	7/15/2011	0 - 2 ft						
MG_KG	DDA-NE-8B	7/13/2011	0 - 2 ft						
MG_KG	DDA-NW-10E	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-10G	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-10Q	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-2D	8/19/2010	0 - 2 ft						
MG_KG	DDA-NW-2F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-2G	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-2P	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-3E	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-3F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-3R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-4D	8/19/2010	0 - 2 ft						
MG_KG	DDA-NW-4F	8/18/2010	0 - 1 ft						
MG_KG	DDA-NW-4F	8/18/2010	0 - 2 ft						
MG_KG	DDA-NW-4R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-4Y	7/15/2011	0 - 2 ft						
MG_KG	DDA-NW-5C	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-5F	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-5F	8/17/2010	0 - 2 ft						
MG_KG	DDA-NW-5G	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-6B	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6D	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6E	8/17/2010	0 - 1 ft						
MG_KG	DDA-NW-6F	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-6R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-7B	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-7E	8/20/2010	0 - 2 ft						
MG_KG	DDA-NW-8R	7/14/2011	0 - 2 ft						
MG_KG	DDA-NW-9B	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-9E	7/12/2011	0 - 2 ft						
MG_KG	DDA-NW-9M	7/13/2011	0 - 2 ft						
MG_KG	DDA-SE-5B	7/12/2011	0 - 2 ft			0.935	0	0.935	0
MG_KG	DDA-SW-2F	8/20/2010	0 - 2 ft						
MG_KG	DDA-SW-2I	7/13/2011	0 - 2 ft						
MG_KG	DDA-SW-3G	7/13/2011	0 - 2 ft						
MG_KG	DDA-W-1F	8/18/2010	0 - 2 ft						
MG_KG	DDA-W-1G	8/20/2010	0 - 2 ft						
MG_KG	FTA-ANOM1C-SO-SURF	9/25/2013	0 - 2 ft	40.5	1	0.0018	0	0.0018	0
MG_KG	FTA-ANOM1D-SO-SURF	9/25/2013	0 - 2 ft	31.2	1	0.0017	0	0.0017	0
MG_KG	FTA-ANOM1E-SO-SURF	9/26/2013	0 - 2 ft	43.3	1	0.0017	0	0.0017	0
MG_KG	FTA-ANOM4-SO-SURF	9/25/2013	0 - 2 ft	34.8	1	0.0018	0	0.0018	0
MG_KG	FTA-AREAA-01	6/17/2014	0 - 2 ft	27.6	1	0.0026	1	0.01	1
MG_KG	FTA-AREAA-02	6/17/2014	0 - 2 ft	31	1	0.017	1	0.094	1
MG_KG	FTA-AREAB-01	6/17/2014	0 - 2 ft	28.6	1	0.045	1	0.29	1
MG_KG	FTA-AREAB-02	6/17/2014	0 - 2 ft	39.6	1	0.13	1	0.79	1
MG_KG	FTA-AREAC-01	6/17/2014	0 - 2 ft	28.8	1	0.0018	1	0.013	1
MG_KG	FTA-AREAD-01	6/19/2014	0 - 2 ft	36.8	1	0.00034	0	0.01	1
MG_KG	FTA-AREAD-02	6/18/2014	0 - 2 ft	33.2	1	0.0018	1	0.0011	1
MG_KG	FTA-AREAF-01	6/19/2014	0 - 2 ft	23.2	1	0.0018	1	0.013	1
MG_KG	FTA-AREAG-01	6/18/2014	0 - 2 ft	37.1	1	0.00032	0	0.045	1
MG_KG	FTA-AREAG-02	6/18/2014	0 - 2 ft	35.4	1	0.034	1	0.024	1
MG_KG	FTA-AREAG-03	6/18/2014	0 - 2 ft	33.7	1	0.48	1	0.32	1
MG_KG	FTA-AREAH-01	6/18/2014	0 - 2 ft	33	1	0.024	1	0.017	1
MG_KG	FTA-AREAI-01	6/17/2014	0 - 2 ft	35.9	1	0.006	1	0.044	1
MG_KG	FTA-SB-206	11/6/2012	0 - 2 ft	40.2	1	0.0018	0	2	1
MG_KG	FTA-SB-209	11/6/2012	0 - 2 ft	38.7	1	0.0017	0	0.99	1
MG_KG	FTA-SB-210	11/6/2012	0 - 2 ft	47	1	0.0017	0	0.24	1
MG_KG	FTA-SB-211	11/6/2012	0 - 2 ft	45.6	1	0.0019	0	3	1
MG_KG	FTA-SB-212	11/5/2012	0 - 2 ft	36.7	1	0.0018	0	0.044	1
MG_KG	FTA-SB-213	11/5/2012	0 - 2 ft	27.5	1	0.0016	0	0.005	1
MG_KG	FTA-SB-214	11/5/2012	0 - 2 ft	33.5	1	0.0017	0	0.081	1
MG_KG	FTA-SB-215	11/7/2012	0 - 2 ft	38.6	1	0.0018	0	0.13	1
MG_KG	FTA-SB-216	11/6/2012	0 - 2 ft	24.8	1	0.0019	0	0.067	1
MG_KG	FTA-SB-220	11/6/2012	0 - 2 ft	28.8	1				
MG_KG	PCBAREA1-003	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-004	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-005	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA1-006	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA1-009	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA1-010	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-011	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-012	9/19/2013	2 - 2 ft						
MG_KG	PCBAREA1-013	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-014	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-017	9/19/2013	1 - 1 ft						
MG_KG	PCBAREA1-207	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-208	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-219	9/27/2013	1.5 - 1.5 ft						
MG_KG	PCBAREA1-220	9/27/2013	1 - 1 ft						
MG_KG	PCBAREA2-001	9/18/2013	2 - 2 ft						
MG_KG	PCBAREA2-002	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-003	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-004	9/18/2013	1 - 1 ft						
MG_KG	PCBAREA2-005	9/18/2013	1 - 1 ft						

Soil Exposure Area 2 - Surface Soil

Units	Location	Collected	Depth	HEPTACHLOR EPOXIDE	D_HEPTACHLOR EPOXIDE	TOTAL AROCLORS	D_TOTAL AROCLORS
MG_KG	DDA-E-1E	7/15/2011	0 - 2 ft			3.45	1
MG_KG	DDA-N-5A	8/20/2010	0 - 2 ft			0.599	1
MG_KG	DDA-NE-10D	7/15/2011	0 - 2 ft			9	1
MG_KG	DDA-NE-13I	7/15/2011	0 - 2 ft			0.469	1
MG_KG	DDA-NE-2I	7/14/2011	0 - 2 ft			0.181	1
MG_KG	DDA-NE-3E	7/13/2011	0 - 2 ft			2.67	1
MG_KG	DDA-NE-5C	8/19/2010	0 - 2 ft			16	1
MG_KG	DDA-NE-5D	8/20/2010	0 - 2 ft			1.83	1
MG_KG	DDA-NE-5E	7/13/2011	0 - 2 ft			1.36	1
MG_KG	DDA-NE-6C	8/20/2010	0 - 2 ft			0.303	1
MG_KG	DDA-NE-6D	8/20/2010	0 - 2 ft			1.64	1
MG_KG	DDA-NE-7D	7/12/2011	0 - 2 ft			68.1	1
MG_KG	DDA-NE-7I	7/15/2011	0 - 2 ft			2.24	1
MG_KG	DDA-NE-8B	7/13/2011	0 - 2 ft			1.96	1
MG_KG	DDA-NW-10E	7/14/2011	0 - 2 ft			1.2	1
MG_KG	DDA-NW-10G	7/14/2011	0 - 2 ft			14.2	1
MG_KG	DDA-NW-10Q	7/14/2011	0 - 2 ft			1.94	1
MG_KG	DDA-NW-2D	8/19/2010	0 - 2 ft			5.65	1
MG_KG	DDA-NW-2F	8/18/2010	0 - 2 ft			25.6	1
MG_KG	DDA-NW-2G	8/20/2010	0 - 2 ft			80.3	1
MG_KG	DDA-NW-2P	7/12/2011	0 - 2 ft			0.31	1
MG_KG	DDA-NW-3E	8/20/2010	0 - 2 ft			22.2	1
MG_KG	DDA-NW-3F	8/18/2010	0 - 2 ft			3.61	1
MG_KG	DDA-NW-3R	7/14/2011	0 - 2 ft			0.166	1
MG_KG	DDA-NW-4D	8/19/2010	0 - 2 ft			8.47	1
MG_KG	DDA-NW-4F	8/18/2010	0 - 1 ft			11	1
MG_KG	DDA-NW-4F	8/18/2010	0 - 2 ft			1.3	1
MG_KG	DDA-NW-4R	7/14/2011	0 - 2 ft			0.621	1
MG_KG	DDA-NW-4Y	7/15/2011	0 - 2 ft			1.34	1
MG_KG	DDA-NW-5C	8/20/2010	0 - 2 ft			4.35	1
MG_KG	DDA-NW-5F	8/17/2010	0 - 1 ft			38.3	1
MG_KG	DDA-NW-5F	8/17/2010	0 - 2 ft			7.48	1
MG_KG	DDA-NW-5G	8/20/2010	0 - 2 ft			24.7	1
MG_KG	DDA-NW-6B	8/17/2010	0 - 1 ft			7.52	1
MG_KG	DDA-NW-6D	8/17/2010	0 - 1 ft			45.5	1
MG_KG	DDA-NW-6E	8/17/2010	0 - 1 ft			33.3	1
MG_KG	DDA-NW-6F	8/20/2010	0 - 2 ft			18.1	1
MG_KG	DDA-NW-6R	7/14/2011	0 - 2 ft			0.524	1
MG_KG	DDA-NW-7B	8/20/2010	0 - 2 ft			3.55	1
MG_KG	DDA-NW-7E	8/20/2010	0 - 2 ft			5.21	1
MG_KG	DDA-NW-8R	7/14/2011	0 - 2 ft			7.85	1
MG_KG	DDA-NW-9B	7/12/2011	0 - 2 ft			0.109	1
MG_KG	DDA-NW-9E	7/12/2011	0 - 2 ft			5.76	1
MG_KG	DDA-NW-9M	7/13/2011	0 - 2 ft			24	1
MG_KG	DDA-SE-5B	7/12/2011	0 - 2 ft	0.495	0	21.5	1
MG_KG	DDA-SW-2F	8/20/2010	0 - 2 ft			8.48	1
MG_KG	DDA-SW-2I	7/13/2011	0 - 2 ft			1.11	1
MG_KG	DDA-SW-3G	7/13/2011	0 - 2 ft			0.323	1
MG_KG	DDA-W-1F	8/18/2010	0 - 2 ft			36	1
MG_KG	DDA-W-1G	8/20/2010	0 - 2 ft			15.2	1
MG_KG	FTA-ANOM1C-SO-SURF	9/25/2013	0 - 2 ft	0.00095	0	0.97	1
MG_KG	FTA-ANOM1D-SO-SURF	9/25/2013	0 - 2 ft	0.00088	0	0.59	1
MG_KG	FTA-ANOM1E-SO-SURF	9/26/2013	0 - 2 ft	0.00086	0	0.075	1
MG_KG	FTA-ANOM4-SO-SURF	9/25/2013	0 - 2 ft	0.00093	0	1.8	1
MG_KG	FTA-AREAA-01	6/17/2014	0 - 2 ft	0.00017	0	0.12	1
MG_KG	FTA-AREAA-02	6/17/2014	0 - 2 ft	0.00017	0	0.99	1
MG_KG	FTA-AREAB-01	6/17/2014	0 - 2 ft	0.00016	0	3.1	1
MG_KG	FTA-AREAB-02	6/17/2014	0 - 2 ft	0.00018	0	11	1
MG_KG	FTA-AREAC-01	6/17/2014	0 - 2 ft	0.00017	0	0.11	1
MG_KG	FTA-AREAD-01	6/19/2014	0 - 2 ft	0.00018	0	0.083	1
MG_KG	FTA-AREAD-02	6/18/2014	0 - 2 ft	0.00018	0	0.052	1
MG_KG	FTA-AREAF-01	6/19/2014	0 - 2 ft	0.00014	0	0.24	1
MG_KG	FTA-AREAG-01	6/18/2014	0 - 2 ft	0.00016	0	0.33	1
MG_KG	FTA-AREAG-02	6/18/2014	0 - 2 ft	0.0044	1	1.2	1
MG_KG	FTA-AREAG-03	6/18/2014	0 - 2 ft	0.087	1	15	1
MG_KG	FTA-AREAH-01	6/18/2014	0 - 2 ft	0.0031	1	0.57	1
MG_KG	FTA-AREAI-01	6/17/2014	0 - 2 ft	0.00015	0	0.48	1
MG_KG	FTA-SB-206	11/6/2012	0 - 2 ft	0.00091	0	15	1
MG_KG	FTA-SB-209	11/6/2012	0 - 2 ft	0.00086	0	8.7	1
MG_KG	FTA-SB-210	11/6/2012	0 - 2 ft	0.00089	0	1.9	1
MG_KG	FTA-SB-211	11/6/2012	0 - 2 ft	0.00096	0	30	1
MG_KG	FTA-SB-212	11/5/2012	0 - 2 ft	0.00092	0	0.32	1
MG_KG	FTA-SB-213	11/5/2012	0 - 2 ft	0.00082	0	0.054	1
MG_KG	FTA-SB-214	11/5/2012	0 - 2 ft	0.00086	0	0.66	1
MG_KG	FTA-SB-215	11/7/2012	0 - 2 ft	0.00093	0	1.1	1
MG_KG	FTA-SB-216	11/6/2012	0 - 2 ft	0.00097	0	0.46	1
MG_KG	FTA-SB-220	11/6/2012	0 - 2 ft			1.5	1
MG_KG	PCBAREA1-003	9/18/2013	2 - 2 ft			71	1
MG_KG	PCBAREA1-004	9/18/2013	2 - 2 ft			0.4	1
MG_KG	PCBAREA1-005	9/18/2013	1 - 1 ft			0.37	1
MG_KG	PCBAREA1-006	9/18/2013	1 - 1 ft			0.13	1
MG_KG	PCBAREA1-009	9/18/2013	2 - 2 ft			0.048	1
MG_KG	PCBAREA1-010	9/19/2013	2 - 2 ft			3.2	1
MG_KG	PCBAREA1-011	9/19/2013	2 - 2 ft			240	1
MG_KG	PCBAREA1-012	9/19/2013	2 - 2 ft			8.9	1
MG_KG	PCBAREA1-013	9/19/2013	1 - 1 ft			610	1
MG_KG	PCBAREA1-014	9/19/2013	1 - 1 ft			140	1
MG_KG	PCBAREA1-017	9/19/2013	1 - 1 ft			1.3	1
MG_KG	PCBAREA1-207	9/27/2013	1.5 - 1.5 ft			1.1	1
MG_KG	PCBAREA1-208	9/27/2013	1.5 - 1.5 ft			66	1
MG_KG	PCBAREA1-219	9/27/2013	1.5 - 1.5 ft			1	1
MG_KG	PCBAREA1-220	9/27/2013	1 - 1 ft			35	1
MG_KG	PCBAREA2-001	9/18/2013	2 - 2 ft			4.7	1
MG_KG	PCBAREA2-002	9/18/2013	1 - 1 ft			1.7	1
MG_KG	PCBAREA2-003	9/18/2013	1 - 1 ft			2.4	1
MG_KG	PCBAREA2-004	9/18/2013	1 - 1 ft			19	1
MG_KG	PCBAREA2-005	9/18/2013	1 - 1 ft			5	1

Soil Exposure Area 2 - Surface Soil

Units	Location	Collected	Depth	BENZO[A]ANTHRACENE	D_BENZO[A]ANTHRACENE	BENZO[A]PYRENE	D_BENZO[A]PYRENE
MG_KG	DDA-E-1E	7/15/2011	0 - 2 ft				
MG_KG	DDA-N-5A	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-10D	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-13I	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-2I	7/14/2011	0 - 2 ft				
MG_KG	DDA-NE-3E	7/13/2011	0 - 2 ft				
MG_KG	DDA-NE-5C	8/19/2010	0 - 2 ft				
MG_KG	DDA-NE-5D	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-5E	7/13/2011	0 - 2 ft				
MG_KG	DDA-NE-6C	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-6D	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-7D	7/12/2011	0 - 2 ft				
MG_KG	DDA-NE-7I	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-8B	7/13/2011	0 - 2 ft				
MG_KG	DDA-NW-10E	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-10G	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-10Q	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-2D	8/19/2010	0 - 2 ft				
MG_KG	DDA-NW-2F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-2G	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-2P	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-3E	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-3F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-3R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-4D	8/19/2010	0 - 2 ft				
MG_KG	DDA-NW-4F	8/18/2010	0 - 1 ft				
MG_KG	DDA-NW-4F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-4R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-4Y	7/15/2011	0 - 2 ft				
MG_KG	DDA-NW-5C	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-5F	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-5F	8/17/2010	0 - 2 ft				
MG_KG	DDA-NW-5G	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-6B	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6D	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6E	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6F	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-6R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-7B	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-7E	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-8R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-9B	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-9E	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-9M	7/13/2011	0 - 2 ft				
MG_KG	DDA-SE-5B	7/12/2011	0 - 2 ft				
MG_KG	DDA-SW-2F	8/20/2010	0 - 2 ft				
MG_KG	DDA-SW-2I	7/13/2011	0 - 2 ft				
MG_KG	DDA-SW-3G	7/13/2011	0 - 2 ft				
MG_KG	DDA-W-1F	8/18/2010	0 - 2 ft				
MG_KG	DDA-W-1G	8/20/2010	0 - 2 ft				
MG_KG	FTA-ANOM1C-SO-SURF	9/25/2013	0 - 2 ft	0.011	0	0.011	0
MG_KG	FTA-ANOM1D-SO-SURF	9/25/2013	0 - 2 ft	0.0037	1	0.01	0
MG_KG	FTA-ANOM1E-SO-SURF	9/26/2013	0 - 2 ft	0.012	0	0.012	0
MG_KG	FTA-ANOM4-SO-SURF	9/25/2013	0 - 2 ft	0.01	0	0.01	0
MG_KG	FTA-AREAA-01	6/17/2014	0 - 2 ft	0.01	0	0.01	0
MG_KG	FTA-AREAA-02	6/17/2014	0 - 2 ft	0.0096	0	0.0096	0
MG_KG	FTA-AREAB-01	6/17/2014	0 - 2 ft	0.019	1	0.015	1
MG_KG	FTA-AREAB-02	6/17/2014	0 - 2 ft	0.011	1	0.0095	1
MG_KG	FTA-AREAC-01	6/17/2014	0 - 2 ft	0.0022	1	0.01	0
MG_KG	FTA-AREAD-01	6/19/2014	0 - 2 ft	0.0095	0	0.0095	0
MG_KG	FTA-AREAD-02	6/18/2014	0 - 2 ft	0.0023	1	0.011	0
MG_KG	FTA-AREAF-01	6/19/2014	0 - 2 ft	0.01	0	0.01	0
MG_KG	FTA-AREAG-01	6/18/2014	0 - 2 ft	0.085	1	0.058	1
MG_KG	FTA-AREAG-02	6/18/2014	0 - 2 ft	0.046	1	0.038	1
MG_KG	FTA-AREAG-03	6/18/2014	0 - 2 ft	0.013	1	0.011	1
MG_KG	FTA-AREAH-01	6/18/2014	0 - 2 ft	0.01	0	0.01	0
MG_KG	FTA-AREAI-01	6/17/2014	0 - 2 ft	0.002	1	0.01	0
MG_KG	FTA-SB-206	11/6/2012	0 - 2 ft	0.022	1	0.019	1
MG_KG	FTA-SB-209	11/6/2012	0 - 2 ft	0.17	1	0.12	1
MG_KG	FTA-SB-210	11/6/2012	0 - 2 ft	0.1	1	0.081	1
MG_KG	FTA-SB-211	11/6/2012	0 - 2 ft	0.0035	1	0.011	0
MG_KG	FTA-SB-212	11/5/2012	0 - 2 ft	0.027	1	0.03	1
MG_KG	FTA-SB-213	11/5/2012	0 - 2 ft	0.0088	0	0.0088	0
MG_KG	FTA-SB-214	11/5/2012	0 - 2 ft	0.0099	0	0.0042	1
MG_KG	FTA-SB-215	11/7/2012	0 - 2 ft	0.024	1	0.024	1
MG_KG	FTA-SB-216	11/6/2012	0 - 2 ft	6.6	1	4.3	1
MG_KG	FTA-SB-220	11/6/2012	0 - 2 ft	0.011	0	0.011	0
MG_KG	PCBAREA1-003	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-004	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-005	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA1-006	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA1-009	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-010	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-011	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-012	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-013	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-014	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-017	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-207	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-208	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-219	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-220	9/27/2013	1 - 1 ft				
MG_KG	PCBAREA2-001	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA2-002	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-003	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-004	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-005	9/18/2013	1 - 1 ft				

Soil Exposure Area 2 - Surface Soil

Units	Location	Collected	Depth	BENZO[B]FLUORANTHENE	D_BENZO[B]FLUORANTHENE	BENZO[K]FLUORANTHENE	D_BENZO[K]FLUORANTHENE
MG_KG	DDA-E-1E	7/15/2011	0 - 2 ft				
MG_KG	DDA-N-5A	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-10D	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-13I	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-2I	7/14/2011	0 - 2 ft				
MG_KG	DDA-NE-3E	7/13/2011	0 - 2 ft				
MG_KG	DDA-NE-5C	8/19/2010	0 - 2 ft				
MG_KG	DDA-NE-5D	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-5E	7/13/2011	0 - 2 ft				
MG_KG	DDA-NE-6C	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-6D	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-7D	7/12/2011	0 - 2 ft				
MG_KG	DDA-NE-7I	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-8B	7/13/2011	0 - 2 ft				
MG_KG	DDA-NW-10E	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-10G	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-10Q	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-2D	8/19/2010	0 - 2 ft				
MG_KG	DDA-NW-2F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-2G	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-2P	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-3E	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-3F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-3R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-4D	8/19/2010	0 - 2 ft				
MG_KG	DDA-NW-4F	8/18/2010	0 - 1 ft				
MG_KG	DDA-NW-4F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-4R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-4Y	7/15/2011	0 - 2 ft				
MG_KG	DDA-NW-5C	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-5F	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-5F	8/17/2010	0 - 2 ft				
MG_KG	DDA-NW-5G	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-6B	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6D	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6E	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6F	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-6R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-7B	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-7E	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-8R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-9B	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-9E	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-9M	7/13/2011	0 - 2 ft				
MG_KG	DDA-SE-5B	7/12/2011	0 - 2 ft				
MG_KG	DDA-SW-2F	8/20/2010	0 - 2 ft				
MG_KG	DDA-SW-2I	7/13/2011	0 - 2 ft				
MG_KG	DDA-SW-3G	7/13/2011	0 - 2 ft				
MG_KG	DDA-W-1F	8/18/2010	0 - 2 ft				
MG_KG	DDA-W-1G	8/20/2010	0 - 2 ft				
MG_KG	FTA-ANOM1C-SO-SURF	9/25/2013	0 - 2 ft	0.011	0	0.28	0
MG_KG	FTA-ANOM1D-SO-SURF	9/25/2013	0 - 2 ft	0.0072	1	0.26	0
MG_KG	FTA-ANOM1E-SO-SURF	9/26/2013	0 - 2 ft	0.012	0	0.29	0
MG_KG	FTA-ANOM4-SO-SURF	9/25/2013	0 - 2 ft	0.01	0	0.25	0
MG_KG	FTA-AREAA-01	6/17/2014	0 - 2 ft	0.01	0	0.26	0
MG_KG	FTA-AREAA-02	6/17/2014	0 - 2 ft	0.0096	0	0.24	0
MG_KG	FTA-AREAB-01	6/17/2014	0 - 2 ft	0.022	1	0.26	0
MG_KG	FTA-AREAB-02	6/17/2014	0 - 2 ft	0.011	0	0.27	0
MG_KG	FTA-AREAC-01	6/17/2014	0 - 2 ft	0.0028	1	0.25	0
MG_KG	FTA-AREAD-01	6/19/2014	0 - 2 ft	0.0095	0	0.24	0
MG_KG	FTA-AREAD-02	6/18/2014	0 - 2 ft	0.003	1	0.26	0
MG_KG	FTA-AREAF-01	6/19/2014	0 - 2 ft	0.01	0	0.25	0
MG_KG	FTA-AREAG-01	6/18/2014	0 - 2 ft	0.092	1	0.087	1
MG_KG	FTA-AREAG-02	6/18/2014	0 - 2 ft	0.058	1	0.26	0
MG_KG	FTA-AREAG-03	6/18/2014	0 - 2 ft	0.016	1	0.25	0
MG_KG	FTA-AREAH-01	6/18/2014	0 - 2 ft	0.01	0	0.25	0
MG_KG	FTA-AREAI-01	6/17/2014	0 - 2 ft	0.01	0	0.25	0
MG_KG	FTA-SB-206	11/6/2012	0 - 2 ft	0.032	1	0.28	0
MG_KG	FTA-SB-209	11/6/2012	0 - 2 ft	0.2	1	0.25	0
MG_KG	FTA-SB-210	11/6/2012	0 - 2 ft	0.14	1	0.093	1
MG_KG	FTA-SB-211	11/6/2012	0 - 2 ft	0.0045	1	0.28	0
MG_KG	FTA-SB-212	11/5/2012	0 - 2 ft	0.047	1	0.24	0
MG_KG	FTA-SB-213	11/5/2012	0 - 2 ft	0.0088	0	0.22	0
MG_KG	FTA-SB-214	11/5/2012	0 - 2 ft	0.0099	0	0.25	0
MG_KG	FTA-SB-215	11/7/2012	0 - 2 ft	0.037	1	0.27	0
MG_KG	FTA-SB-216	11/6/2012	0 - 2 ft	6.1	1	2.3	1
MG_KG	FTA-SB-220	11/6/2012	0 - 2 ft	0.011	0	0.28	0
MG_KG	PCBAREA1-003	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-004	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-005	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA1-006	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA1-009	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-010	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-011	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-012	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-013	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-014	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-017	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-207	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-208	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-219	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-220	9/27/2013	1 - 1 ft				
MG_KG	PCBAREA2-001	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA2-002	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-003	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-004	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-005	9/18/2013	1 - 1 ft				

Soil Exposure Area 2 - Surface Soil

Units	Location	Collected	Depth	DIBENZ[A,H]ANTHRACENE	D_DIBENZ[A,H]ANTHRACENE	INDENO[1,2,3-CD]PYRENE	D_INDENO[1,2,3-CD]PYRENE
MG_KG	DDA-E-1E	7/15/2011	0 - 2 ft				
MG_KG	DDA-N-5A	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-10D	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-13I	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-2I	7/14/2011	0 - 2 ft				
MG_KG	DDA-NE-3E	7/13/2011	0 - 2 ft				
MG_KG	DDA-NE-5C	8/19/2010	0 - 2 ft				
MG_KG	DDA-NE-5D	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-5E	7/13/2011	0 - 2 ft				
MG_KG	DDA-NE-6C	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-6D	8/20/2010	0 - 2 ft				
MG_KG	DDA-NE-7D	7/12/2011	0 - 2 ft				
MG_KG	DDA-NE-7I	7/15/2011	0 - 2 ft				
MG_KG	DDA-NE-8B	7/13/2011	0 - 2 ft				
MG_KG	DDA-NW-10E	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-10G	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-10Q	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-2D	8/19/2010	0 - 2 ft				
MG_KG	DDA-NW-2F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-2G	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-2P	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-3E	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-3F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-3R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-4D	8/19/2010	0 - 2 ft				
MG_KG	DDA-NW-4F	8/18/2010	0 - 1 ft				
MG_KG	DDA-NW-4F	8/18/2010	0 - 2 ft				
MG_KG	DDA-NW-4R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-4Y	7/15/2011	0 - 2 ft				
MG_KG	DDA-NW-5C	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-5F	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-5F	8/17/2010	0 - 2 ft				
MG_KG	DDA-NW-5G	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-6B	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6D	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6E	8/17/2010	0 - 1 ft				
MG_KG	DDA-NW-6F	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-6R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-7B	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-7E	8/20/2010	0 - 2 ft				
MG_KG	DDA-NW-8R	7/14/2011	0 - 2 ft				
MG_KG	DDA-NW-9B	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-9E	7/12/2011	0 - 2 ft				
MG_KG	DDA-NW-9M	7/13/2011	0 - 2 ft				
MG_KG	DDA-SE-5B	7/12/2011	0 - 2 ft				
MG_KG	DDA-SW-2F	8/20/2010	0 - 2 ft				
MG_KG	DDA-SW-2I	7/13/2011	0 - 2 ft				
MG_KG	DDA-SW-3G	7/13/2011	0 - 2 ft				
MG_KG	DDA-W-1F	8/18/2010	0 - 2 ft				
MG_KG	DDA-W-1G	8/20/2010	0 - 2 ft				
MG_KG	FTA-ANOM1C-SO-SURF	9/25/2013	0 - 2 ft	0.011	0	0.011	0
MG_KG	FTA-ANOM1D-SO-SURF	9/25/2013	0 - 2 ft	0.01	0	0.01	0
MG_KG	FTA-ANOM1E-SO-SURF	9/26/2013	0 - 2 ft	0.012	0	0.012	0
MG_KG	FTA-ANOM4-SO-SURF	9/25/2013	0 - 2 ft	0.01	0	0.01	0
MG_KG	FTA-AREAA-01	6/17/2014	0 - 2 ft	0.26	0	0.01	0
MG_KG	FTA-AREAA-02	6/17/2014	0 - 2 ft	0.24	0	0.0096	0
MG_KG	FTA-AREAB-01	6/17/2014	0 - 2 ft	0.26	0	0.015	1
MG_KG	FTA-AREAB-02	6/17/2014	0 - 2 ft	0.27	0	0.01	1
MG_KG	FTA-AREAC-01	6/17/2014	0 - 2 ft	0.25	0	0.0021	1
MG_KG	FTA-AREAD-01	6/19/2014	0 - 2 ft	0.24	0	0.0095	0
MG_KG	FTA-AREAD-02	6/18/2014	0 - 2 ft	0.26	0	0.0029	1
MG_KG	FTA-AREAF-01	6/19/2014	0 - 2 ft	0.25	0	0.01	0
MG_KG	FTA-AREAG-01	6/18/2014	0 - 2 ft	0.26	0	0.069	1
MG_KG	FTA-AREAG-02	6/18/2014	0 - 2 ft	0.26	0	0.052	1
MG_KG	FTA-AREAG-03	6/18/2014	0 - 2 ft	0.25	0	0.015	1
MG_KG	FTA-AREAH-01	6/18/2014	0 - 2 ft	0.25	0	0.01	0
MG_KG	FTA-AREAI-01	6/17/2014	0 - 2 ft	0.25	0	0.01	0
MG_KG	FTA-SB-206	11/6/2012	0 - 2 ft	0.0048	1	0.024	1
MG_KG	FTA-SB-209	11/6/2012	0 - 2 ft	0.028	1	0.12	1
MG_KG	FTA-SB-210	11/6/2012	0 - 2 ft	0.02	1	0.095	1
MG_KG	FTA-SB-211	11/6/2012	0 - 2 ft	0.011	0	0.0067	1
MG_KG	FTA-SB-212	11/5/2012	0 - 2 ft	0.0099	1	0.048	1
MG_KG	FTA-SB-213	11/5/2012	0 - 2 ft	0.0088	0	0.0088	0
MG_KG	FTA-SB-214	11/5/2012	0 - 2 ft	0.0099	0	0.0099	0
MG_KG	FTA-SB-215	11/7/2012	0 - 2 ft	0.008	1	0.031	1
MG_KG	FTA-SB-216	11/6/2012	0 - 2 ft	0.92	1	4.7	1
MG_KG	FTA-SB-220	11/6/2012	0 - 2 ft	0.011	0	0.011	0
MG_KG	PCBAREA1-003	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-004	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-005	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA1-006	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA1-009	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA1-010	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-011	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-012	9/19/2013	2 - 2 ft				
MG_KG	PCBAREA1-013	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-014	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-017	9/19/2013	1 - 1 ft				
MG_KG	PCBAREA1-207	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-208	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-219	9/27/2013	1.5 - 1.5 ft				
MG_KG	PCBAREA1-220	9/27/2013	1 - 1 ft				
MG_KG	PCBAREA2-001	9/18/2013	2 - 2 ft				
MG_KG	PCBAREA2-002	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-003	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-004	9/18/2013	1 - 1 ft				
MG_KG	PCBAREA2-005	9/18/2013	1 - 1 ft				

Soil Exposure Area 2 - Subsurface Soil

Units	Location	Collected	Depth	ALUMINUM	D_ALUMINUM	ARSENIC	D_ARSENIC	COBALT	D_COBALT	IRON	D_IRON	MANGANESE	D_MANGANESE
MG_KG	DDA-E-1E	7/15/2011	6 - 8 ft										
MG_KG	DDA-N-2A	8/16/2010	5 - 7 ft										
MG_KG	DDA-N-3A	8/16/2010	3 - 5 ft										
MG_KG	DDA-N-3A	8/20/2010	7 - 9 ft										
MG_KG	DDA-N-5A	8/20/2010	4 - 6 ft										
MG_KG	DDA-N-5A	8/20/2010	6 - 8 ft										
MG_KG	DDA-NE-10D	7/15/2011	6 - 8 ft										
MG_KG	DDA-NE-3E	7/13/2011	6 - 8 ft										
MG_KG	DDA-NE-5C	8/19/2010	2 - 4 ft										
MG_KG	DDA-NE-5D	8/20/2010	2 - 4 ft										
MG_KG	DDA-NE-5E	7/13/2011	4 - 6 ft										
MG_KG	DDA-NE-6C	8/20/2010	2 - 4 ft										
MG_KG	DDA-NE-6E	7/13/2011	2 - 4 ft										
MG_KG	DDA-NE-6E	7/13/2011	4 - 6 ft										
MG_KG	DDA-NE-8B	7/13/2011	4 - 6 ft										
MG_KG	DDA-NW-10G	7/14/2011	2 - 4 ft										
MG_KG	DDA-NW-10Q	7/14/2011	4 - 6 ft										
MG_KG	DDA-NW-2D	8/19/2010	2 - 4 ft										
MG_KG	DDA-NW-2F	8/18/2010	2 - 4 ft										
MG_KG	DDA-NW-2G	8/20/2010	2 - 4 ft										
MG_KG	DDA-NW-2P	7/12/2011	4 - 6 ft										
MG_KG	DDA-NW-3B	8/16/2010	3 - 5 ft										
MG_KG	DDA-NW-3E	8/20/2010	2 - 4 ft										
MG_KG	DDA-NW-3F	8/18/2010	2 - 4 ft										
MG_KG	DDA-NW-3R	7/15/2011	8 - 10 ft										
MG_KG	DDA-NW-4D	8/19/2010	2 - 4 ft										
MG_KG	DDA-NW-4P	7/12/2011	4 - 6 ft										
MG_KG	DDA-NW-4Y	7/15/2011	2 - 4 ft										
MG_KG	DDA-NW-5C	8/20/2010	2 - 4 ft										
MG_KG	DDA-NW-5G	8/20/2010	2 - 4 ft										
MG_KG	DDA-NW-6B	8/17/2010	2 - 4 ft										
MG_KG	DDA-NW-6C	8/17/2010	2 - 4 ft										
MG_KG	DDA-NW-6D	8/17/2010	2 - 4 ft										
MG_KG	DDA-NW-6E	8/17/2010	2 - 4 ft										
MG_KG	DDA-NW-6F	8/20/2010	2 - 4 ft										
MG_KG	DDA-NW-6R	7/14/2011	4 - 6 ft										
MG_KG	DDA-NW-7D	8/20/2010	2 - 4 ft										
MG_KG	DDA-NW-8I	7/13/2011	2 - 4 ft										
MG_KG	DDA-NW-8R	7/14/2011	2 - 4 ft										
MG_KG	DDA-NW-9B	7/12/2011	4 - 6 ft										
MG_KG	DDA-NW-9M	7/14/2011	6 - 8 ft										
MG_KG	DDA-SE-2C	8/19/2010	6 - 8 ft										
MG_KG	DDA-SE-2D	8/20/2010	6 - 8 ft										
MG_KG	DDA-SE-3D	8/20/2010	8 - 10 ft										
MG_KG	DDA-SE-4C	8/19/2010	6 - 8 ft										
MG_KG	DDA-SE-4D	8/20/2010	8 - 10 ft										
MG_KG	DDA-SE-4D	7/11/2011	8 - 10 ft										
MG_KG	DDA-SE-5B	7/12/2011	2 - 4 ft										
MG_KG	DDA-SE-5C	8/20/2010	8 - 10 ft										
MG_KG	DDA-SE-5C	7/12/2011	8 - 10 ft										
MG_KG	DDA-SE-5D	7/12/2011	2 - 4 ft										
MG_KG	DDA-SE-5D	7/12/2011	4 - 6 ft	14100	1	9.1	1	11	1	22900	1	409	1
MG_KG	DDA-SW-2F	8/20/2010	2 - 4 ft										
MG_KG	DDA-SW-3G	7/13/2011	4 - 6 ft										
MG_KG	DDA-SW-3N	7/13/2011	4 - 6 ft										
MG_KG	DDA-SW-5C	7/13/2011	4 - 6 ft										
MG_KG	DDA-W-1B	8/17/2010	3 - 5 ft										
MG_KG	DDA-W-1F	8/18/2010	2 - 4 ft										
MG_KG	DDA-W-1G	8/20/2010	2 - 4 ft										
MG_KG	DDA-W-1L	7/13/2011	4 - 6 ft										
MG_KG	FTA-ANOM1A-SO-DEEP	9/25/2013	3 - 4.5 ft	16000	1	11.8	1	11.4	1	25700	1	599	1
MG_KG	FTA-ANOM1B-SO-DEEP	9/25/2013	3 - 4.5 ft	14800	1	7.2	1	11.7	1	24700	1	486	1
MG_KG	FTA-ANOM1C-SO-INT	9/25/2013	2 - 3.75 ft	26200	1	18.2	1	20.8	1	43800	1	1060	1
MG_KG	FTA-ANOM1D-SO-INT	9/25/2013	2 - 4 ft	12300	1	10.4	1	11.2	1	21800	1	474	1
MG_KG	FTA-ANOM1E-SO-INT	9/26/2013	2 - 4 ft	14600	1	9.5	1	10.4	1	22400	1	570	1
MG_KG	FTA-ANOM2-SO-DEEP	9/25/2013	6 - 7.5 ft	12500	1	7.8	1	12.8	1	26300	1	549	1
MG_KG	FTA-ANOM2-SO-INT	9/25/2013	2 - 4 ft	14300	1	7.2	1	10.5	1	22200	1	495	1
MG_KG	FTA-ANOM4-SO-DEEP	9/25/2013	3 - 4 ft	15300	1	10.4	1	12	1	26400	1	544	1
MG_KG	FTA-ANOM4-SO-INT	9/25/2013	2 - 4 ft	14600	1	8.8	1	10.7	1	24100	1	483	1
MG_KG	FTA-AREAA-01	6/17/2014	2 - 6 ft	16800	1	10	1	12.5	1	29500	1	617	1
MG_KG	FTA-AREAA-02	6/17/2014	2 - 6 ft	16200	1	15.9	1	11.8	1	28600	1	523	1
MG_KG	FTA-AREAB-01	6/17/2014	2 - 6 ft	15000	1	13.4	1	11	1	26300	1	615	1
MG_KG	FTA-AREAB-01	6/17/2014	6 - 10 ft	14900	1	14.5	1	13.7	1	29100	1	617	1
MG_KG	FTA-AREAB-02	6/17/2014	2 - 6 ft	16100	1	21.4	1	12.4	1	28000	1	584	1
MG_KG	FTA-AREAC-01	6/17/2014	2 - 6 ft	11300	1	8.84	1	10.5	1	21900	1	485	1
MG_KG	FTA-AREAD-01	6/19/2014	2 - 6 ft	9940	1	7.46	1	8.08	1	16800	1	354	1
MG_KG	FTA-AREAD-02	6/18/2014	2 - 6 ft	11100	1	7.68	1	10.4	1	19100	1	445	1
MG_KG	FTA-AREAE-01	6/19/2014	6 - 10 ft	11900	1	8.25	1	10.1	1	21200	1	455	1
MG_KG	FTA-AREAF-01	6/19/2014	2 - 6 ft	12600	1	9.86	1	10.6	1	21900	1	446	1
MG_KG	FTA-AREAG-01	6/18/2014	2 - 6 ft	15200	1	14.3	1	12.2	1	26900	1	592	1
MG_KG	FTA-AREAG-02	6/18/2014	2 - 6 ft	17900	1	16.1	1	14.4	1	29400	1	603	1
MG_KG	FTA-AREAG-03	6/18/2014	2 - 6 ft	12800	1	7.83	1	12	1	22600	1	891	1
MG_KG	FTA-AREAH-01	6/18/2014	2 - 6 ft	11600	1	7.54	1	10.4	1	20000	1	450	1
MG_KG	FTA-AREAI-01	6/17/2014	2 - 6 ft	13400	1	6.73	1	9.86	1	22100	1	435	1
MG_KG	FTA-AREAJ-01	6/18/2014	2 - 6 ft	13300	1	8.43	1	11.7	1	23100	1	573	1
MG_KG	FTA-AREAJ-01	6/18/2014	6 - 9.4 ft	12300	1	5.65	1	10.4	1	22100	1	459	1
MG_KG	FTA-NPCB-SO-BOTPCB	9/25/2013	2 - 3 ft	14000	1	7.1	1	9.9	1	24100	1	561	1
MG_KG	FTA-SB-206	11/6/2012	2 - 6 ft	15600	1	23.1	1	12.8	1	27100	1	534	1
MG_KG	FTA-SB-209	11/6/2012	2 - 6 ft	13200	1	6.5	1	11.5	1	25000	1	504	1
MG_KG	FTA-SB-209	11/6/2012	6 - 10 ft	19000	1	20	1	15.1	1	31300	1	662	1
MG_KG	FTA-SB-210	11/6/2012	6 - 10 ft	15800	1	6.8	1	15.3	1	29800	1	632	1
MG_KG	FTA-SB-211	11/6/2012	2 - 6 ft	13000	1	7.7	1	11.7	1	23600	1	544	1
MG_KG	FTA-SB-211	11/6/2012	6 - 10 ft	13400	1	10.4	1	13.9	1	25800	1	544	1
MG_KG	FTA-SB-212	11/5/2012	2 - 6 ft	15800	1	9.4	1	13.6	1	24500	1	526	1
MG_KG	FTA-SB-212	11/8/2012	6 - 10 ft	12900	1	8.2	1	12.6	1	26000	1	573	1
MG_KG	FTA-SB-213	11/5/2012	6 - 10 ft	14300	1	9.8	1	11.3	1	23800	1	455	1
MG_KG	FTA-SB-214	11/5/2012	2 - 6 ft	26100	1	25.1	1	18.9	1	43100	1	1530	1
MG_KG	FTA-SB-215	11/7/2012	6 - 10 ft	23000	1	13.9	1	16.5	1	36600	1	714	1
MG_KG	FTA-SB-216	11/6/2012	2 - 6 ft	12500	1	5.6	1	8.9	1	25500	1	510	1
MG_KG	FTA-SB-216	11/6/2012	6 - 10 ft	19100	1	12.2	1	14.8	1	34600	1	650	1
MG_KG	FTA-SB-220	11/6/2012	2 - 6 ft	14900	1	7.2	1	12.8	1	26900	1	530	1
MG_KG	FTA-WANOM1-SO-BOTPCB	9/25/2013	2 - 3 ft	13400	1	9.2	1	12.2	1	22200	1	1290	1
MG_KG	PCBAREA1-201	9/27/2013	3 - 3 ft										
MG_KG	PCBAREA1-202	9/27/2013	3 - 3 ft										

Soil Exposure Area 2 - Subsurface Soil

Units	Location	Collected	Depth	THALLIUM	D_THALLIUM	VANADIUM	D_VANADIUM	TOTAL AROCLORS	TOTAL AROCLORS
MG_KG	DDA-E-1E	7/15/2011	6 - 8 ft					0.018	0
MG_KG	DDA-N-2A	8/16/2010	5 - 7 ft					0.3	1
MG_KG	DDA-N-3A	8/16/2010	3 - 5 ft					17.7	1
MG_KG	DDA-N-3A	8/20/2010	7 - 9 ft					0.0165	0
MG_KG	DDA-N-5A	8/20/2010	4 - 6 ft					0.0165	0
MG_KG	DDA-N-5A	8/20/2010	6 - 8 ft					0.0165	0
MG_KG	DDA-NE-10D	7/15/2011	6 - 8 ft					0.018	0
MG_KG	DDA-NE-3E	7/13/2011	6 - 8 ft					0.018	0
MG_KG	DDA-NE-5C	8/19/2010	2 - 4 ft					0.018	0
MG_KG	DDA-NE-5D	8/20/2010	2 - 4 ft					0.46	1
MG_KG	DDA-NE-5E	7/13/2011	4 - 6 ft					0.012	1
MG_KG	DDA-NE-6C	8/20/2010	2 - 4 ft					0.018	0
MG_KG	DDA-NE-6E	7/13/2011	2 - 4 ft					3.33	1
MG_KG	DDA-NE-6E	7/13/2011	4 - 6 ft					4.99	1
MG_KG	DDA-NE-8B	7/13/2011	4 - 6 ft					0.018	0
MG_KG	DDA-NW-10G	7/14/2011	2 - 4 ft					0.484	1
MG_KG	DDA-NW-10Q	7/14/2011	4 - 6 ft					1.84	1
MG_KG	DDA-NW-2D	8/19/2010	2 - 4 ft					0.018	0
MG_KG	DDA-NW-2F	8/18/2010	2 - 4 ft					0.449	1
MG_KG	DDA-NW-2G	8/20/2010	2 - 4 ft					13.5	1
MG_KG	DDA-NW-2P	7/12/2011	4 - 6 ft					0.018	0
MG_KG	DDA-NW-3B	8/16/2010	3 - 5 ft					0.074	1
MG_KG	DDA-NW-3E	8/20/2010	2 - 4 ft					1.48	1
MG_KG	DDA-NW-3F	8/18/2010	2 - 4 ft					0.145	1
MG_KG	DDA-NW-3R	7/15/2011	8 - 10 ft					0.018	0
MG_KG	DDA-NW-4D	8/19/2010	2 - 4 ft					0.02	0
MG_KG	DDA-NW-4P	7/12/2011	4 - 6 ft					0.076	1
MG_KG	DDA-NW-4Y	7/15/2011	2 - 4 ft					0.0215	0
MG_KG	DDA-NW-5C	8/20/2010	2 - 4 ft					1.05	1
MG_KG	DDA-NW-5G	8/20/2010	2 - 4 ft					2.02	1
MG_KG	DDA-NW-6B	8/17/2010	2 - 4 ft					0.158	1
MG_KG	DDA-NW-6C	8/17/2010	2 - 4 ft					0.104	1
MG_KG	DDA-NW-6D	8/17/2010	2 - 4 ft					0.204	1
MG_KG	DDA-NW-6E	8/17/2010	2 - 4 ft					0.154	1
MG_KG	DDA-NW-6F	8/20/2010	2 - 4 ft					1.62	1
MG_KG	DDA-NW-6R	7/14/2011	4 - 6 ft					0.018	0
MG_KG	DDA-NW-7D	8/20/2010	2 - 4 ft					0.113	1
MG_KG	DDA-NW-8I	7/13/2011	2 - 4 ft					3.41	1
MG_KG	DDA-NW-8R	7/14/2011	2 - 4 ft					0.215	1
MG_KG	DDA-NW-9B	7/12/2011	4 - 6 ft					0.044	1
MG_KG	DDA-NW-9M	7/14/2011	6 - 8 ft					0.02	0
MG_KG	DDA-SE-2C	8/19/2010	6 - 8 ft					0.0165	0
MG_KG	DDA-SE-2D	8/20/2010	6 - 8 ft					0.0165	0
MG_KG	DDA-SE-3D	8/20/2010	8 - 10 ft					0.0165	0
MG_KG	DDA-SE-4C	8/19/2010	6 - 8 ft					0.0165	0
MG_KG	DDA-SE-4D	8/20/2010	8 - 10 ft					0.0165	0
MG_KG	DDA-SE-4D	7/11/2011	8 - 10 ft					0.0165	0
MG_KG	DDA-SE-5B	7/12/2011	2 - 4 ft					0.018	0
MG_KG	DDA-SE-5C	8/20/2010	8 - 10 ft					0.0165	0
MG_KG	DDA-SE-5C	7/12/2011	8 - 10 ft					0.038	1
MG_KG	DDA-SE-5D	7/12/2011	2 - 4 ft					0.0183	0
MG_KG	DDA-SE-5D	7/12/2011	4 - 6 ft	0.3	0	33	1	0.018	0
MG_KG	DDA-SW-2F	8/20/2010	2 - 4 ft					0.569	1
MG_KG	DDA-SW-3G	7/13/2011	4 - 6 ft					0.014	1
MG_KG	DDA-SW-3N	7/13/2011	4 - 6 ft					2.64	1
MG_KG	DDA-SW-5C	7/13/2011	4 - 6 ft					0.026	1
MG_KG	DDA-W-1B	8/17/2010	3 - 5 ft					1.9	1
MG_KG	DDA-W-1F	8/18/2010	2 - 4 ft					0.208	1
MG_KG	DDA-W-1G	8/20/2010	2 - 4 ft					1.11	1
MG_KG	DDA-W-1L	7/13/2011	4 - 6 ft					0.332	1
MG_KG	FTA-ANOM1A-SO-DEEP	9/25/2013	3 - 4.5 ft	0.12	1	36.5	1	0.32	1
MG_KG	FTA-ANOM1B-SO-DEEP	9/25/2013	3 - 4.5 ft	0.1	1	38.7	1	0.054	1
MG_KG	FTA-ANOM1C-SO-INT	9/25/2013	2 - 3.75 ft	0.15	1	64.4	1	0.35	1
MG_KG	FTA-ANOM1D-SO-INT	9/25/2013	2 - 4 ft	0.09	1	34.4	1	0.12	1
MG_KG	FTA-ANOM1E-SO-INT	9/26/2013	2 - 4 ft	0.08	1	31.8	1	0.15	1
MG_KG	FTA-ANOM2-SO-DEEP	9/25/2013	6 - 7.5 ft	0.07	1	36.3	1	1.2	1
MG_KG	FTA-ANOM2-SO-INT	9/25/2013	2 - 4 ft	0.07	1	30.8	1	12	1
MG_KG	FTA-ANOM4-SO-DEEP	9/25/2013	3 - 4 ft	0.1	1	40.5	1	0.011	0
MG_KG	FTA-ANOM4-SO-INT	9/25/2013	2 - 4 ft	0.1	1	31.8	1	0.22	1
MG_KG	FTA-AREAA-01	6/17/2014	2 - 6 ft	0.151	1	40.4	1	0.0024	0
MG_KG	FTA-AREAA-02	6/17/2014	2 - 6 ft	0.125	1	36.1	1	0.0024	0
MG_KG	FTA-AREAB-01	6/17/2014	2 - 6 ft	0.123	1	35.7	1	0.063	1
MG_KG	FTA-AREAB-01	6/17/2014	6 - 10 ft	0.103	1	35.5	1	0.049	1
MG_KG	FTA-AREAB-02	6/17/2014	2 - 6 ft	0.115	1	36.8	1	0.035	1
MG_KG	FTA-AREAC-01	6/17/2014	2 - 6 ft	0.052	1	26.3	1	0.037	1
MG_KG	FTA-AREAD-01	6/19/2014	2 - 6 ft	0.044	1	24.4	1	0.0023	0
MG_KG	FTA-AREAD-02	6/18/2014	2 - 6 ft	0.0988	1	27.4	1	0.0021	0
MG_KG	FTA-AREAE-01	6/19/2014	6 - 10 ft	0.0715	1	30.4	1	0.018	1
MG_KG	FTA-AREAF-01	6/19/2014	2 - 6 ft	0.088	1	32.7	1	0.002	0
MG_KG	FTA-AREAG-01	6/18/2014	2 - 6 ft	0.0987	1	44.5	1	0.044	1
MG_KG	FTA-AREAG-02	6/18/2014	2 - 6 ft	0.124	1	44.4	1	0.026	1
MG_KG	FTA-AREAG-03	6/18/2014	2 - 6 ft	0.111	1	30.5	1	0.56	1
MG_KG	FTA-AREAH-01	6/18/2014	2 - 6 ft	0.069	1	30.4	1	0.094	1
MG_KG	FTA-AREAI-01	6/17/2014	2 - 6 ft	0.14	1	32.9	1	0.02	1
MG_KG	FTA-AREAJ-01	6/18/2014	2 - 6 ft	0.08	1	35.4	1	0.043	1
MG_KG	FTA-AREAJ-01	6/18/2014	6 - 9.4 ft	0.062	1	30.8	1	0.017	1
MG_KG	FTA-NPCB-SO-BOTPCB	9/25/2013	2 - 3 ft	0.1	1	30.4	1	0.29	1
MG_KG	FTA-SB-206	11/6/2012	2 - 6 ft	0.13	1	38.3	1	0.022	1
MG_KG	FTA-SB-209	11/6/2012	2 - 6 ft	0.07	1	38.5	1	2	1
MG_KG	FTA-SB-209	11/6/2012	6 - 10 ft	0.16	1	48.3	1	0.012	0
MG_KG	FTA-SB-210	11/6/2012	6 - 10 ft	0.06	1	40.3	1	0.011	0
MG_KG	FTA-SB-211	11/6/2012	2 - 6 ft	0.09	1	32.6	1	0.95	1
MG_KG	FTA-SB-211	11/6/2012	6 - 10 ft	0.07	1	32.7	1	0.072	1
MG_KG	FTA-SB-212	11/5/2012	2 - 6 ft	0.12	1	39.7	1	0.01	0
MG_KG	FTA-SB-212	11/8/2012	6 - 10 ft	0.06	1	29.4	1	0.01	0
MG_KG	FTA-SB-213	11/5/2012	6 - 10 ft	0.14	1	40.9	1	0.01	0
MG_KG	FTA-SB-214	11/5/2012	2 - 6 ft	0.26	1	56.2	1	0.012	0
MG_KG	FTA-SB-215	11/7/2012	6 - 10 ft	0.19	1	54.3	1	0.012	0
MG_KG	FTA-SB-216	11/6/2012	2 - 6 ft	0.07	1	33.7	1	0.078	1
MG_KG	FTA-SB-216	11/6/2012	6 - 10 ft	0.15	1	45.8	1	0.011	0
MG_KG	FTA-SB-220	11/6/2012	2 - 6 ft	0.07	1	39.8	1	0.01	0
MG_KG	FTA-WANOM1-SO-BOTPCB	9/25/2013	2 - 3 ft	0.15	1	32	1	0.44	1
MG_KG	PCBAREA1-201	9/27/2013	3 - 3 ft					0.67	1
MG_KG	PCBAREA1-202	9/27/2013	3 - 3 ft					83	1

Soil Exposure Area 2 - Subsurface Soil

Units	Location	Collected	Depth	BENZO[A]PYRENE	D_BENZO[A]PYRENE	DIBENZ[A,H]ANTHRACENE	D_DIBENZ[A,H]ANTHRACENE
MG_KG	DDA-E-1E	7/15/2011	6 - 8 ft				
MG_KG	DDA-N-2A	8/16/2010	5 - 7 ft				
MG_KG	DDA-N-3A	8/16/2010	3 - 5 ft				
MG_KG	DDA-N-3A	8/20/2010	7 - 9 ft				
MG_KG	DDA-N-5A	8/20/2010	4 - 6 ft				
MG_KG	DDA-N-5A	8/20/2010	6 - 8 ft				
MG_KG	DDA-NE-10D	7/15/2011	6 - 8 ft				
MG_KG	DDA-NE-3E	7/13/2011	6 - 8 ft				
MG_KG	DDA-NE-5C	8/19/2010	2 - 4 ft				
MG_KG	DDA-NE-5D	8/20/2010	2 - 4 ft				
MG_KG	DDA-NE-5E	7/13/2011	4 - 6 ft				
MG_KG	DDA-NE-6C	8/20/2010	2 - 4 ft				
MG_KG	DDA-NE-6E	7/13/2011	2 - 4 ft				
MG_KG	DDA-NE-6E	7/13/2011	4 - 6 ft				
MG_KG	DDA-NE-8B	7/13/2011	4 - 6 ft				
MG_KG	DDA-NW-10G	7/14/2011	2 - 4 ft				
MG_KG	DDA-NW-10Q	7/14/2011	4 - 6 ft				
MG_KG	DDA-NW-2D	8/19/2010	2 - 4 ft				
MG_KG	DDA-NW-2F	8/18/2010	2 - 4 ft				
MG_KG	DDA-NW-2G	8/20/2010	2 - 4 ft				
MG_KG	DDA-NW-2P	7/12/2011	4 - 6 ft				
MG_KG	DDA-NW-3B	8/16/2010	3 - 5 ft				
MG_KG	DDA-NW-3E	8/20/2010	2 - 4 ft				
MG_KG	DDA-NW-3F	8/18/2010	2 - 4 ft				
MG_KG	DDA-NW-3R	7/15/2011	8 - 10 ft				
MG_KG	DDA-NW-4D	8/19/2010	2 - 4 ft				
MG_KG	DDA-NW-4P	7/12/2011	4 - 6 ft				
MG_KG	DDA-NW-4Y	7/15/2011	2 - 4 ft				
MG_KG	DDA-NW-5C	8/20/2010	2 - 4 ft				
MG_KG	DDA-NW-5G	8/20/2010	2 - 4 ft				
MG_KG	DDA-NW-6B	8/17/2010	2 - 4 ft				
MG_KG	DDA-NW-6C	8/17/2010	2 - 4 ft				
MG_KG	DDA-NW-6D	8/17/2010	2 - 4 ft				
MG_KG	DDA-NW-6E	8/17/2010	2 - 4 ft				
MG_KG	DDA-NW-6F	8/20/2010	2 - 4 ft				
MG_KG	DDA-NW-6R	7/14/2011	4 - 6 ft				
MG_KG	DDA-NW-7D	8/20/2010	2 - 4 ft				
MG_KG	DDA-NW-8I	7/13/2011	2 - 4 ft				
MG_KG	DDA-NW-8R	7/14/2011	2 - 4 ft				
MG_KG	DDA-NW-9B	7/12/2011	4 - 6 ft				
MG_KG	DDA-NW-9M	7/14/2011	6 - 8 ft				
MG_KG	DDA-SE-2C	8/19/2010	6 - 8 ft				
MG_KG	DDA-SE-2D	8/20/2010	6 - 8 ft				
MG_KG	DDA-SE-3D	8/20/2010	8 - 10 ft				
MG_KG	DDA-SE-4C	8/19/2010	6 - 8 ft				
MG_KG	DDA-SE-4D	8/20/2010	8 - 10 ft				
MG_KG	DDA-SE-4D	7/11/2011	8 - 10 ft				
MG_KG	DDA-SE-5B	7/12/2011	2 - 4 ft				
MG_KG	DDA-SE-5C	8/20/2010	8 - 10 ft				
MG_KG	DDA-SE-5C	7/12/2011	8 - 10 ft				
MG_KG	DDA-SE-5D	7/12/2011	2 - 4 ft				
MG_KG	DDA-SE-5D	7/12/2011	4 - 6 ft				
MG_KG	DDA-SW-2F	8/20/2010	2 - 4 ft				
MG_KG	DDA-SW-3G	7/13/2011	4 - 6 ft				
MG_KG	DDA-SW-3N	7/13/2011	4 - 6 ft				
MG_KG	DDA-SW-5C	7/13/2011	4 - 6 ft				
MG_KG	DDA-W-1B	8/17/2010	3 - 5 ft				
MG_KG	DDA-W-1F	8/18/2010	2 - 4 ft				
MG_KG	DDA-W-1G	8/20/2010	2 - 4 ft				
MG_KG	DDA-W-1L	7/13/2011	4 - 6 ft				
MG_KG	FTA-ANOM1A-SO-DEEP	9/25/2013	3 - 4.5 ft	0.01	0	0.01	0
MG_KG	FTA-ANOM1B-SO-DEEP	9/25/2013	3 - 4.5 ft	0.01	0	0.01	0
MG_KG	FTA-ANOM1C-SO-INT	9/25/2013	2 - 3.75 ft	0.016	0	0.016	0
MG_KG	FTA-ANOM1D-SO-INT	9/25/2013	2 - 4 ft	0.0099	0	0.0099	0
MG_KG	FTA-ANOM1E-SO-INT	9/26/2013	2 - 4 ft	0.0095	0	0.0095	0
MG_KG	FTA-ANOM2-SO-DEEP	9/25/2013	6 - 7.5 ft	0.0086	0	0.0086	0
MG_KG	FTA-ANOM2-SO-INT	9/25/2013	2 - 4 ft	0.005	1	0.0093	0
MG_KG	FTA-ANOM4-SO-DEEP	9/25/2013	3 - 4 ft	0.011	0	0.011	0
MG_KG	FTA-ANOM4-SO-INT	9/25/2013	2 - 4 ft	0.011	0	0.011	0
MG_KG	FTA-AREAA-01	6/17/2014	2 - 6 ft	0.0096	0	0.3	0
MG_KG	FTA-AREAA-02	6/17/2014	2 - 6 ft	0.012	0	0.29	0
MG_KG	FTA-AREAB-01	6/17/2014	2 - 6 ft	0.0098	0	0.24	0
MG_KG	FTA-AREAB-01	6/17/2014	6 - 10 ft	0.0094	0	0.23	0
MG_KG	FTA-AREAB-02	6/17/2014	2 - 6 ft	0.011	0	0.27	0
MG_KG	FTA-AREAC-01	6/17/2014	2 - 6 ft	0.01	0	0.25	0
MG_KG	FTA-AREAD-01	6/19/2014	2 - 6 ft	0.011	0	0.28	0
MG_KG	FTA-AREAD-02	6/18/2014	2 - 6 ft	0.011	0	0.27	0
MG_KG	FTA-AREAE-01	6/19/2014	6 - 10 ft	0.0097	0	0.24	0
MG_KG	FTA-AREAF-01	6/19/2014	2 - 6 ft	0.0095	0	0.24	0
MG_KG	FTA-AREAG-01	6/18/2014	2 - 6 ft	0.0093	0	0.27	0
MG_KG	FTA-AREAG-02	6/18/2014	2 - 6 ft	0.011	0	0.28	0
MG_KG	FTA-AREAG-03	6/18/2014	2 - 6 ft	0.01	0	0.25	0
MG_KG	FTA-AREAH-01	6/18/2014	2 - 6 ft	0.01	0	0.25	0
MG_KG	FTA-AREAI-01	6/17/2014	2 - 6 ft	0.01	0	0.26	0
MG_KG	FTA-AREAJ-01	6/18/2014	2 - 6 ft	0.01	0	0.25	0
MG_KG	FTA-AREAJ-01	6/18/2014	6 - 9.4 ft	0.01	0	0.25	0
MG_KG	FTA-NPCB-SO-BOTPCB	9/25/2013	2 - 3 ft	0.01	0	0.01	0
MG_KG	FTA-SB-206	11/6/2012	2 - 6 ft	0.0085	0	0.0085	0
MG_KG	FTA-SB-209	11/6/2012	2 - 6 ft	0.013	1	0.0033	1
MG_KG	FTA-SB-209	11/6/2012	6 - 10 ft	0.011	0	0.011	0
MG_KG	FTA-SB-210	11/6/2012	6 - 10 ft	0.01	0	0.01	0
MG_KG	FTA-SB-211	11/6/2012	2 - 6 ft	0.011	0	0.011	0
MG_KG	FTA-SB-211	11/6/2012	6 - 10 ft	0.01	0	0.0025	1
MG_KG	FTA-SB-212	11/5/2012	2 - 6 ft	0.011	0	0.011	0
MG_KG	FTA-SB-212	11/8/2012	6 - 10 ft	0.01	0	0.01	0
MG_KG	FTA-SB-213	11/5/2012	6 - 10 ft	0.01	0	0.01	0
MG_KG	FTA-SB-214	11/5/2012	2 - 6 ft	0.012	0	0.012	0
MG_KG	FTA-SB-215	11/7/2012	6 - 10 ft	0.011	0	0.011	0
MG_KG	FTA-SB-216	11/6/2012	2 - 6 ft	0.1	1	0.021	1
MG_KG	FTA-SB-216	11/6/2012	6 - 10 ft	0.011	0	0.011	0
MG_KG	FTA-SB-220	11/6/2012	2 - 6 ft	0.0085	0	0.0085	0
MG_KG	FTA-WANOM1-SO-BOTPCB	9/25/2013	2 - 3 ft	0.0094	0	0.0094	0
MG_KG	PCBAREA1-201	9/27/2013	3 - 3 ft				
MG_KG	PCBAREA1-202	9/27/2013	3 - 3 ft				

Wetland Surface Water

Fraction	Units	Location	Collected	ARSENIC	D_ARSENIC	MANGANESE	D_MANGANESE
T	UG_L	FTA-SW-01	11/27/2012	4	0	124	1
T	UG_L	FTA-SW-01	6/19/2014	4	0	57.4	1
T	UG_L	FTA-SW-02	11/27/2012	5.5	1	838	1
T	UG_L	FTA-SW-02	6/19/2014	3.6	1	31.1	1
T	UG_L	FTA-SW-03	11/27/2012	4	0	67.8	1
T	UG_L	FTA-SW-03	6/19/2014	4	0	41.3	1
T	UG_L	FTA-SW-04	11/27/2012	4	1	1190	1
T	UG_L	FTA-SW-05	11/27/2012	3	0	496	1
T	UG_L	FTA-SW-06	11/27/2012	3.8	1	815	1
T	UG_L	FTA-SW-06	6/19/2014	7.9	1	1160	1
T	UG_L	FTA-SW-07	11/28/2012	3.6	1	365	1
T	UG_L	FTA-SW-07	6/19/2014	7.9	1	432	1
T	UG_L	FTA-SW-08	11/28/2012	3.3	1	52.2	1
T	UG_L	FTA-SW-08	6/19/2014	5.1	1	28.3	1

Units	Location	Collected	Depth	ARSENIC	D_ ARSENIC	COBALT	D_ COBALT	IRON	D_ IRON	TOTAL AROCLORS	D_TOTAL AROCLORS	BENZO[A] ANTHRACENE	D_BENZO[A]A NTHRACENE	BENZO[A] PYRENE	D_BENZO[A]P YRENE	BENZO[B] FLUORANTHENE	D_BENZO[B] FLUORANTHENE	DIBENZ [A,H] ANTHRACENE	D_DIBENZ [A,H] ANTHRACENE	INDENO [1,2,3-CD] PYRENE	D_INDENO [1,2,3-CD] PYRENE
MG_KG	FTA-SED-01	11/27/2012	0 - 0.5 ft	8.3	1	12	1	15200	1	1.4	1	3.6	1	2.4	1	3.2	1	0.51	1	2.4	1
MG_KG	FTA-SED-01	6/19/2014	0 - 0.5 ft	4.21	1	6.57	1	16200	1	1.2	1	0.22	1	0.16	1	0.25	1	0.44	0	0.15	1
MG_KG	FTA-SED-02	11/27/2012	0 - 0.5 ft	5.4	1	7.7	1	16000	1	1.3	1	0.14	1	0.11	1	0.17	1	0.022	1	0.1	1
MG_KG	FTA-SED-02	6/19/2014	0 - 0.5 ft	6.22	1	8.33	1	19400	1	0.079	1	0.018	1	0.015	1	0.023	1	0.3	0	0.018	1
MG_KG	FTA-SED-03	11/27/2012	0 - 0.5 ft	3.3	1	11.7	1	15600	1	0.22	1	0.028	1	0.027	1	0.042	0	0.0058	1	0.031	0
MG_KG	FTA-SED-03	6/19/2014	0 - 0.5 ft	1.6	1	4.32	1	8100	1	0.23	1	0.014	1	0.014	1	0.024	1	0.47	0	0.021	1
MG_KG	FTA-SED-04	11/27/2012	0 - 0.5 ft	19	1	19	1	25600	1	2.1	1	0.22	1	0.18	1	0.24	1	0.038	1	0.17	1
MG_KG	FTA-SED-04	6/21/2014	0 - 0.5 ft	8.98	1	10.5	1	20400	1	0.6	1	0.055	1	0.052	1	0.079	1	0.53	0	0.053	1
MG_KG	FTA-SED-05	11/27/2012	0 - 0.5 ft	5.6	1	6.2	1	14300	1	0.76	1	0.34	1	0.25	1	0.39	1	0.048	1	0.23	1
MG_KG	FTA-SED-05	6/20/2014	0 - 0.5 ft	5.03	1	4.56	1	12000	1	0.44	1	0.16	1	0.13	1	0.24	1	1.2	0	0.16	1
MG_KG	FTA-SED-06	11/27/2012	0 - 0.5 ft	4.4	1	5.8	1	13400	1	0.29	1	0.11	1	0.09	1	0.14	1	0.022	1	0.1	1
MG_KG	FTA-SED-06	6/19/2014	0 - 0.5 ft	6.4	1	5.98	1	14500	1	0.87	1	0.24	1	0.17	1	0.28	1	1	0	0.16	1
MG_KG	FTA-SED-07	11/28/2012	0 - 0.5 ft	9.3	1	7.5	1	22300	1	0.066	1	0.024	0	0.011	1	0.024	0	0.009	1	0.028	0
MG_KG	FTA-SED-07	6/19/2014	0 - 0.5 ft	4.3	1	3.56	1	9700	1	0.16	1	0.073	1	0.049	1	0.083	1	1.1	0	0.058	1
MG_KG	FTA-SED-08	11/28/2012	0 - 0.5 ft	7.1	1	3.6	1	10300	1	0.026	0	0.024	0	0.024	0	0.024	0	0.024	0	0.024	0
MG_KG	FTA-SED-08	6/19/2014	0 - 0.5 ft	7.08	1	3.73	1	12000	1	0.028	1	0.0078	1	0.0072	1	0.013	1	0.42	0	0.012	1

Groundwater

Fraction	Units	Location	Collected	ALUMINUM	D_ALUMINUM	ARSENIC	D_ARSENIC	CADMIUM	D_CADMIUM	COBALT	D_COBALT	IRON	D_IRON
T	UG_L	FTA-DP-35	9/21/2015	41	1	11	1	0.2	0	0.12	1	79	1
T	UG_L	FTA-MW-1	11/28/2012	3080	1	6	0	0.2	0	1.4	1	3020	1
T	UG_L	FTA-MW-1	6/18/2014	1660	1	7.9	1	0.2	0	0.899	1	1890	1
T	UG_L	FTA-MW-1	9/18/2015	1420	1	8.8	1	0.059	1	2.48	1	1890	1
T	UG_L	FTA-MW-10	11/27/2012	36.7	1	4	1	0.09	1	4.9	1	1180	1
T	UG_L	FTA-MW-10	6/17/2014	100	0	4.3	1	0.2	0	5.07	1	1350	1
T	UG_L	FTA-MW-10	9/21/2015	58	1	6.7	1	0.042	1	8.02	1	2430	1
T	UG_L	FTA-MW-11	11/27/2012	76.6	1	4	0	0.2	0	0.1	1	277	1
T	UG_L	FTA-MW-11	6/17/2014	100	0	4	0	0.2	0	0.1	1	241	1
T	UG_L	FTA-MW-11	9/21/2015	27	1	4	0	0.2	0	0.087	1	341	1
T	UG_L	FTA-MW-12	11/27/2012	116	1	2.5	1	0.08	1	2.5	1	3330	1
T	UG_L	FTA-MW-12	6/17/2014	269	1	4	0	1.6	1	1.49	1	744	1
T	UG_L	FTA-MW-12	9/21/2015	91	1	3	1	1.34	1	1.42	1	390	1
T	UG_L	FTA-MW-14	11/27/2012	375	1	4	0	0.05	1	0.33	1	964	1
T	UG_L	FTA-MW-14	6/17/2014	279	1	4	0	0.2	0	0.27	1	827	1
T	UG_L	FTA-MW-14	9/21/2015	120	1	4	0	0.2	0	0.27	1	1240	1
T	UG_L	FTA-MW-206	11/28/2012	36	1	6.6	0	0.2	0	1.3	1	80	0
T	UG_L	FTA-MW-206	9/26/2013										
T	UG_L	FTA-MW-206	6/18/2014	100	0	2.5	1	0.2	0	1.02	1	80	0
T	UG_L	FTA-MW-206	9/18/2015	37	1	2.7	1	0.046	1	0.939	1	9.2	1
T	UG_L	FTA-MW-210	11/29/2012	64.8	1	4	0	0.04	1	0.24	1	39.8	1
T	UG_L	FTA-MW-210	9/26/2013										
T	UG_L	FTA-MW-210	6/19/2014	24	1	4	0	0.2	0	0.15	1	80	0
T	UG_L	FTA-MW-210	9/21/2015	100	0	3.6	1	0.11	1	0.36	1	18	1
T	UG_L	FTA-MW-5	11/27/2012	58.8	1	7.6	1	0.2	0	2.1	1	1850	1
T	UG_L	FTA-MW-5	6/18/2014	100	0	4.4	1	0.2	0	2.07	1	1520	1
T	UG_L	FTA-MW-5	9/18/2015	214	1	16	1	0.16	1	3.65	1	3800	1
T	UG_L	FTA-MW-9	11/27/2012	87.8	1	2.7	1	0.2	0	4.2	1	3340	1
T	UG_L	FTA-MW-9	6/17/2014	100	0	2.7	1	0.2	0	4.22	1	3210	1
T	UG_L	FTA-MW-9	9/15/2015	60	1	2.6	1	0.043	1	5.16	1	4100	1

Groundwater

Location	Collected	MANGANESE	D_MANGANESE	PFOS	D_PFOS	PFOA	D_PFOA	CIS-1,2-DICHLOROETHENE	D_CIS-1,2-DICHLOROETHENE	VINYL CHLORIDE	D_VINYL CHLORIDE
FTA-DP-35	9/21/2015	49.3	1	0.0031	0	0.018	1	0.5	0		
FTA-MW-1	11/28/2012	55.6	1					0.5	0	0.025	0
FTA-MW-1	6/18/2014	34.8	1	0.018	0	0.011	1	0.5	0	0.05	0
FTA-MW-1	9/18/2015	94	1	0.0016	1	0.015	1	0.5	0		
FTA-MW-10	11/27/2012	1680	1					0.4	1	0.069	1
FTA-MW-10	6/17/2014	1690	1	0.016	1	0.027	1	0.5	0	0.081	1
FTA-MW-10	9/21/2015	2150	1	0.011	1	0.022	1	0.4	1		
FTA-MW-11	11/27/2012	513	1					0.34	1	0.025	0
FTA-MW-11	6/17/2014	488	1	0.25	1	0.016	1	0.24	1	0.05	0
FTA-MW-11	9/21/2015	794	1	0.15	1	0.017	1	0.5	0		
FTA-MW-12	11/27/2012	3190	1					0.43	1	0.025	0
FTA-MW-12	6/17/2014	1500	1	0.015	1	0.0074	0	0.5	0	0.05	0
FTA-MW-12	9/21/2015	1460	1	0.011	1	0.0056	1	0.3	1		
FTA-MW-14	11/27/2012	96.9	1	0.02	0	0.45	1	0.5	0	0.025	0
FTA-MW-14	6/17/2014	70	1	0.018	0	0.43	1	0.5	0	0.05	0
FTA-MW-14	9/21/2015	87.5	1	0.0013	1	0.35	1	0.5	0		
FTA-MW-206	11/28/2012	308	1					18	1	0.053	1
FTA-MW-206	9/26/2013							26	1	0.069	1
FTA-MW-206	6/18/2014	220	1	0.011	1	0.0075	0	22	1	0.054	1
FTA-MW-206	9/18/2015	180	1	0.003	0	0.0014	1	21	1		
FTA-MW-210	11/29/2012	51.8	1					0.5	0	0.025	0
FTA-MW-210	9/26/2013							0.5	0	0.025	0
FTA-MW-210	6/19/2014	47	1	0.018	0	0.0099	1	0.5	0	0.05	0
FTA-MW-210	9/21/2015	87.1	1	0.0036	1	0.012	1	0.5	0		
FTA-MW-5	11/27/2012	249	1	0.02	0	0.24	1	0.5	0	0.025	0
FTA-MW-5	6/18/2014	213	1	0.018	0	0.27	1	0.5	0	0.05	0
FTA-MW-5	9/18/2015	578	1	0.003	0	0.3	1	0.5	0		
FTA-MW-9	11/27/2012	3510	1	0.22	1	0.036	1	0.58	1	0.72	1
FTA-MW-9	6/17/2014	3060	1	0.18	1	0.026	1	0.38	1	0.84	1
FTA-MW-9	9/15/2015	3850	1	0.14	1	0.021	1	0.62	1		

ProUCL Output

UCL Statistics for Data Sets with Non-Detects			
User Selected Options			
Date/Time of Computation	ProUCL 5.110/31/2016 9:34:45 AM		
From File	WorkSheet_d.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
ALUMINUM			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	0
Minimum	4320	Mean	12235
Maximum	17000	Median	13750
SD	4496	Std. Error of Mean	1422
Coefficient of Variation	0.367	Skewness	-0.848
Normal GOF Test			
Shapiro Wilk Test Statistic	0.876	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	14841	95% Adjusted-CLT UCL (Chen-1995)	14166
		95% Modified-t UCL (Johnson-1978)	14777
Gamma GOF Test			
A-D Test Statistic	0.785	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.729	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.275	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.267	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	6.063	k star (bias corrected MLE)	4.311
Theta hat (MLE)	2018	Theta star (bias corrected MLE)	2838
nu hat (MLE)	121.3	nu star (bias corrected)	86.22
MLE Mean (bias corrected)	12235	MLE Sd (bias corrected)	5893
		Approximate Chi Square Value (0.05)	65.82
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	62.73
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	16028	95% Adjusted Gamma UCL (use when n<50)	16818
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.815	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.289	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	8.371	Mean of logged Data	9.327
Maximum of Logged Data	9.741	SD of logged Data	0.473
Assuming Lognormal Distribution			
95% H-UCL	17733	90% Chebyshev (MVUE) UCL	18082
95% Chebyshev (MVUE) UCL	20647	97.5% Chebyshev (MVUE) UCL	24207
99% Chebyshev (MVUE) UCL	31200		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	14573	95% Jackknife UCL	14841
95% Standard Bootstrap UCL	14443	95% Bootstrap-t UCL	14528
95% Hall's Bootstrap UCL	14135	95% Percentile Bootstrap UCL	14367
95% BCA Bootstrap UCL	14136		
90% Chebyshev(Mean, Sd) UCL	16500	95% Chebyshev(Mean, Sd) UCL	18432
97.5% Chebyshev(Mean, Sd) UCL	21113	99% Chebyshev(Mean, Sd) UCL	26380
Suggested UCL to Use			
95% Student's-t UCL	14841		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

ARSENIC			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	9
		Number of Missing Observations	0
Minimum	3.6	Mean	6.79
Maximum	12	Median	6.75
SD	2.274	Std. Error of Mean	0.719
Coefficient of Variation	0.335	Skewness	1.199
Normal GOF Test			
Shapiro Wilk Test Statistic	0.911	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.211	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.108	95% Adjusted-CLT UCL (Chen-1995)	8.264
		95% Modified-t UCL (Johnson-1978)	8.153
Gamma GOF Test			
A-D Test Statistic	0.267	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.725	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.166	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.267	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	10.72	k star (bias corrected MLE)	7.574
Theta hat (MLE)	0.633	Theta star (bias corrected MLE)	0.896
nu hat (MLE)	214.5	nu star (bias corrected)	151.5
MLE Mean (bias corrected)	6.79	MLE Sd (bias corrected)	2.467
		Approximate Chi Square Value (0.05)	124
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	119.7
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	8.293	95% Adjusted Gamma UCL (use when n<50)	8.591
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.971	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.155	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	1.281	Mean of logged Data	1.868
Maximum of Logged Data	2.485	SD of logged Data	0.323
Assuming Lognormal Distribution			
95% H-UCL	8.464	90% Chebyshev (MVUE) UCL	8.883
95% Chebyshev (MVUE) UCL	9.833	97.5% Chebyshev (MVUE) UCL	11.15
99% Chebyshev (MVUE) UCL	13.74		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	7.973	95% Jackknife UCL	8.108
95% Standard Bootstrap UCL	7.896	95% Bootstrap-t UCL	8.535
95% Hall's Bootstrap UCL	9.978	95% Percentile Bootstrap UCL	7.95
95% BCA Bootstrap UCL	8.16		
90% Chebyshev(Mean, Sd) UCL	8.947	95% Chebyshev(Mean, Sd) UCL	9.924
97.5% Chebyshev(Mean, Sd) UCL	11.28	99% Chebyshev(Mean, Sd) UCL	13.94
Suggested UCL to Use			
95% Student's-t UCL	8.108		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

COBALT			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	0
Minimum	6.8	Mean	11.44
Maximum	24.2	Median	10.95
SD	4.869	Std. Error of Mean	1.54
Coefficient of Variation	0.426	Skewness	2.269
Normal GOF Test			
Shapiro Wilk Test Statistic	0.734	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.346	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	14.26	95% Adjusted-CLT UCL (Chen-1995)	15.15
		95% Modified-t UCL (Johnson-1978)	14.45
Gamma GOF Test			
A-D Test Statistic	0.678	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.727	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.29	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.267	Data Not Gamma Distributed at 5% Significance Level	
Detected data follow Appr. Gamma Distribution at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	8.252	k star (bias corrected MLE)	5.843
Theta hat (MLE)	1.386	Theta star (bias corrected MLE)	1.958
nu hat (MLE)	165	nu star (bias corrected)	116.9
MLE Mean (bias corrected)	11.44	MLE Sd (bias corrected)	4.733
		Approximate Chi Square Value (0.05)	92.9
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	89.19
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50)	14.39	95% Adjusted Gamma UCL (use when n<50)	14.99
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.88	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.268	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	1.917	Mean of logged Data	2.375
Maximum of Logged Data	3.186	SD of logged Data	0.35
Assuming Lognormal Distribution			
95% H-UCL	14.48	90% Chebyshev (MVUE) UCL	15.16
95% Chebyshev (MVUE) UCL	16.88	97.5% Chebyshev (MVUE) UCL	19.28
99% Chebyshev (MVUE) UCL	23.97		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	13.97	95% Jackknife UCL	14.26
95% Standard Bootstrap UCL	13.85	95% Bootstrap-t UCL	16.5
95% Hall's Bootstrap UCL	24.86	95% Percentile Bootstrap UCL	14.07
95% BCA Bootstrap UCL	15.03		
90% Chebyshev(Mean, Sd) UCL	16.06	95% Chebyshev(Mean, Sd) UCL	18.15
97.5% Chebyshev(Mean, Sd) UCL	21.06	99% Chebyshev(Mean, Sd) UCL	26.76
Suggested UCL to Use			
95% Adjusted Gamma UCL	14.99		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

IRON			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	0
Minimum	6840	Mean	18580
Maximum	24800	Median	19650
SD	5992	Std. Error of Mean	1895
Coefficient of Variation	0.322	Skewness	-1.27
Normal GOF Test			
Shapiro Wilk Test Statistic	0.834	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.281	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	22053	95% Adjusted-CLT UCL (Chen-1995)	20884
		95% Modified-t UCL (Johnson-1978)	21927
Gamma GOF Test			
A-D Test Statistic	1.084	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.727	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.332	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.267	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	7.445	k star (bias corrected MLE)	5.278
Theta hat (MLE)	2496	Theta star (bias corrected MLE)	3520
nu hat (MLE)	148.9	nu star (bias corrected)	105.6
MLE Mean (bias corrected)	18580	MLE Sd (bias corrected)	8087
		Approximate Chi Square Value (0.05)	82.85
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	79.36
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	23673	95% Adjusted Gamma UCL (use when n<50)	24714
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.747	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.349	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	8.831	Mean of logged Data	9.761
Maximum of Logged Data	10.12	SD of logged Data	0.431
Assuming Lognormal Distribution			
95% H-UCL	25838	90% Chebyshev (MVUE) UCL	26658
95% Chebyshev (MVUE) UCL	30195	97.5% Chebyshev (MVUE) UCL	35106
99% Chebyshev (MVUE) UCL	44751		
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution (0.05)			
Nonparametric Distribution Free UCLs			
95% CLT UCL	21697	95% Jackknife UCL	22053
95% Standard Bootstrap UCL	21657	95% Bootstrap-t UCL	21412
95% Hall's Bootstrap UCL	20991	95% Percentile Bootstrap UCL	21450
95% BCA Bootstrap UCL	20856		
90% Chebyshev(Mean, Sd) UCL	24264	95% Chebyshev(Mean, Sd) UCL	26839
97.5% Chebyshev(Mean, Sd) UCL	30413	99% Chebyshev(Mean, Sd) UCL	37433
Suggested UCL to Use			
95% Student's-t UCL	22053	or 95% Modified-t UCL	21927
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

MANGANESE			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	0
Minimum	342	Mean	1703
Maximum	8600	Median	561.5
SD	2558	Std. Error of Mean	808.9
Coefficient of Variation	1.502	Skewness	2.629
Normal GOF Test			
Shapiro Wilk Test Statistic	0.583	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.363	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	3186	95% Adjusted-CLT UCL (Chen-1995)	3752
		95% Modified-t UCL (Johnson-1978)	3298
Gamma GOF Test			
A-D Test Statistic	1.292	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.375	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.274	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	0.926	k star (bias corrected MLE)	0.715
Theta hat (MLE)	1840	Theta star (bias corrected MLE)	2383
nu hat (MLE)	18.52	nu star (bias corrected)	14.3
MLE Mean (bias corrected)	1703	MLE Sd (bias corrected)	2015
		Approximate Chi Square Value (0.05)	6.774
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	5.898
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	3594	95% Adjusted Gamma UCL (use when n<50)	4129
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.794	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.338	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	5.835	Mean of logged Data	6.811
Maximum of Logged Data	9.06	SD of logged Data	1.044
Assuming Lognormal Distribution			
95% H-UCL	4764	90% Chebyshev (MVUE) UCL	2967
95% Chebyshev (MVUE) UCL	3653	97.5% Chebyshev (MVUE) UCL	4605
99% Chebyshev (MVUE) UCL	6474		
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution (0.05)			
Nonparametric Distribution Free UCLs			
95% CLT UCL	3034	95% Jackknife UCL	3186
95% Standard Bootstrap UCL	2967	95% Bootstrap-t UCL	6489
95% Hall's Bootstrap UCL	6971	95% Percentile Bootstrap UCL	3144
95% BCA Bootstrap UCL	3904		
90% Chebyshev(Mean, Sd) UCL	4130	95% Chebyshev(Mean, Sd) UCL	5229
97.5% Chebyshev(Mean, Sd) UCL	6755	99% Chebyshev(Mean, Sd) UCL	9752
Suggested UCL to Use			
95% Chebyshev (Mean, Sd) UCL	5229		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

THALLIUM			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	6
		Number of Missing Observations	0
Minimum	0.05	Mean	0.077
Maximum	0.1	Median	0.075
SD	0.0157	Std. Error of Mean	0.00496
Coefficient of Variation	0.204	Skewness	-0.247
Normal GOF Test			
Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0861	95% Adjusted-CLT UCL (Chen-1995)	0.0847
		95% Modified-t UCL (Johnson-1978)	0.086
Gamma GOF Test			
A-D Test Statistic	0.38	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.725	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.208	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.266	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	25.22	k star (bias corrected MLE)	17.72
Theta hat (MLE)	0.00305	Theta star (bias corrected MLE)	0.00435
nu hat (MLE)	504.4	nu star (bias corrected)	354.4
MLE Mean (bias corrected)	0.077	MLE Sd (bias corrected)	0.0183
		Approximate Chi Square Value (0.05)	311.8
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	304.8
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	0.0875	95% Adjusted Gamma UCL (use when n<50)	0.0895
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.93	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.194	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	-2.996	Mean of logged Data	-2.584
Maximum of Logged Data	-2.303	SD of logged Data	0.215
Assuming Lognormal Distribution			
95% H-UCL	0.0884	90% Chebyshev (MVUE) UCL	0.0928
95% Chebyshev (MVUE) UCL	0.0999	97.5% Chebyshev (MVUE) UCL	0.11
99% Chebyshev (MVUE) UCL	0.129		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	0.0852	95% Jackknife UCL	0.0861
95% Standard Bootstrap UCL	0.0847	95% Bootstrap-t UCL	0.0861
95% Hall's Bootstrap UCL	0.0848	95% Percentile Bootstrap UCL	0.085
95% BCA Bootstrap UCL	0.083		
90% Chebyshev(Mean, Sd) UCL	0.0919	95% Chebyshev(Mean, Sd) UCL	0.0986
97.5% Chebyshev(Mean, Sd) UCL	0.108	99% Chebyshev(Mean, Sd) UCL	0.126
Suggested UCL to Use			
95% Student's-t UCL	0.0861		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

VANADIUM			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	10
		Number of Missing Observations	0
Minimum	17.8	Mean	30.28
Maximum	42.7	Median	30.45
SD	7.677	Std. Error of Mean	2.428
Coefficient of Variation	0.254	Skewness	-0.34
Normal GOF Test			
Shapiro Wilk Test Statistic	0.944	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.193	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	34.73	95% Adjusted-CLT UCL (Chen-1995)	33.99
		95% Modified-t UCL (Johnson-1978)	34.69
Gamma GOF Test			
A-D Test Statistic	0.456	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.725	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.224	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.266	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	15.48	k star (bias corrected MLE)	10.9
Theta hat (MLE)	1.956	Theta star (bias corrected MLE)	2.778
nu hat (MLE)	309.6	nu star (bias corrected)	218
MLE Mean (bias corrected)	30.28	MLE Sd (bias corrected)	9.171
		Approximate Chi Square Value (0.05)	184.9
Adjusted Level of Significance	0.0267	Adjusted Chi Square Value	179.5
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	35.71	95% Adjusted Gamma UCL (use when n<50)	36.77
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.898	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.245	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.262	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	2.879	Mean of logged Data	3.378
Maximum of Logged Data	3.754	SD of logged Data	0.279
Assuming Lognormal Distribution			
95% H-UCL	36.54	90% Chebyshev (MVUE) UCL	38.42
95% Chebyshev (MVUE) UCL	42.07	97.5% Chebyshev (MVUE) UCL	47.15
99% Chebyshev (MVUE) UCL	57.12		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	34.27	95% Jackknife UCL	34.73
95% Standard Bootstrap UCL	34.13	95% Bootstrap-t UCL	34.1
95% Hall's Bootstrap UCL	34.23	95% Percentile Bootstrap UCL	34.04
95% BCA Bootstrap UCL	34.01		
90% Chebyshev(Mean, Sd) UCL	37.56	95% Chebyshev(Mean, Sd) UCL	40.86
97.5% Chebyshev(Mean, Sd) UCL	45.44	99% Chebyshev(Mean, Sd) UCL	54.43
Suggested UCL to Use			
95% Student's-t UCL	34.73		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

TOTAL AROCLORS			
General Statistics			
Total Number of Observations	10	Number of Distinct Observations	9
Number of Detects	6	Number of Non-Detects	4
Number of Distinct Detects	6	Number of Distinct Non-Detects	3
Minimum Detect	0.015	Minimum Non-Detect	0.0097
Maximum Detect	0.87	Maximum Non-Detect	0.012
Variance Detects	0.13	Percent Non-Detects	40%
Mean Detects	0.276	SD Detects	0.361
Median Detects	0.074	CV Detects	1.31
Skewness Detects	1.213	Kurtosis Detects	-0.288
Mean of Logged Detects	-2.236	SD of Logged Detects	1.592
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.764	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.353	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.169	KM Standard Error of Mean	0.0993
KM SD	0.287	95% KM (BCA) UCL	0.361
95% KM (t) UCL	0.351	95% KM (Percentile Bootstrap) UCL	0.328
95% KM (z) UCL	0.333	95% KM Bootstrap t UCL	1.593
90% KM Chebyshev UCL	0.467	95% KM Chebyshev UCL	0.602
97.5% KM Chebyshev UCL	0.789	99% KM Chebyshev UCL	1.157
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.477	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.727	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.268	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.346	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.645	k star (bias corrected MLE)	0.434
Theta hat (MLE)	0.427	Theta star (bias corrected MLE)	0.636
nu hat (MLE)	7.742	nu star (bias corrected)	5.204
Mean (detects)	0.276		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	0.169
Maximum	0.87	Median	0.028
SD	0.302	CV	1.783
k hat (MLE)	0.457	k star (bias corrected MLE)	0.387
Theta hat (MLE)	0.37	Theta star (bias corrected MLE)	0.438
nu hat (MLE)	9.147	nu star (bias corrected)	7.737
Adjusted Level of Significance (β)	0.0267		
Approximate Chi Square Value (7.74, α)	2.583	Adjusted Chi Square Value (7.74, β)	2.096
95% Gamma Approximate UCL (use when n>=50)	0.507	95% Gamma Adjusted UCL (use when n<50)	0.625
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.169	SD (KM)	0.287
Variance (KM)	0.0821	SE of Mean (KM)	0.0993
k hat (KM)	0.349	k star (KM)	0.311
nu hat (KM)	6.978	nu star (KM)	6.218
theta hat (KM)	0.485	theta star (KM)	0.544
80% gamma percentile (KM)	0.262	90% gamma percentile (KM)	0.497
95% gamma percentile (KM)	0.766	99% gamma percentile (KM)	1.46
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (6.22, α)	1.752	Adjusted Chi Square Value (6.22, β)	1.373
95% Gamma Approximate KM-UCL (use when n>=50)	0.601	95% Gamma Adjusted KM-UCL (use when n<50)	0.767
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.166	Mean in Log Scale	-3.969
SD in Original Scale	0.304	SD in Log Scale	2.556
95% t UCL (assumes normality of ROS data)	0.342	95% Percentile Bootstrap UCL	0.335
95% BCA Bootstrap UCL	0.383	95% Bootstrap t UCL	1.48
95% H-UCL (Log ROS)	156.8		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-3.196	KM Geo Mean	0.0409
KM SD (logged)	1.628	95% Critical H Value (KM-Log)	4.505
KM Standard Error of Mean (logged)	0.564	95% H-UCL (KM -Log)	1.773
KM SD (logged)	1.628	95% Critical H Value (KM-Log)	4.505
KM Standard Error of Mean (logged)	0.564		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.168	Mean in Log Scale	-3.418
SD in Original Scale	0.303	SD in Log Scale	1.934
95% t UCL (Assumes normality)	0.343	95% H-Stat UCL	6.216
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Gamma Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM Bootstrap t UCL	1.593	Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	0.767
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Soil Exposure Area 1 - Subsurface Soil

UCL Statistics for Data Sets with Non-Detects			
User Selected Options			
Date/Time of Computation	ProUCL 5.110/31/2016 10:13:37 AM		
From File	WorkSheet_f.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
ALUMINUM			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
		Number of Missing Observations	1
Minimum	3550	Mean	13488
Maximum	19100	Median	14400
SD	4769	Std. Error of Mean	1438
Coefficient of Variation	0.354	Skewness	-0.728
Normal GOF Test			
Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	16094	95% Adjusted-CLT UCL (Chen-1995)	15516
		95% Modified-t UCL (Johnson-1978)	16042
Gamma GOF Test			
A-D Test Statistic	0.548	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.731	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.163	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.256	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	6.096	k star (bias corrected MLE)	4.494
Theta hat (MLE)	2213	Theta star (bias corrected MLE)	3002
nu hat (MLE)	134.1	nu star (bias corrected)	98.86
MLE Mean (bias corrected)	13488	MLE Sd (bias corrected)	6363
		Approximate Chi Square Value (0.05)	76.93
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	73.78
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	17335	95% Adjusted Gamma UCL (use when n<50)	18075
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.807	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.199	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	8.175	Mean of logged Data	9.425
Maximum of Logged Data	9.857	SD of logged Data	0.485
Assuming Lognormal Distribution			
95% H-UCL	19406	90% Chebyshev (MVUE) UCL	19947
95% Chebyshev (MVUE) UCL	22739	97.5% Chebyshev (MVUE) UCL	26614
99% Chebyshev (MVUE) UCL	34226		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	15853	95% Jackknife UCL	16094
95% Standard Bootstrap UCL	15716	95% Bootstrap-t UCL	15816
95% Hall's Bootstrap UCL	15572	95% Percentile Bootstrap UCL	15636
95% BCA Bootstrap UCL	15577		
90% Chebyshev(Mean, Sd) UCL	17802	95% Chebyshev(Mean, Sd) UCL	19756
97.5% Chebyshev(Mean, Sd) UCL	22467	99% Chebyshev(Mean, Sd) UCL	27794
Suggested UCL to Use			
95% Student's-t UCL	16094		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

Soil Exposure Area 1 - Subsurface Soil

ARSENIC			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
		Number of Missing Observations	1
Minimum	3.4	Mean	8.109
Maximum	12.9	Median	8
SD	3.039	Std. Error of Mean	0.916
Coefficient of Variation	0.375	Skewness	-0.0384
Normal GOF Test			
Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.15	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.77	95% Adjusted-CLT UCL (Chen-1995)	9.605
		95% Modified-t UCL (Johnson-1978)	9.768
Gamma GOF Test			
A-D Test Statistic	0.377	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.731	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.186	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.256	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	6.747	k star (bias corrected MLE)	4.967
Theta hat (MLE)	1.202	Theta star (bias corrected MLE)	1.633
nu hat (MLE)	148.4	nu star (bias corrected)	109.3
MLE Mean (bias corrected)	8.109	MLE Sd (bias corrected)	3.638
		Approximate Chi Square Value (0.05)	86.15
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	82.81
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	10.29	95% Adjusted Gamma UCL (use when n<50)	10.7
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.904	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.213	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	1.224	Mean of logged Data	2.017
Maximum of Logged Data	2.557	SD of logged Data	0.431
Assuming Lognormal Distribution			
95% H-UCL	10.97	90% Chebyshev (MVUE) UCL	11.41
95% Chebyshev (MVUE) UCL	12.88	97.5% Chebyshev (MVUE) UCL	14.91
99% Chebyshev (MVUE) UCL	18.91		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	9.616	95% Jackknife UCL	9.77
95% Standard Bootstrap UCL	9.519	95% Bootstrap-t UCL	9.779
95% Hall's Bootstrap UCL	9.639	95% Percentile Bootstrap UCL	9.455
95% BCA Bootstrap UCL	9.573		
90% Chebyshev(Mean, Sd) UCL	10.86	95% Chebyshev(Mean, Sd) UCL	12.1
97.5% Chebyshev(Mean, Sd) UCL	13.83	99% Chebyshev(Mean, Sd) UCL	17.22
Suggested UCL to Use			
95% Student's-t UCL	9.77		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

Soil Exposure Area 1 - Subsurface Soil

COBALT			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
		Number of Missing Observations	1
Minimum	2.2	Mean	10.25
Maximum	15.8	Median	10.6
SD	4.038	Std. Error of Mean	1.217
Coefficient of Variation	0.394	Skewness	-0.759
Normal GOF Test			
Shapiro Wilk Test Statistic	0.947	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.174	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	12.46	95% Adjusted-CLT UCL (Chen-1995)	11.96
		95% Modified-t UCL (Johnson-1978)	12.41
Gamma GOF Test			
A-D Test Statistic	0.642	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.732	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.208	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.256	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	4.609	k star (bias corrected MLE)	3.413
Theta hat (MLE)	2.225	Theta star (bias corrected MLE)	3.005
nu hat (MLE)	101.4	nu star (bias corrected)	75.08
MLE Mean (bias corrected)	10.25	MLE Sd (bias corrected)	5.551
		Approximate Chi Square Value (0.05)	56.13
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	53.46
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	13.72	95% Adjusted Gamma UCL (use when n<50)	14.4
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.805	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.249	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	0.788	Mean of logged Data	2.215
Maximum of Logged Data	2.76	SD of logged Data	0.57
Assuming Lognormal Distribution			
95% H-UCL	16.24	90% Chebyshev (MVUE) UCL	16.22
95% Chebyshev (MVUE) UCL	18.76	97.5% Chebyshev (MVUE) UCL	22.29
99% Chebyshev (MVUE) UCL	29.23		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	12.26	95% Jackknife UCL	12.46
95% Standard Bootstrap UCL	12.17	95% Bootstrap-t UCL	12.08
95% Hall's Bootstrap UCL	12.04	95% Percentile Bootstrap UCL	12.04
95% BCA Bootstrap UCL	11.99		
90% Chebyshev(Mean, Sd) UCL	13.91	95% Chebyshev(Mean, Sd) UCL	15.56
97.5% Chebyshev(Mean, Sd) UCL	17.86	99% Chebyshev(Mean, Sd) UCL	22.37
Suggested UCL to Use			
95% Student's-t UCL	12.46		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

Soil Exposure Area 1 - Subsurface Soil

IRON			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
		Number of Missing Observations	1
Minimum	2490	Mean	22126
Maximum	34700	Median	22500
SD	9702	Std. Error of Mean	2925
Coefficient of Variation	0.438	Skewness	-0.689
Normal GOF Test			
Shapiro Wilk Test Statistic	0.952	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.15	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	27428	95% Adjusted-CLT UCL (Chen-1995)	26288
		95% Modified-t UCL (Johnson-1978)	27327
Gamma GOF Test			
A-D Test Statistic	0.729	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.733	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.251	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.257	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	3.114	k star (bias corrected MLE)	2.325
Theta hat (MLE)	7106	Theta star (bias corrected MLE)	9516
nu hat (MLE)	68.5	nu star (bias corrected)	51.15
MLE Mean (bias corrected)	22126	MLE Sd (bias corrected)	14511
		Approximate Chi Square Value (0.05)	35.73
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	33.64
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	31679	95% Adjusted Gamma UCL (use when n<50)	33649
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.743	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.295	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.251	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	7.82	Mean of logged Data	9.835
Maximum of Logged Data	10.45	SD of logged Data	0.75
Assuming Lognormal Distribution			
95% H-UCL	45332	90% Chebyshev (MVUE) UCL	40976
95% Chebyshev (MVUE) UCL	48662	97.5% Chebyshev (MVUE) UCL	59328
99% Chebyshev (MVUE) UCL	80281		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	26938	95% Jackknife UCL	27428
95% Standard Bootstrap UCL	26773	95% Bootstrap-t UCL	26811
95% Hall's Bootstrap UCL	26627	95% Percentile Bootstrap UCL	26545
95% BCA Bootstrap UCL	26427		
90% Chebyshev(Mean, Sd) UCL	30902	95% Chebyshev(Mean, Sd) UCL	34878
97.5% Chebyshev(Mean, Sd) UCL	40395	99% Chebyshev(Mean, Sd) UCL	51233
Suggested UCL to Use			
95% Student's-t UCL	27428		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

Soil Exposure Area 1 - Subsurface Soil

MANGANESE			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
		Number of Missing Observations	1
Minimum	249	Mean	587.8
Maximum	1460	Median	521
SD	313.4	Std. Error of Mean	94.51
Coefficient of Variation	0.533	Skewness	2.42
Normal GOF Test			
Shapiro Wilk Test Statistic	0.725	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.311	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	759.1	95% Adjusted-CLT UCL (Chen-1995)	816.9
		95% Modified-t UCL (Johnson-1978)	770.6
Gamma GOF Test			
A-D Test Statistic	0.65	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.731	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.239	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.256	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	5.435	k star (bias corrected MLE)	4.013
Theta hat (MLE)	108.2	Theta star (bias corrected MLE)	146.5
nu hat (MLE)	119.6	nu star (bias corrected)	88.29
MLE Mean (bias corrected)	587.8	MLE Sd (bias corrected)	293.4
		Approximate Chi Square Value (0.05)	67.63
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	64.69
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50)	767.4	95% Adjusted Gamma UCL (use when n<50)	802.3
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.215	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.251	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	5.517	Mean of logged Data	6.282
Maximum of Logged Data	7.286	SD of logged Data	0.433
Assuming Lognormal Distribution			
95% H-UCL	782.2	90% Chebyshev (MVUE) UCL	813.6
95% Chebyshev (MVUE) UCL	918.6	97.5% Chebyshev (MVUE) UCL	1064
99% Chebyshev (MVUE) UCL	1350		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	743.3	95% Jackknife UCL	759.1
95% Standard Bootstrap UCL	739.4	95% Bootstrap-t UCL	923.7
95% Hall's Bootstrap UCL	1448	95% Percentile Bootstrap UCL	755.8
95% BCA Bootstrap UCL	802.2		
90% Chebyshev(Mean, Sd) UCL	871.3	95% Chebyshev(Mean, Sd) UCL	999.8
97.5% Chebyshev(Mean, Sd) UCL	1178	99% Chebyshev(Mean, Sd) UCL	1528
Suggested UCL to Use			
95% Adjusted Gamma UCL	802.3		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Soil Exposure Area 1 - Subsurface Soil

THALLIUM			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	8
		Number of Missing Observations	1
Number of Detects	10	Number of Non-Detects	1
Number of Distinct Detects	8	Number of Distinct Non-Detects	1
Minimum Detect	0.05	Minimum Non-Detect	0.05
Maximum Detect	0.15	Maximum Non-Detect	0.05
Variance Detects	0.00109	Percent Non-Detects	9.091%
Mean Detects	0.094	SD Detects	0.0331
Median Detects	0.095	CV Detects	0.352
Skewness Detects	0.481	Kurtosis Detects	-0.664
Mean of Logged Detects	-2.421	SD of Logged Detects	0.358
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.166	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.09	KM Standard Error of Mean	0.0103
KM SD	0.0325	95% KM (BCA) UCL	0.106
95% KM (t) UCL	0.109	95% KM (Percentile Bootstrap) UCL	0.106
95% KM (z) UCL	0.107	95% KM Bootstrap t UCL	0.111
90% KM Chebyshev UCL	0.121	95% KM Chebyshev UCL	0.135
97.5% KM Chebyshev UCL	0.154	99% KM Chebyshev UCL	0.193
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.236	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.726	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.167	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.267	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	8.987	k star (bias corrected MLE)	6.357
Theta hat (MLE)	0.0105	Theta star (bias corrected MLE)	0.0148
nu hat (MLE)	179.7	nu star (bias corrected)	127.1
Mean (detects)	0.094		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.027	Mean	0.0879
Maximum	0.15	Median	0.09
SD	0.0373	CV	0.424
k hat (MLE)	5.269	k star (bias corrected MLE)	3.893
Theta hat (MLE)	0.0167	Theta star (bias corrected MLE)	0.0226
nu hat (MLE)	115.9	nu star (bias corrected)	85.64
Adjusted Level of Significance (β)	0.0278		
Approximate Chi Square Value (85.64, α)	65.31	Adjusted Chi Square Value (85.64, β)	62.42
95% Gamma Approximate UCL (use when n>=50)	0.115	95% Gamma Adjusted UCL (use when n<50)	0.121
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.09	SD (KM)	0.0325
Variance (KM)	0.00105	SE of Mean (KM)	0.0103
k hat (KM)	7.681	k star (KM)	5.647
nu hat (KM)	169	nu star (KM)	124.2
theta hat (KM)	0.0117	theta star (KM)	0.0159
80% gamma percentile (KM)	0.119	90% gamma percentile (KM)	0.141
95% gamma percentile (KM)	0.16	99% gamma percentile (KM)	0.201
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (124.23, α)	99.49	Adjusted Chi Square Value (124.23, β)	95.88
95% Gamma Approximate KM-UCL (use when n>=50)	0.112	95% Gamma Adjusted KM-UCL (use when n<50)	0.117
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.147	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0888	Mean in Log Scale	-2.501
SD in Original Scale	0.0358	SD in Log Scale	0.431
95% t UCL (assumes normality of ROS data)	0.108	95% Percentile Bootstrap UCL	0.105
95% BCA Bootstrap UCL	0.105	95% Bootstrap t UCL	0.11
95% H-UCL (Log ROS)	0.12		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.473	KM Geo Mean	0.0843
KM SD (logged)	0.363	95% Critical H Value (KM-Log)	2.014
KM Standard Error of Mean (logged)	0.116	95% H-UCL (KM -Log)	0.114
KM SD (logged)	0.363	95% Critical H Value (KM-Log)	2.014
KM Standard Error of Mean (logged)	0.116		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0877	Mean in Log Scale	-2.536
SD in Original Scale	0.0376	SD in Log Scale	0.511
95% t UCL (Assumes normality)	0.108	95% H-Stat UCL	0.129
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	0.109		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Soil Exposure Area 1 - Subsurface Soil

VANADIUM			
General Statistics			
Total Number of Observations	11	Number of Distinct Observations	11
		Number of Missing Observations	1
Minimum	11.6	Mean	33.41
Maximum	42.4	Median	38.1
SD	9.832	Std. Error of Mean	2.964
Coefficient of Variation	0.294	Skewness	-1.379
Normal GOF Test			
Shapiro Wilk Test Statistic	0.81	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.283	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	38.78	95% Adjusted-CLT UCL (Chen-1995)	36.97
		95% Modified-t UCL (Johnson-1978)	38.58
Gamma GOF Test			
A-D Test Statistic	1.183	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.73	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.302	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.256	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	8.796	k star (bias corrected MLE)	6.458
Theta hat (MLE)	3.798	Theta star (bias corrected MLE)	5.173
nu hat (MLE)	193.5	nu star (bias corrected)	142.1
MLE Mean (bias corrected)	33.41	MLE Sd (bias corrected)	13.15
		Approximate Chi Square Value (0.05)	115.5
Adjusted Level of Significance	0.0278	Adjusted Chi Square Value	111.6
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	41.09	95% Adjusted Gamma UCL (use when n<50)	42.52
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.731	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.296	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.251	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	2.451	Mean of logged Data	3.451
Maximum of Logged Data	3.747	SD of logged Data	0.396
Assuming Lognormal Distribution			
95% H-UCL	44.06	90% Chebyshev (MVUE) UCL	46.12
95% Chebyshev (MVUE) UCL	51.68	97.5% Chebyshev (MVUE) UCL	59.39
99% Chebyshev (MVUE) UCL	74.56		
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution (0.05)			
Nonparametric Distribution Free UCLs			
95% CLT UCL	38.29	95% Jackknife UCL	38.78
95% Standard Bootstrap UCL	38.05	95% Bootstrap-t UCL	37.75
95% Hall's Bootstrap UCL	37.16	95% Percentile Bootstrap UCL	37.75
95% BCA Bootstrap UCL	37.26		
90% Chebyshev(Mean, Sd) UCL	42.3	95% Chebyshev(Mean, Sd) UCL	46.33
97.5% Chebyshev(Mean, Sd) UCL	51.92	99% Chebyshev(Mean, Sd) UCL	62.9
Suggested UCL to Use			
95% Student's-t UCL	38.78	or 95% Modified-t UCL	38.58
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.			

UCL Statistics for Data Sets with Non-Detects			
User Selected Options			
Date/Time of Computation	ProUCL 5.13/3/2017 9:23:40 AM		
From File	WorkSheet_a.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
FFTA_RA_SO_Metals|ALUMINUM			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	23
		Number of Missing Observations	50
Minimum	8970	Mean	13733
Maximum	19700	Median	13400
SD	2462	Std. Error of Mean	473.8
Coefficient of Variation	0.179	Skewness	0.554
Normal GOF Test			
Shapiro Wilk Test Statistic	0.955	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.141	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	14541	95% Adjusted-CLT UCL (Chen-1995)	14566
		95% Modified-t UCL (Johnson-1978)	14550
Gamma GOF Test			
A-D Test Statistic	0.422	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.123	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	32.89	k star (bias corrected MLE)	29.26
Theta hat (MLE)	417.6	Theta star (bias corrected MLE)	469.4
nu hat (MLE)	1776	nu star (bias corrected)	1580
MLE Mean (bias corrected)	13733	MLE Sd (bias corrected)	2539
		Approximate Chi Square Value (0.05)	1489
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	1483
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	14575	95% Adjusted Gamma UCL (use when n<50)	14631
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.97	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.12	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	9.102	Mean of logged Data	9.512
Maximum of Logged Data	9.888	SD of logged Data	0.178
Assuming Lognormal Distribution			
95% H-UCL	14609	90% Chebyshev (MVUE) UCL	15156
95% Chebyshev (MVUE) UCL	15800	97.5% Chebyshev (MVUE) UCL	16694
99% Chebyshev (MVUE) UCL	18450		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	14512	95% Jackknife UCL	14541
95% Standard Bootstrap UCL	14501	95% Bootstrap-t UCL	14585
95% Hall's Bootstrap UCL	14624	95% Percentile Bootstrap UCL	14466
95% BCA Bootstrap UCL	14551		
90% Chebyshev(Mean, Sd) UCL	15154	95% Chebyshev(Mean, Sd) UCL	15798
97.5% Chebyshev(Mean, Sd) UCL	16692	99% Chebyshev(Mean, Sd) UCL	18447
Suggested UCL to Use			
95% Student's-t UCL	14541		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|ARSENIC			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	25
		Number of Missing Observations	50
Minimum	4.6	Mean	7.904
Maximum	11.3	Median	7.7
SD	1.821	Std. Error of Mean	0.35
Coefficient of Variation	0.23	Skewness	0.286
Normal GOF Test			
Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.105	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.502	95% Adjusted-CLT UCL (Chen-1995)	8.501
		95% Modified-t UCL (Johnson-1978)	8.505
Gamma GOF Test			
A-D Test Statistic	0.193	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0917	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	19.39	k star (bias corrected MLE)	17.26
Theta hat (MLE)	0.408	Theta star (bias corrected MLE)	0.458
nu hat (MLE)	1047	nu star (bias corrected)	932
MLE Mean (bias corrected)	7.904	MLE Sd (bias corrected)	1.903
		Approximate Chi Square Value (0.05)	862.1
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	857.8
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	8.545	95% Adjusted Gamma UCL (use when n<50)	8.588
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0869	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	1.526	Mean of logged Data	2.041
Maximum of Logged Data	2.425	SD of logged Data	0.234
Assuming Lognormal Distribution			
95% H-UCL	8.59	90% Chebyshev (MVUE) UCL	8.988
95% Chebyshev (MVUE) UCL	9.477	97.5% Chebyshev (MVUE) UCL	10.16
99% Chebyshev (MVUE) UCL	11.49		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	8.481	95% Jackknife UCL	8.502
95% Standard Bootstrap UCL	8.461	95% Bootstrap-t UCL	8.52
95% Hall's Bootstrap UCL	8.521	95% Percentile Bootstrap UCL	8.494
95% BCA Bootstrap UCL	8.503		
90% Chebyshev(Mean, Sd) UCL	8.956	95% Chebyshev(Mean, Sd) UCL	9.432
97.5% Chebyshev(Mean, Sd) UCL	10.09	99% Chebyshev(Mean, Sd) UCL	11.39
Suggested UCL to Use			
95% Student's-t UCL	8.502		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|COBALT			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	22
		Number of Missing Observations	50
Minimum	7.8	Mean	11.05
Maximum	15.2	Median	11.2
SD	1.885	Std. Error of Mean	0.363
Coefficient of Variation	0.171	Skewness	0.336
Normal GOF Test			
Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.16	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	11.67	95% Adjusted-CLT UCL (Chen-1995)	11.67
		95% Modified-t UCL (Johnson-1978)	11.67
Gamma GOF Test			
A-D Test Statistic	0.659	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.163	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	35.68	k star (bias corrected MLE)	31.74
Theta hat (MLE)	0.31	Theta star (bias corrected MLE)	0.348
nu hat (MLE)	1927	nu star (bias corrected)	1714
MLE Mean (bias corrected)	11.05	MLE Sd (bias corrected)	1.961
		Approximate Chi Square Value (0.05)	1619
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	1613
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	11.7	95% Adjusted Gamma UCL (use when n<50)	11.74
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.945	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data Not Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	2.054	Mean of logged Data	2.388
Maximum of Logged Data	2.721	SD of logged Data	0.172
Assuming Lognormal Distribution			
95% H-UCL	11.72	90% Chebyshev (MVUE) UCL	12.15
95% Chebyshev (MVUE) UCL	12.65	97.5% Chebyshev (MVUE) UCL	13.34
99% Chebyshev (MVUE) UCL	14.7		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	11.64	95% Jackknife UCL	11.67
95% Standard Bootstrap UCL	11.63	95% Bootstrap-t UCL	11.68
95% Hall's Bootstrap UCL	11.7	95% Percentile Bootstrap UCL	11.63
95% BCA Bootstrap UCL	11.64		
90% Chebyshev(Mean, Sd) UCL	12.14	95% Chebyshev(Mean, Sd) UCL	12.63
97.5% Chebyshev(Mean, Sd) UCL	13.31	99% Chebyshev(Mean, Sd) UCL	14.66
Suggested UCL to Use			
95% Student's-t UCL	11.67		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|IRON			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	25
		Number of Missing Observations	50
Minimum	16400	Mean	23100
Maximum	32000	Median	22800
SD	3575	Std. Error of Mean	688.1
Coefficient of Variation	0.155	Skewness	0.446
Normal GOF Test			
Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level	
Data appear Approximate Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	24274	95% Adjusted-CLT UCL (Chen-1995)	24295
		95% Modified-t UCL (Johnson-1978)	24283
Gamma GOF Test			
A-D Test Statistic	0.57	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.743	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.154	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	43.73	k star (bias corrected MLE)	38.9
Theta hat (MLE)	528.2	Theta star (bias corrected MLE)	593.8
nu hat (MLE)	2362	nu star (bias corrected)	2101
MLE Mean (bias corrected)	23100	MLE Sd (bias corrected)	3704
		Approximate Chi Square Value (0.05)	1995
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	1989
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	24321	95% Adjusted Gamma UCL (use when n<50)	24401
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.149	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	9.705	Mean of logged Data	10.04
Maximum of Logged Data	10.37	SD of logged Data	0.155
Assuming Lognormal Distribution			
95% H-UCL	24363	90% Chebyshev (MVUE) UCL	25173
95% Chebyshev (MVUE) UCL	26112	97.5% Chebyshev (MVUE) UCL	27415
99% Chebyshev (MVUE) UCL	29974		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	24232	95% Jackknife UCL	24274
95% Standard Bootstrap UCL	24231	95% Bootstrap-t UCL	24325
95% Hall's Bootstrap UCL	24422	95% Percentile Bootstrap UCL	24211
95% BCA Bootstrap UCL	24304		
90% Chebyshev(Mean, Sd) UCL	25164	95% Chebyshev(Mean, Sd) UCL	26099
97.5% Chebyshev(Mean, Sd) UCL	27397	99% Chebyshev(Mean, Sd) UCL	29946
Suggested UCL to Use			
95% Student's-t UCL	24274		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|MANGANESE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	26
		Number of Missing Observations	50
Minimum	315	Mean	498.2
Maximum	686	Median	498
SD	94.33	Std. Error of Mean	18.15
Coefficient of Variation	0.189	Skewness	0.221
Normal GOF Test			
Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.13	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	529.1	95% Adjusted-CLT UCL (Chen-1995)	528.9
		95% Modified-t UCL (Johnson-1978)	529.3
Gamma GOF Test			
A-D Test Statistic	0.494	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.112	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	28.45	k star (bias corrected MLE)	25.31
Theta hat (MLE)	17.51	Theta star (bias corrected MLE)	19.68
nu hat (MLE)	1536	nu star (bias corrected)	1367
MLE Mean (bias corrected)	498.2	MLE Sd (bias corrected)	99.02
		Approximate Chi Square Value (0.05)	1282
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	1277
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	531.2	95% Adjusted Gamma UCL (use when n<50)	533.3
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.124	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	5.753	Mean of logged Data	6.193
Maximum of Logged Data	6.531	SD of logged Data	0.194
Assuming Lognormal Distribution			
95% H-UCL	533.1	90% Chebyshev (MVUE) UCL	554.4
95% Chebyshev (MVUE) UCL	579.8	97.5% Chebyshev (MVUE) UCL	615.1
99% Chebyshev (MVUE) UCL	684.3		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	528	95% Jackknife UCL	529.1
95% Standard Bootstrap UCL	528.2	95% Bootstrap-t UCL	530.2
95% Hall's Bootstrap UCL	531.4	95% Percentile Bootstrap UCL	527.4
95% BCA Bootstrap UCL	528.7		
90% Chebyshev(Mean, Sd) UCL	552.6	95% Chebyshev(Mean, Sd) UCL	577.3
97.5% Chebyshev(Mean, Sd) UCL	611.6	99% Chebyshev(Mean, Sd) UCL	678.8
Suggested UCL to Use			
95% Student's-t UCL	529.1		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|THALLIUM			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	21
		Number of Missing Observations	50
Minimum	0.05	Mean	0.0808
Maximum	0.14	Median	0.078
SD	0.0223	Std. Error of Mean	0.0043
Coefficient of Variation	0.276	Skewness	1.067
Normal GOF Test			
Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0882	95% Adjusted-CLT UCL (Chen-1995)	0.0888
		95% Modified-t UCL (Johnson-1978)	0.0883
Gamma GOF Test			
A-D Test Statistic	0.68	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.181	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.168	Data Not Gamma Distributed at 5% Significance Level	
Detected data follow Appr. Gamma Distribution at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	15.08	k star (bias corrected MLE)	13.43
Theta hat (MLE)	0.00536	Theta star (bias corrected MLE)	0.00602
nu hat (MLE)	814.2	nu star (bias corrected)	725.1
MLE Mean (bias corrected)	0.0808	MLE Sd (bias corrected)	0.0221
		Approximate Chi Square Value (0.05)	663.6
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	659.8
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50)	0.0883	95% Adjusted Gamma UCL (use when n<50)	0.0888
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.164	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	-2.996	Mean of logged Data	-2.549
Maximum of Logged Data	-1.966	SD of logged Data	0.259
Assuming Lognormal Distribution			
95% H-UCL	0.0886	90% Chebyshev (MVUE) UCL	0.093
95% Chebyshev (MVUE) UCL	0.0985	97.5% Chebyshev (MVUE) UCL	0.106
99% Chebyshev (MVUE) UCL	0.121		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	0.0879	95% Jackknife UCL	0.0882
95% Standard Bootstrap UCL	0.0878	95% Bootstrap-t UCL	0.09
95% Hall's Bootstrap UCL	0.0891	95% Percentile Bootstrap UCL	0.0881
95% BCA Bootstrap UCL	0.0887		
90% Chebyshev(Mean, Sd) UCL	0.0937	95% Chebyshev(Mean, Sd) UCL	0.0996
97.5% Chebyshev(Mean, Sd) UCL	0.108	99% Chebyshev(Mean, Sd) UCL	0.124
Suggested UCL to Use			
95% Adjusted Gamma UCL	0.0888		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|VANADIUM			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	26
		Number of Missing Observations	50
Minimum	23.2	Mean	34.63
Maximum	47	Median	34.8
SD	6.051	Std. Error of Mean	1.165
Coefficient of Variation	0.175	Skewness	0.122
Normal GOF Test			
Shapiro Wilk Test Statistic	0.984	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.0917	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	36.62	95% Adjusted-CLT UCL (Chen-1995)	36.58
		95% Modified-t UCL (Johnson-1978)	36.62
Gamma GOF Test			
A-D Test Statistic	0.169	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0946	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.168	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	33.41	k star (bias corrected MLE)	29.72
Theta hat (MLE)	1.037	Theta star (bias corrected MLE)	1.165
nu hat (MLE)	1804	nu star (bias corrected)	1605
MLE Mean (bias corrected)	34.63	MLE Sd (bias corrected)	6.353
		Approximate Chi Square Value (0.05)	1513
Adjusted Level of Significance	0.0401	Adjusted Chi Square Value	1507
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	36.74	95% Adjusted Gamma UCL (use when n<50)	36.88
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.923	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0926	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.167	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	3.144	Mean of logged Data	3.53
Maximum of Logged Data	3.85	SD of logged Data	0.178
Assuming Lognormal Distribution			
95% H-UCL	36.85	90% Chebyshev (MVUE) UCL	38.23
95% Chebyshev (MVUE) UCL	39.85	97.5% Chebyshev (MVUE) UCL	42.1
99% Chebyshev (MVUE) UCL	46.53		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	36.55	95% Jackknife UCL	36.62
95% Standard Bootstrap UCL	36.52	95% Bootstrap-t UCL	36.61
95% Hall's Bootstrap UCL	36.59	95% Percentile Bootstrap UCL	36.5
95% BCA Bootstrap UCL	36.57		
90% Chebyshev(Mean, Sd) UCL	38.13	95% Chebyshev(Mean, Sd) UCL	39.71
97.5% Chebyshev(Mean, Sd) UCL	41.91	99% Chebyshev(Mean, Sd) UCL	46.22
Suggested UCL to Use			
95% Student's-t UCL	36.62		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Pest_PCBs|DIELDRIN			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	15
		Number of Missing Observations	49
Number of Detects	11	Number of Non-Detects	16
Number of Distinct Detects	9	Number of Distinct Non-Detects	7
Minimum Detect	0.0018	Minimum Non-Detect	3.2000E-4
Maximum Detect	0.48	Maximum Non-Detect	0.935
Variance Detects	0.0201	Percent Non-Detects	59.26%
Mean Detects	0.0676	SD Detects	0.142
Median Detects	0.017	CV Detects	2.097
Skewness Detects	2.946	Kurtosis Detects	8.997
Mean of Logged Detects	-4.281	SD of Logged Detects	1.9
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.528	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.382	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.0288	KM Standard Error of Mean	0.0193
KM SD	0.094	95% KM (BCA) UCL	0.0696
95% KM (t) UCL	0.0618	95% KM (Percentile Bootstrap) UCL	0.0632
95% KM (z) UCL	0.0606	95% KM Bootstrap t UCL	0.23
90% KM Chebyshev UCL	0.0868	95% KM Chebyshev UCL	0.113
97.5% KM Chebyshev UCL	0.15	99% KM Chebyshev UCL	0.221
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.708	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.798	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.206	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.272	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.413	k star (bias corrected MLE)	0.361
Theta hat (MLE)	0.164	Theta star (bias corrected MLE)	0.188
nu hat (MLE)	9.076	nu star (bias corrected)	7.934
Mean (detects)	0.0676		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0018	Mean	0.0335
Maximum	0.48	Median	0.01
SD	0.0926	CV	2.764
k hat (MLE)	0.577	k star (bias corrected MLE)	0.538
Theta hat (MLE)	0.058	Theta star (bias corrected MLE)	0.0622
nu hat (MLE)	31.18	nu star (bias corrected)	29.05
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (29.05, α)	17.75	Adjusted Chi Square Value (29.05, β)	17.18
95% Gamma Approximate UCL (use when n>=50)	0.0548	95% Gamma Adjusted UCL (use when n<50)	0.0566
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.0288	SD (KM)	0.094
Variance (KM)	0.00884	SE of Mean (KM)	0.0193
k hat (KM)	0.094	k star (KM)	0.108
nu hat (KM)	5.075	nu star (KM)	5.844
theta hat (KM)	0.307	theta star (KM)	0.266
80% gamma percentile (KM)	0.0223	90% gamma percentile (KM)	0.0791
95% gamma percentile (KM)	0.166	99% gamma percentile (KM)	0.44
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (5.84, α)	1.561	Adjusted Chi Square Value (5.84, β)	1.425
95% Gamma Approximate KM-UCL (use when n>=50)	0.108	95% Gamma Adjusted KM-UCL (use when n<50)	0.118
95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)			
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.174	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0276	Mean in Log Scale	-7.484
SD in Original Scale	0.0942	SD in Log Scale	3.173
95% t UCL (assumes normality of ROS data)	0.0586	95% Percentile Bootstrap UCL	0.0601
95% BCA Bootstrap UCL	0.0798	95% Bootstrap t UCL	0.241
95% H-UCL (Log ROS)	3.709		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-6.429	KM Geo Mean	0.00161
KM SD (logged)	2.194	95% Critical H Value (KM-Log)	4.361
KM Standard Error of Mean (logged)	0.453	95% H-UCL (KM -Log)	0.117
KM SD (logged)	2.194	95% Critical H Value (KM-Log)	4.361
KM Standard Error of Mean (logged)	0.453		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0453	Mean in Log Scale	-5.805
SD in Original Scale	0.126	SD in Log Scale	2.181
95% t UCL (Assumes normality)	0.0868	95% H-Stat UCL	0.208
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Gamma Distributed at 5% Significance Level			
Suggested UCL to Use			
Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	0.118		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Pest_PCBs|ENDRIN KETONE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	22
		Number of Missing Observations	49
Number of Detects	22	Number of Non-Detects	5
Number of Distinct Detects	19	Number of Distinct Non-Detects	3
Minimum Detect	0.0011	Minimum Non-Detect	0.0017
Maximum Detect	3	Maximum Non-Detect	0.935
Variance Detects	0.563	Percent Non-Detects	18.52%
Mean Detects	0.374	SD Detects	0.75
Median Detects	0.056	CV Detects	2.006
Skewness Detects	2.747	Kurtosis Detects	7.519
Mean of Logged Detects	-2.684	SD of Logged Detects	2.021
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.554	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.347	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.184	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.309	KM Standard Error of Mean	0.133
KM SD	0.677	95% KM (BCA) UCL	0.574
95% KM (t) UCL	0.536	95% KM (Percentile Bootstrap) UCL	0.551
95% KM (z) UCL	0.528	95% KM Bootstrap t UCL	0.95
90% KM Chebyshev UCL	0.709	95% KM Chebyshev UCL	0.89
97.5% KM Chebyshev UCL	1.142	99% KM Chebyshev UCL	1.636
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.996	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.828	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.193	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.199	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data follow Appr. Gamma Distribution at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.389	k star (bias corrected MLE)	0.366
Theta hat (MLE)	0.962	Theta star (bias corrected MLE)	1.022
nu hat (MLE)	17.11	nu star (bias corrected)	16.11
Mean (detects)	0.374		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0011	Mean	0.307
Maximum	3	Median	0.044
SD	0.689	CV	2.248
k hat (MLE)	0.36	k star (bias corrected MLE)	0.345
Theta hat (MLE)	0.851	Theta star (bias corrected MLE)	0.889
nu hat (MLE)	19.46	nu star (bias corrected)	18.63
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (18.63, α)	9.848	Adjusted Chi Square Value (18.63, β)	9.44
95% Gamma Approximate UCL (use when n>=50)	0.58	95% Gamma Adjusted UCL (use when n<50)	0.605
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.309	SD (KM)	0.677
Variance (KM)	0.458	SE of Mean (KM)	0.133
k hat (KM)	0.208	k star (KM)	0.209
nu hat (KM)	11.23	nu star (KM)	11.31
theta hat (KM)	1.484	theta star (KM)	1.473
80% gamma percentile (KM)	0.416	90% gamma percentile (KM)	0.933
95% gamma percentile (KM)	1.57	99% gamma percentile (KM)	3.312
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (11.31, α)	4.777	Adjusted Chi Square Value (11.31, β)	4.508
95% Gamma Approximate KM-UCL (use when n>=50)	0.731	95% Gamma Adjusted KM-UCL (use when n<50)	0.774
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.981	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.911	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0818	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.184	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.306	Mean in Log Scale	-3.311
SD in Original Scale	0.69	SD in Log Scale	2.326
95% t UCL (assumes normality of ROS data)	0.532	95% Percentile Bootstrap UCL	0.531
95% BCA Bootstrap UCL	0.624	95% Bootstrap t UCL	0.907
95% H-UCL (Log ROS)	4.412		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-3.338	KM Geo Mean	0.0355
KM SD (logged)	2.339	95% Critical H Value (KM-Log)	4.605
KM Standard Error of Mean (logged)	0.467	95% H-UCL (KM -Log)	4.528
KM SD (logged)	2.339	95% Critical H Value (KM-Log)	4.605
KM Standard Error of Mean (logged)	0.467		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.322	Mean in Log Scale	-3.258
SD in Original Scale	0.688	SD in Log Scale	2.454
95% t UCL (Assumes normality)	0.548	95% H-Stat UCL	7.879
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Gamma Distributed at 5% Significance Level			
Suggested UCL to Use			
Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	0.774		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Pest_PCBs|HEPTACHLOR EPOXIDE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	19
		Number of Missing Observations	49
Number of Detects	3	Number of Non-Detects	24
Number of Distinct Detects	3	Number of Distinct Non-Detects	16
Minimum Detect	0.0031	Minimum Non-Detect	1.4000E-4
Maximum Detect	0.087	Maximum Non-Detect	0.495
Variance Detects	0.00231	Percent Non-Detects	88.89%
Mean Detects	0.0315	SD Detects	0.0481
Median Detects	0.0044	CV Detects	1.526
Skewness Detects	1.731	Kurtosis Detects	N/A
Mean of Logged Detects	-4.548	SD of Logged Detects	1.832
Warning: Data set has only 3 Detected Values.			
This is not enough to compute meaningful or reliable statistics and estimates.			
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.762	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.38	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Approximate Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.00376	KM Standard Error of Mean	0.00401
KM SD	0.0167	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0106	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.0103	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0158	95% KM Chebyshev UCL	0.0212
97.5% KM Chebyshev UCL	0.0288	99% KM Chebyshev UCL	0.0436
Gamma GOF Tests on Detected Observations Only			
Not Enough Data to Perform GOF Test			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.571	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0552	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	3.425	nu star (bias corrected)	N/A
Mean (detects)	0.0315		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0031	Mean	0.0124
Maximum	0.087	Median	0.01
SD	0.015	CV	1.211
k hat (MLE)	2.56	k star (bias corrected MLE)	2.3
Theta hat (MLE)	0.00484	Theta star (bias corrected MLE)	0.00539
nu hat (MLE)	138.2	nu star (bias corrected)	124.2
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (124.20, α)	99.46	Adjusted Chi Square Value (124.20, β)	98.04
95% Gamma Approximate UCL (use when n>=50)	0.0155	95% Gamma Adjusted UCL (use when n<50)	N/A
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.00376	SD (KM)	0.0167
Variance (KM)	2.7812E-4	SE of Mean (KM)	0.00401
k hat (KM)	0.0508	k star (KM)	0.0698
nu hat (KM)	2.743	nu star (KM)	3.771
theta hat (KM)	0.074	theta star (KM)	0.0538
80% gamma percentile (KM)	0.00134	90% gamma percentile (KM)	0.0081
95% gamma percentile (KM)	0.0216	99% gamma percentile (KM)	0.0709
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (3.77, α)	0.633	Adjusted Chi Square Value (3.77, β)	0.56
95% Gamma Approximate KM-UCL (use when n>=50)	0.0224	95% Gamma Adjusted KM-UCL (use when n<50)	0.0253
95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)			
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.828	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.351	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0035	Mean in Log Scale	-14.67
SD in Original Scale	0.0167	SD in Log Scale	4.24
95% t UCL (assumes normality of ROS data)	0.00899	95% Percentile Bootstrap UCL	0.00978
95% BCA Bootstrap UCL	0.0161	95% Bootstrap t UCL	0.0984
95% H-UCL (Log ROS)	2.5		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-8.375	KM Geo Mean	2.3062E-4
KM SD (logged)	1.473	95% Critical H Value (KM-Log)	3.196
KM Standard Error of Mean (logged)	0.354	95% H-UCL (KM -Log)	0.00172
KM SD (logged)	1.473	95% Critical H Value (KM-Log)	3.196
KM Standard Error of Mean (logged)	0.354		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0129	Mean in Log Scale	-7.748
SD in Original Scale	0.0498	SD in Log Scale	2.011
95% t UCL (Assumes normality)	0.0292	95% H-Stat UCL	0.0162
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	0.0106		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Pest_PCBs|TOTAL AROCLORS			
General Statistics			
Total Number of Observations	97	Number of Distinct Observations	92
		Number of Missing Observations	0
Minimum	0.048	Mean	19.63
Maximum	610	Median	2.24
SD	68.17	Std. Error of Mean	6.922
Coefficient of Variation	3.473	Skewness	7.332
Normal GOF Test			
Shapiro Wilk Test Statistic	0.306	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.387	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0902	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	31.13	95% Adjusted-CLT UCL (Chen-1995)	36.52
		95% Modified-t UCL (Johnson-1978)	31.99
Gamma GOF Test			
A-D Test Statistic	4.107	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.858	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.149	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.0981	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	0.341	k star (bias corrected MLE)	0.337
Theta hat (MLE)	57.59	Theta star (bias corrected MLE)	58.22
nu hat (MLE)	66.13	nu star (bias corrected)	65.41
MLE Mean (bias corrected)	19.63	MLE Sd (bias corrected)	33.81
		Approximate Chi Square Value (0.05)	47.8
Adjusted Level of Significance	0.0475	Adjusted Chi Square Value	47.58
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	26.86	95% Adjusted Gamma UCL (use when n<50)	26.99
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.977	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk P Value	0.376	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0571	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.0902	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	-3.037	Mean of logged Data	0.996
Maximum of Logged Data	6.413	SD of logged Data	2.059
Assuming Lognormal Distribution			
95% H-UCL	46.95	90% Chebyshev (MVUE) UCL	42.29
95% Chebyshev (MVUE) UCL	51.87	97.5% Chebyshev (MVUE) UCL	65.15
99% Chebyshev (MVUE) UCL	91.26		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	31.02	95% Jackknife UCL	31.13
95% Standard Bootstrap UCL	31.18	95% Bootstrap-t UCL	52.25
95% Hall's Bootstrap UCL	73.75	95% Percentile Bootstrap UCL	32.46
95% BCA Bootstrap UCL	40.79		
90% Chebyshev(Mean, Sd) UCL	40.4	95% Chebyshev(Mean, Sd) UCL	49.8
97.5% Chebyshev(Mean, Sd) UCL	62.86	99% Chebyshev(Mean, Sd) UCL	88.5
Suggested UCL to Use			
95% H-UCL	46.95		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
ProUCL computes and outputs H-statistic based UCLs for historical reasons only.			
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.			
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.			
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.			

FFTA_RA_SO_SVOCs|BENZO[A]ANTHRACENE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	22
		Number of Missing Observations	50
Number of Detects	16	Number of Non-Detects	11
Number of Distinct Detects	16	Number of Distinct Non-Detects	7
Minimum Detect	0.002	Minimum Non-Detect	0.0088
Maximum Detect	6.6	Maximum Non-Detect	0.012
Variance Detects	2.696	Percent Non-Detects	40.74%
Mean Detects	0.446	SD Detects	1.642
Median Detects	0.0205	CV Detects	3.684
Skewness Detects	3.995	Kurtosis Detects	15.97
Mean of Logged Detects	-3.836	SD of Logged Detects	2.08
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.293	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.504	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.265	KM Standard Error of Mean	0.247
KM SD	1.243	95% KM (BCA) UCL	0.753
95% KM (t) UCL	0.687	95% KM (Percentile Bootstrap) UCL	0.751
95% KM (z) UCL	0.672	95% KM Bootstrap t UCL	13.49
90% KM Chebyshev UCL	1.006	95% KM Chebyshev UCL	1.342
97.5% KM Chebyshev UCL	1.808	99% KM Chebyshev UCL	2.723
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	2.606	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.867	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.331	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.236	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.237	k star (bias corrected MLE)	0.234
Theta hat (MLE)	1.883	Theta star (bias corrected MLE)	1.905
nu hat (MLE)	7.574	nu star (bias corrected)	7.487
Mean (detects)	0.446		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.002	Mean	0.268
Maximum	6.6	Median	0.01
SD	1.266	CV	4.721
k hat (MLE)	0.251	k star (bias corrected MLE)	0.247
Theta hat (MLE)	1.07	Theta star (bias corrected MLE)	1.084
nu hat (MLE)	13.53	nu star (bias corrected)	13.36
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (13.36, α)	6.138	Adjusted Chi Square Value (13.36, β)	5.826
95% Gamma Approximate UCL (use when n>=50)	0.584	95% Gamma Adjusted UCL (use when n<50)	0.615
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.265	SD (KM)	1.243
Variance (KM)	1.545	SE of Mean (KM)	0.247
k hat (KM)	0.0455	k star (KM)	0.0652
nu hat (KM)	2.459	nu star (KM)	3.519
theta hat (KM)	5.825	theta star (KM)	4.07
80% gamma percentile (KM)	0.0799	90% gamma percentile (KM)	0.539
95% gamma percentile (KM)	1.51	99% gamma percentile (KM)	5.161
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (3.52, α)	0.542	Adjusted Chi Square Value (3.52, β)	0.476
95% Gamma Approximate KM-UCL (use when n>=50)	1.724	95% Gamma Adjusted KM-UCL (use when n<50)	1.959
95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)			
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.888	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.145	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.265	Mean in Log Scale	-4.726
SD in Original Scale	1.267	SD in Log Scale	1.963
95% t UCL (assumes normality of ROS data)	0.681	95% Percentile Bootstrap UCL	0.753
95% BCA Bootstrap UCL	1.004	95% Bootstrap t UCL	13.6
95% H-UCL (Log ROS)	0.282		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-4.687	KM Geo Mean	0.00922
KM SD (logged)	1.868	95% Critical H Value (KM-Log)	3.821
KM Standard Error of Mean (logged)	0.376	95% H-UCL (KM -Log)	0.214
KM SD (logged)	1.868	95% Critical H Value (KM-Log)	3.821
KM Standard Error of Mean (logged)	0.376		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.266	Mean in Log Scale	-4.426
SD in Original Scale	1.266	SD in Log Scale	1.74
95% t UCL (Assumes normality)	0.682	95% H-Stat UCL	0.186
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
97.5% KM (Chebyshev) UCL	1.808		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_SVOCs|BENZO[A]PYRENE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	16
		Number of Missing Observations	50
Number of Detects	12	Number of Non-Detects	15
Number of Distinct Detects	12	Number of Distinct Non-Detects	6
Minimum Detect	0.0042	Minimum Non-Detect	0.0088
Maximum Detect	4.3	Maximum Non-Detect	0.012
Variance Detects	1.515	Percent Non-Detects	55.56%
Mean Detects	0.392	SD Detects	1.231
Median Detects	0.027	CV Detects	3.137
Skewness Detects	3.459	Kurtosis Detects	11.98
Mean of Logged Detects	-3.278	SD of Logged Detects	1.767
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.35	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.504	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.177	KM Standard Error of Mean	0.163
KM SD	0.809	95% KM (BCA) UCL	0.501
95% KM (t) UCL	0.455	95% KM (Percentile Bootstrap) UCL	0.494
95% KM (z) UCL	0.445	95% KM Bootstrap t UCL	8.154
90% KM Chebyshev UCL	0.665	95% KM Chebyshev UCL	0.886
97.5% KM Chebyshev UCL	1.193	99% KM Chebyshev UCL	1.795
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	2.202	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.826	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.38	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.266	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.295	k star (bias corrected MLE)	0.277
Theta hat (MLE)	1.33	Theta star (bias corrected MLE)	1.417
nu hat (MLE)	7.084	nu star (bias corrected)	6.647
Mean (detects)	0.392		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0042	Mean	0.18
Maximum	4.3	Median	0.01
SD	0.824	CV	4.577
k hat (MLE)	0.3	k star (bias corrected MLE)	0.291
Theta hat (MLE)	0.6	Theta star (bias corrected MLE)	0.618
nu hat (MLE)	16.19	nu star (bias corrected)	15.72
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (15.72, α)	7.768	Adjusted Chi Square Value (15.72, β)	7.411
95% Gamma Approximate UCL (use when n>=50)	0.364	95% Gamma Adjusted UCL (use when n<50)	0.382
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.177	SD (KM)	0.809
Variance (KM)	0.654	SE of Mean (KM)	0.163
k hat (KM)	0.0481	k star (KM)	0.0674
nu hat (KM)	2.597	nu star (KM)	3.642
theta hat (KM)	3.688	theta star (KM)	2.63
80% gamma percentile (KM)	0.0582	90% gamma percentile (KM)	0.371
95% gamma percentile (KM)	1.016	99% gamma percentile (KM)	3.4
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (3.64, α)	0.586	Adjusted Chi Square Value (3.64, β)	0.516
95% Gamma Approximate KM-UCL (use when n>=50)	1.103	95% Gamma Adjusted KM-UCL (use when n<50)	1.251
95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)			
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.846	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Approximate Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.176	Mean in Log Scale	-4.963
SD in Original Scale	0.825	SD in Log Scale	2.05
95% t UCL (assumes normality of ROS data)	0.447	95% Percentile Bootstrap UCL	0.492
95% BCA Bootstrap UCL	0.659	95% Bootstrap t UCL	7.492
95% H-UCL (Log ROS)	0.299		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-4.397	KM Geo Mean	0.0123
KM SD (logged)	1.529	95% Critical H Value (KM-Log)	3.284
KM Standard Error of Mean (logged)	0.324	95% H-UCL (KM -Log)	0.106
KM SD (logged)	1.529	95% Critical H Value (KM-Log)	3.284
KM Standard Error of Mean (logged)	0.324		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.177	Mean in Log Scale	-4.387
SD in Original Scale	0.824	SD in Log Scale	1.532
95% t UCL (Assumes normality)	0.448	95% H-Stat UCL	0.108
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.886		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_SVOCs|BENZO[B]FLUORANTHENE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	21
		Number of Missing Observations	50
Number of Detects	14	Number of Non-Detects	13
Number of Distinct Detects	14	Number of Distinct Non-Detects	7
Minimum Detect	0.0028	Minimum Non-Detect	0.0088
Maximum Detect	6.1	Maximum Non-Detect	0.012
Variance Detects	2.617	Percent Non-Detects	48.15%
Mean Detects	0.483	SD Detects	1.618
Median Detects	0.0345	CV Detects	3.35
Skewness Detects	3.733	Kurtosis Detects	13.96
Mean of Logged Detects	-3.341	SD of Logged Detects	2.016
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.325	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.498	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.253	KM Standard Error of Mean	0.229
KM SD	1.148	95% KM (BCA) UCL	0.708
95% KM (t) UCL	0.643	95% KM (Percentile Bootstrap) UCL	0.699
95% KM (z) UCL	0.63	95% KM Bootstrap t UCL	9.414
90% KM Chebyshev UCL	0.94	95% KM Chebyshev UCL	1.252
97.5% KM Chebyshev UCL	1.684	99% KM Chebyshev UCL	2.533
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	2.018	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.847	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.329	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.249	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.269	k star (bias corrected MLE)	0.259
Theta hat (MLE)	1.798	Theta star (bias corrected MLE)	1.867
nu hat (MLE)	7.523	nu star (bias corrected)	7.244
Mean (detects)	0.483		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0028	Mean	0.255
Maximum	6.1	Median	0.01
SD	1.169	CV	4.58
k hat (MLE)	0.271	k star (bias corrected MLE)	0.266
Theta hat (MLE)	0.941	Theta star (bias corrected MLE)	0.96
nu hat (MLE)	14.65	nu star (bias corrected)	14.35
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (14.35, α)	6.814	Adjusted Chi Square Value (14.35, β)	6.483
95% Gamma Approximate UCL (use when n>=50)	0.538	95% Gamma Adjusted UCL (use when n<50)	0.565
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.253	SD (KM)	1.148
Variance (KM)	1.317	SE of Mean (KM)	0.229
k hat (KM)	0.0484	k star (KM)	0.0677
nu hat (KM)	2.614	nu star (KM)	3.657
theta hat (KM)	5.216	theta star (KM)	3.729
80% gamma percentile (KM)	0.0837	90% gamma percentile (KM)	0.531
95% gamma percentile (KM)	1.446	99% gamma percentile (KM)	4.83
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (3.66, α)	0.591	Adjusted Chi Square Value (3.66, β)	0.522
95% Gamma Approximate KM-UCL (use when n>=50)	1.562	95% Gamma Adjusted KM-UCL (use when n<50)	1.771
95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)			
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.915	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.124	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.253	Mean in Log Scale	-4.472
SD in Original Scale	1.17	SD in Log Scale	1.936
95% t UCL (assumes normality of ROS data)	0.636	95% Percentile Bootstrap UCL	0.7
95% BCA Bootstrap UCL	0.932	95% Bootstrap t UCL	9.703
95% H-UCL (Log ROS)	0.331		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-4.383	KM Geo Mean	0.0125
KM SD (logged)	1.788	95% Critical H Value (KM-Log)	3.691
KM Standard Error of Mean (logged)	0.373	95% H-UCL (KM -Log)	0.225
KM SD (logged)	1.788	95% Critical H Value (KM-Log)	3.691
KM Standard Error of Mean (logged)	0.373		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.253	Mean in Log Scale	-4.275
SD in Original Scale	1.169	SD in Log Scale	1.735
95% t UCL (Assumes normality)	0.637	95% H-Stat UCL	0.214
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
97.5% KM (Chebyshev) UCL	1.684		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_SVOCs|BENZO[K]FLUORANTHENE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	10
		Number of Missing Observations	50
Number of Detects	3	Number of Non-Detects	24
Number of Distinct Detects	3	Number of Distinct Non-Detects	7
Minimum Detect	0.087	Minimum Non-Detect	0.22
Maximum Detect	2.3	Maximum Non-Detect	0.29
Variance Detects	1.628	Percent Non-Detects	88.89%
Mean Detects	0.827	SD Detects	1.276
Median Detects	0.093	CV Detects	1.543
Skewness Detects	1.732	Kurtosis Detects	N/A
Mean of Logged Detects	-1.328	SD of Logged Detects	1.872
Warning: Data set has only 3 Detected Values.			
This is not enough to compute meaningful or reliable statistics and estimates.			
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.752	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.384	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Approximate Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.172	KM Standard Error of Mean	0.0984
KM SD	0.417	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.34	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.334	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.467	95% KM Chebyshev UCL	0.601
97.5% KM Chebyshev UCL	0.786	99% KM Chebyshev UCL	1.151
Gamma GOF Tests on Detected Observations Only			
Not Enough Data to Perform GOF Test			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.55	k star (bias corrected MLE)	N/A
Theta hat (MLE)	1.503	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	3.301	nu star (bias corrected)	N/A
Mean (detects)	0.827		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	0.249
Maximum	2.3	Median	0.062
SD	0.464	CV	1.865
k hat (MLE)	0.502	k star (bias corrected MLE)	0.471
Theta hat (MLE)	0.495	Theta star (bias corrected MLE)	0.528
nu hat (MLE)	27.12	nu star (bias corrected)	25.44
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (25.44, α)	14.95	Adjusted Chi Square Value (25.44, β)	14.43
95% Gamma Approximate UCL (use when n>=50)	0.423	95% Gamma Adjusted UCL (use when n<50)	N/A
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.172	SD (KM)	0.417
Variance (KM)	0.174	SE of Mean (KM)	0.0984
k hat (KM)	0.17	k star (KM)	0.175
nu hat (KM)	9.155	nu star (KM)	9.471
theta hat (KM)	1.014	theta star (KM)	0.98
80% gamma percentile (KM)	0.21	90% gamma percentile (KM)	0.518
95% gamma percentile (KM)	0.915	99% gamma percentile (KM)	2.033
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (9.47, α)	3.614	Adjusted Chi Square Value (9.47, β)	3.385
95% Gamma Approximate KM-UCL (use when n>=50)	0.45	95% Gamma Adjusted KM-UCL (use when n<50)	0.481
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.765	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.379	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Approximate Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.213	Mean in Log Scale	-2.204
SD in Original Scale	0.43	SD in Log Scale	1.001
95% t UCL (assumes normality of ROS data)	0.355	95% Percentile Bootstrap UCL	0.366
95% BCA Bootstrap UCL	0.472	95% Bootstrap t UCL	0.71
95% H-UCL (Log ROS)	0.299		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.288	KM Geo Mean	0.101
KM SD (logged)	0.613	95% Critical H Value (KM-Log)	2.074
KM Standard Error of Mean (logged)	0.147	95% H-UCL (KM -Log)	0.157
KM SD (logged)	0.613	95% Critical H Value (KM-Log)	2.074
KM Standard Error of Mean (logged)	0.147		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.206	Mean in Log Scale	-1.97
SD in Original Scale	0.419	SD in Log Scale	0.571
95% t UCL (Assumes normality)	0.344	95% H-Stat UCL	0.206
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	0.34		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_SVOCs|DIBENZ[A,H]ANTHRACENE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	14
		Number of Missing Observations	50
Number of Detects	6	Number of Non-Detects	21
Number of Distinct Detects	6	Number of Distinct Non-Detects	9
Minimum Detect	0.0048	Minimum Non-Detect	0.0088
Maximum Detect	0.92	Maximum Non-Detect	0.27
Variance Detects	0.137	Percent Non-Detects	77.78%
Mean Detects	0.165	SD Detects	0.37
Median Detects	0.015	CV Detects	2.24
Skewness Detects	2.447	Kurtosis Detects	5.989
Mean of Logged Detects	-3.726	SD of Logged Detects	1.894
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.518	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.478	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.0434	KM Standard Error of Mean	0.0363
KM SD	0.172	95% KM (BCA) UCL	0.113
95% KM (t) UCL	0.105	95% KM (Percentile Bootstrap) UCL	0.11
95% KM (z) UCL	0.103	95% KM Bootstrap t UCL	1.018
90% KM Chebyshev UCL	0.152	95% KM Chebyshev UCL	0.202
97.5% KM Chebyshev UCL	0.27	99% KM Chebyshev UCL	0.405
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.065	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.759	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.422	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.355	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.349	k star (bias corrected MLE)	0.286
Theta hat (MLE)	0.472	Theta star (bias corrected MLE)	0.578
nu hat (MLE)	4.194	nu star (bias corrected)	3.43
Mean (detects)	0.165		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0048	Mean	0.0498
Maximum	0.92	Median	0.01
SD	0.175	CV	3.516
k hat (MLE)	0.506	k star (bias corrected MLE)	0.474
Theta hat (MLE)	0.0984	Theta star (bias corrected MLE)	0.105
nu hat (MLE)	27.31	nu star (bias corrected)	25.61
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (25.61, α)	15.08	Adjusted Chi Square Value (25.61, β)	14.56
95% Gamma Approximate UCL (use when n>=50)	0.0845	95% Gamma Adjusted UCL (use when n<50)	0.0875
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.0434	SD (KM)	0.172
Variance (KM)	0.0296	SE of Mean (KM)	0.0363
k hat (KM)	0.0637	k star (KM)	0.0813
nu hat (KM)	3.439	nu star (KM)	4.39
theta hat (KM)	0.682	theta star (KM)	0.534
80% gamma percentile (KM)	0.0213	90% gamma percentile (KM)	0.104
95% gamma percentile (KM)	0.253	99% gamma percentile (KM)	0.763
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (4.39, α)	0.882	Adjusted Chi Square Value (4.39, β)	0.789
95% Gamma Approximate KM-UCL (use when n>=50)	0.216	95% Gamma Adjusted KM-UCL (use when n<50)	0.242
95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)			
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.802	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.302	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0436	Mean in Log Scale	-4.756
SD in Original Scale	0.175	SD in Log Scale	1.237
95% t UCL (assumes normality of ROS data)	0.101	95% Percentile Bootstrap UCL	0.111
95% BCA Bootstrap UCL	0.145	95% Bootstrap t UCL	0.964
95% H-UCL (Log ROS)	0.0368		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-4.624	KM Geo Mean	0.00982
KM SD (logged)	1.031	95% Critical H Value (KM-Log)	2.562
KM Standard Error of Mean (logged)	0.274	95% H-UCL (KM -Log)	0.028
KM SD (logged)	1.031	95% Critical H Value (KM-Log)	2.562
KM Standard Error of Mean (logged)	0.274		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0994	Mean in Log Scale	-3.38
SD in Original Scale	0.174	SD in Log Scale	1.634
95% t UCL (Assumes normality)	0.157	95% H-Stat UCL	0.39
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.202		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_SVOCs|INDENO[1,2,3-CD]PYRENE			
General Statistics			
Total Number of Observations	27	Number of Distinct Observations	19
		Number of Missing Observations	50
Number of Detects	14	Number of Non-Detects	13
Number of Distinct Detects	13	Number of Distinct Non-Detects	7
Minimum Detect	0.0021	Minimum Non-Detect	0.0088
Maximum Detect	4.7	Maximum Non-Detect	0.012
Variance Detects	1.554	Percent Non-Detects	48.15%
Mean Detects	0.371	SD Detects	1.247
Median Detects	0.0275	CV Detects	3.362
Skewness Detects	3.736	Kurtosis Detects	13.97
Mean of Logged Detects	-3.487	SD of Logged Detects	1.901
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.321	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.508	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.194	KM Standard Error of Mean	0.177
KM SD	0.884	95% KM (BCA) UCL	0.545
95% KM (t) UCL	0.495	95% KM (Percentile Bootstrap) UCL	0.539
95% KM (z) UCL	0.485	95% KM Bootstrap t UCL	7.4
90% KM Chebyshev UCL	0.724	95% KM Chebyshev UCL	0.964
97.5% KM Chebyshev UCL	1.297	99% KM Chebyshev UCL	1.951
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	2.208	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.842	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.372	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.249	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.28	k star (bias corrected MLE)	0.267
Theta hat (MLE)	1.326	Theta star (bias corrected MLE)	1.387
nu hat (MLE)	7.829	nu star (bias corrected)	7.485
Mean (detects)	0.371		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0021	Mean	0.197
Maximum	4.7	Median	0.01
SD	0.9	CV	4.569
k hat (MLE)	0.289	k star (bias corrected MLE)	0.282
Theta hat (MLE)	0.682	Theta star (bias corrected MLE)	0.7
nu hat (MLE)	15.6	nu star (bias corrected)	15.2
Adjusted Level of Significance (β)	0.0401		
Approximate Chi Square Value (15.20, α)	7.403	Adjusted Chi Square Value (15.20, β)	7.056
95% Gamma Approximate UCL (use when n>=50)	0.405	95% Gamma Adjusted UCL (use when n<50)	0.425
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.194	SD (KM)	0.884
Variance (KM)	0.782	SE of Mean (KM)	0.177
k hat (KM)	0.0482	k star (KM)	0.0676
nu hat (KM)	2.604	nu star (KM)	3.648
theta hat (KM)	4.026	theta star (KM)	2.874
80% gamma percentile (KM)	0.0639	90% gamma percentile (KM)	0.407
95% gamma percentile (KM)	1.112	99% gamma percentile (KM)	3.718
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (3.65, α)	0.588	Adjusted Chi Square Value (3.65, β)	0.519
95% Gamma Approximate KM-UCL (use when n>=50)	1.205	95% Gamma Adjusted KM-UCL (use when n<50)	1.366
95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)			
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.907	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.165	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.194	Mean in Log Scale	-4.721
SD in Original Scale	0.901	SD in Log Scale	1.949
95% t UCL (assumes normality of ROS data)	0.489	95% Percentile Bootstrap UCL	0.539
95% BCA Bootstrap UCL	0.887	95% Bootstrap t UCL	7.707
95% H-UCL (Log ROS)	0.269		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-4.53	KM Geo Mean	0.0108
KM SD (logged)	1.742	95% Critical H Value (KM-Log)	3.619
KM Standard Error of Mean (logged)	0.381	95% H-UCL (KM -Log)	0.169
KM SD (logged)	1.742	95% Critical H Value (KM-Log)	3.619
KM Standard Error of Mean (logged)	0.381		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.195	Mean in Log Scale	-4.354
SD in Original Scale	0.901	SD in Log Scale	1.628
95% t UCL (Assumes normality)	0.49	95% H-Stat UCL	0.145
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.964		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

UCL Statistics for Data Sets with Non-Detects			
User Selected Options			
Date/Time of Computation	ProUCL 5.13/3/2017 9:21:08 AM		
From File	WorkSheet.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
FFTA_RA_SO_Metals|ALUMINUM			
General Statistics			
Total Number of Observations	43	Number of Distinct Observations	35
		Number of Missing Observations	59
Minimum	9940	Mean	14954
Maximum	26200	Median	14300
SD	3454	Std. Error of Mean	526.8
Coefficient of Variation	0.231	Skewness	1.863
Normal GOF Test			
Shapiro Wilk Test Statistic	0.822	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.196	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	15840	95% Adjusted-CLT UCL (Chen-1995)	15981
		95% Modified-t UCL (Johnson-1978)	15865
Gamma GOF Test			
A-D Test Statistic	1.419	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.748	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.161	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.135	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	23.03	k star (bias corrected MLE)	21.44
Theta hat (MLE)	649.2	Theta star (bias corrected MLE)	697.4
nu hat (MLE)	1981	nu star (bias corrected)	1844
MLE Mean (bias corrected)	14954	MLE Sd (bias corrected)	3229
		Approximate Chi Square Value (0.05)	1745
Adjusted Level of Significance	0.0444	Adjusted Chi Square Value	1742
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	15800	95% Adjusted Gamma UCL (use when n<50)	15831
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.146	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	9.204	Mean of logged Data	9.591
Maximum of Logged Data	10.17	SD of logged Data	0.204
Assuming Lognormal Distribution			
95% H-UCL	15763	90% Chebyshev (MVUE) UCL	16333
95% Chebyshev (MVUE) UCL	16969	97.5% Chebyshev (MVUE) UCL	17851
99% Chebyshev (MVUE) UCL	19584		
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution (0.05)			
Nonparametric Distribution Free UCLs			
95% CLT UCL	15821	95% Jackknife UCL	15840
95% Standard Bootstrap UCL	15820	95% Bootstrap-t UCL	16034
95% Hall's Bootstrap UCL	16042	95% Percentile Bootstrap UCL	15853
95% BCA Bootstrap UCL	16063		
90% Chebyshev(Mean, Sd) UCL	16535	95% Chebyshev(Mean, Sd) UCL	17251
97.5% Chebyshev(Mean, Sd) UCL	18244	99% Chebyshev(Mean, Sd) UCL	20196
Suggested UCL to Use			
95% Student's-t UCL	15840	or 95% Modified-t UCL	15865
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|ARSENIC			
General Statistics			
Total Number of Observations	43	Number of Distinct Observations	39
		Number of Missing Observations	59
Minimum	5.6	Mean	10.85
Maximum	25.1	Median	9.2
SD	4.785	Std. Error of Mean	0.73
Coefficient of Variation	0.441	Skewness	1.482
Normal GOF Test			
Shapiro Wilk Test Statistic	0.826	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	12.08	95% Adjusted-CLT UCL (Chen-1995)	12.22
		95% Modified-t UCL (Johnson-1978)	12.1
Gamma GOF Test			
A-D Test Statistic	1.572	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.751	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.188	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.135	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	6.599	k star (bias corrected MLE)	6.154
Theta hat (MLE)	1.644	Theta star (bias corrected MLE)	1.763
nu hat (MLE)	567.5	nu star (bias corrected)	529.3
MLE Mean (bias corrected)	10.85	MLE Sd (bias corrected)	4.373
		Approximate Chi Square Value (0.05)	476.9
Adjusted Level of Significance	0.0444	Adjusted Chi Square Value	475.2
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	12.04	95% Adjusted Gamma UCL (use when n<50)	12.08
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.161	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	1.723	Mean of logged Data	2.306
Maximum of Logged Data	3.223	SD of logged Data	0.382
Assuming Lognormal Distribution			
95% H-UCL	12.02	90% Chebyshev (MVUE) UCL	12.71
95% Chebyshev (MVUE) UCL	13.59	97.5% Chebyshev (MVUE) UCL	14.81
99% Chebyshev (MVUE) UCL	17.2		
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution (0.05)			
Nonparametric Distribution Free UCLs			
95% CLT UCL	12.05	95% Jackknife UCL	12.08
95% Standard Bootstrap UCL	12.03	95% Bootstrap-t UCL	12.29
95% Hall's Bootstrap UCL	12.31	95% Percentile Bootstrap UCL	12.17
95% BCA Bootstrap UCL	12.19		
90% Chebyshev(Mean, Sd) UCL	13.04	95% Chebyshev(Mean, Sd) UCL	14.03
97.5% Chebyshev(Mean, Sd) UCL	15.41	99% Chebyshev(Mean, Sd) UCL	18.11
Suggested UCL to Use			
95% Student's-t UCL	12.08	or 95% Modified-t UCL	12.1
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Soil Exposure Area 2 - Subsurface Soil

FFTA_RA_SO_Metals|COBALT			
General Statistics			
Total Number of Observations	43	Number of Distinct Observations	32
		Number of Missing Observations	59
Minimum	8.08	Mean	12.24
Maximum	20.8	Median	11.7
SD	2.434	Std. Error of Mean	0.371
Coefficient of Variation	0.199	Skewness	1.547
Normal GOF Test			
Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.177	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	12.86	95% Adjusted-CLT UCL (Chen-1995)	12.94
		95% Modified-t UCL (Johnson-1978)	12.88
Gamma GOF Test			
A-D Test Statistic	0.927	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.747	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.147	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.135	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	29.4	k star (bias corrected MLE)	27.37
Theta hat (MLE)	0.416	Theta star (bias corrected MLE)	0.447
nu hat (MLE)	2529	nu star (bias corrected)	2354
MLE Mean (bias corrected)	12.24	MLE Sd (bias corrected)	2.34
		Approximate Chi Square Value (0.05)	2242
Adjusted Level of Significance	0.0444	Adjusted Chi Square Value	2238
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	12.85	95% Adjusted Gamma UCL (use when n<50)	12.87
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.135	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	2.089	Mean of logged Data	2.488
Maximum of Logged Data	3.035	SD of logged Data	0.183
Assuming Lognormal Distribution			
95% H-UCL	12.84	90% Chebyshev (MVUE) UCL	13.26
95% Chebyshev (MVUE) UCL	13.72	97.5% Chebyshev (MVUE) UCL	14.37
99% Chebyshev (MVUE) UCL	15.64		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	12.85	95% Jackknife UCL	12.86
95% Standard Bootstrap UCL	12.83	95% Bootstrap-t UCL	13.11
95% Hall's Bootstrap UCL	13.03	95% Percentile Bootstrap UCL	12.87
95% BCA Bootstrap UCL	12.94		
90% Chebyshev(Mean, Sd) UCL	13.35	95% Chebyshev(Mean, Sd) UCL	13.86
97.5% Chebyshev(Mean, Sd) UCL	14.56	99% Chebyshev(Mean, Sd) UCL	15.93
Suggested UCL to Use			
95% Student's-t UCL	12.86	or 95% Modified-t UCL	12.88
or 95% H-UCL	12.84		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
ProUCL computes and outputs H-statistic based UCLs for historical reasons only.			
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.			
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.			
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.			

FFTA_RA_SO_Metals|IRON			
General Statistics			
Total Number of Observations	43	Number of Distinct Observations	37
		Number of Missing Observations	59
Minimum	16800	Mean	26019
Maximum	43800	Median	25000
SD	5462	Std. Error of Mean	832.9
Coefficient of Variation	0.21	Skewness	1.637
Normal GOF Test			
Shapiro Wilk Test Statistic	0.861	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.166	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	27420	95% Adjusted-CLT UCL (Chen-1995)	27611
		95% Modified-t UCL (Johnson-1978)	27454
Gamma GOF Test			
A-D Test Statistic	1.134	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.747	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.135	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.135	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	26.8	k star (bias corrected MLE)	24.94
Theta hat (MLE)	971	Theta star (bias corrected MLE)	1043
nu hat (MLE)	2304	nu star (bias corrected)	2145
MLE Mean (bias corrected)	26019	MLE Sd (bias corrected)	5210
		Approximate Chi Square Value (0.05)	2038
Adjusted Level of Significance	0.0444	Adjusted Chi Square Value	2035
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	27379	95% Adjusted Gamma UCL (use when n<50)	27427
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.122	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.134	Data appear Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	9.729	Mean of logged Data	10.15
Maximum of Logged Data	10.69	SD of logged Data	0.191
Assuming Lognormal Distribution			
95% H-UCL	27340	90% Chebyshev (MVUE) UCL	28275
95% Chebyshev (MVUE) UCL	29309	97.5% Chebyshev (MVUE) UCL	30745
99% Chebyshev (MVUE) UCL	33564		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	27389	95% Jackknife UCL	27420
95% Standard Bootstrap UCL	27327	95% Bootstrap-t UCL	27805
95% Hall's Bootstrap UCL	27941	95% Percentile Bootstrap UCL	27405
95% BCA Bootstrap UCL	27591		
90% Chebyshev(Mean, Sd) UCL	28517	95% Chebyshev(Mean, Sd) UCL	29649
97.5% Chebyshev(Mean, Sd) UCL	31220	99% Chebyshev(Mean, Sd) UCL	34306
Suggested UCL to Use			
95% Student's-t UCL	27420	or 95% Modified-t UCL	27454
or 95% H-UCL	27340		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
ProUCL computes and outputs H-statistic based UCLs for historical reasons only.			
H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.			
It is therefore recommended to avoid the use of H-statistic based 95% UCLs.			
Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.			

Soil Exposure Area 2 - Subsurface Soil

FFTA_RA_SO_Metals|MANGANESE			
General Statistics			
Total Number of Observations	43	Number of Distinct Observations	38
		Number of Missing Observations	59
Minimum	354	Mean	594.7
Maximum	1530	Median	544
SD	220.1	Std. Error of Mean	33.56
Coefficient of Variation	0.37	Skewness	2.884
Normal GOF Test			
Shapiro Wilk Test Statistic	0.667	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.274	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	651.2	95% Adjusted-CLT UCL (Chen-1995)	665.7
		95% Modified-t UCL (Johnson-1978)	653.6
Gamma GOF Test			
A-D Test Statistic	3.07	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.748	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.226	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.135	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	11.19	k star (bias corrected MLE)	10.43
Theta hat (MLE)	53.13	Theta star (bias corrected MLE)	57.03
nu hat (MLE)	962.5	nu star (bias corrected)	896.7
MLE Mean (bias corrected)	594.7	MLE Sd (bias corrected)	184.2
		Approximate Chi Square Value (0.05)	828.2
Adjusted Level of Significance	0.0444	Adjusted Chi Square Value	825.9
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	643.9	95% Adjusted Gamma UCL (use when n<50)	645.7
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.833	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.198	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Lognormal at 5% Significance Level	
Data Not Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	5.869	Mean of logged Data	6.343
Maximum of Logged Data	7.333	SD of logged Data	0.28
Assuming Lognormal Distribution			
95% H-UCL	637.5	90% Chebyshev (MVUE) UCL	667.1
95% Chebyshev (MVUE) UCL	701.8	97.5% Chebyshev (MVUE) UCL	750.1
99% Chebyshev (MVUE) UCL	844.8		
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution (0.05)			
Nonparametric Distribution Free UCLs			
95% CLT UCL	649.9	95% Jackknife UCL	651.2
95% Standard Bootstrap UCL	650.9	95% Bootstrap-t UCL	685.1
95% Hall's Bootstrap UCL	710.5	95% Percentile Bootstrap UCL	653.7
95% BCA Bootstrap UCL	668.6		
90% Chebyshev(Mean, Sd) UCL	695.4	95% Chebyshev(Mean, Sd) UCL	741
97.5% Chebyshev(Mean, Sd) UCL	804.3	99% Chebyshev(Mean, Sd) UCL	928.7
Suggested UCL to Use			
95% Student's-t UCL	651.2	or 95% Modified-t UCL	653.6
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|THALLIUM			
General Statistics			
Total Number of Observations	43	Number of Distinct Observations	28
		Number of Missing Observations	59
Number of Detects	42	Number of Non-Detects	1
Number of Distinct Detects	27	Number of Distinct Non-Detects	1
Minimum Detect	0.044	Minimum Non-Detect	0.3
Maximum Detect	0.26	Maximum Non-Detect	0.3
Variance Detects	0.00175	Percent Non-Detects	2.326%
Mean Detects	0.105	SD Detects	0.0418
Median Detects	0.1	CV Detects	0.396
Skewness Detects	1.369	Kurtosis Detects	3.248
Mean of Logged Detects	-2.32	SD of Logged Detects	0.374
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.867	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.942	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.123	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.135	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Approximate Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.105	KM Standard Error of Mean	0.00645
KM SD	0.0413	95% KM (BCA) UCL	0.116
95% KM (t) UCL	0.116	95% KM (Percentile Bootstrap) UCL	0.116
95% KM (z) UCL	0.116	95% KM Bootstrap t UCL	0.118
90% KM Chebyshev UCL	0.125	95% KM Chebyshev UCL	0.133
97.5% KM Chebyshev UCL	0.146	99% KM Chebyshev UCL	0.17
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.416	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.75	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.115	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.137	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	7.36	k star (bias corrected MLE)	6.85
Theta hat (MLE)	0.0143	Theta star (bias corrected MLE)	0.0154
nu hat (MLE)	618.3	nu star (bias corrected)	575.4
Mean (detects)	0.105		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.044	Mean	0.105
Maximum	0.26	Median	0.1
SD	0.0413	CV	0.392
k hat (MLE)	7.529	k star (bias corrected MLE)	7.019
Theta hat (MLE)	0.014	Theta star (bias corrected MLE)	0.015
nu hat (MLE)	647.5	nu star (bias corrected)	603.7
Adjusted Level of Significance (β)	0.0444		
Approximate Chi Square Value (603.67, α)	547.7	Adjusted Chi Square Value (603.67, β)	545.8
95% Gamma Approximate UCL (use when n>=50)	0.116	95% Gamma Adjusted UCL (use when n<50)	0.116
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.105	SD (KM)	0.0413
Variance (KM)	0.0017	SE of Mean (KM)	0.00645
k hat (KM)	6.517	k star (KM)	6.077
nu hat (KM)	560.4	nu star (KM)	522.7
theta hat (KM)	0.0162	theta star (KM)	0.0173
80% gamma percentile (KM)	0.139	90% gamma percentile (KM)	0.163
95% gamma percentile (KM)	0.184	99% gamma percentile (KM)	0.229
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (522.66, α)	470.6	Adjusted Chi Square Value (522.66, β)	468.9
95% Gamma Approximate KM-UCL (use when n>=50)	0.117	95% Gamma Adjusted KM-UCL (use when n<50)	0.117
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.942	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.112	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.135	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Approximate Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.105	Mean in Log Scale	-2.32
SD in Original Scale	0.0413	SD in Log Scale	0.369
95% t UCL (assumes normality of ROS data)	0.116	95% Percentile Bootstrap UCL	0.116
95% BCA Bootstrap UCL	0.117	95% Bootstrap t UCL	0.118
95% H-UCL (Log ROS)	0.117		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.32	KM Geo Mean	0.0983
KM SD (logged)	0.369	95% Critical H Value (KM-Log)	1.817
KM Standard Error of Mean (logged)	0.0577	95% H-UCL (KM -Log)	0.117
KM SD (logged)	0.369	95% Critical H Value (KM-Log)	1.817
KM Standard Error of Mean (logged)	0.0577		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.106	Mean in Log Scale	-2.31
SD in Original Scale	0.0418	SD in Log Scale	0.375
95% t UCL (Assumes normality)	0.117	95% H-Stat UCL	0.118
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	0.116		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Metals|VANADIUM			
General Statistics			
Total Number of Observations	43	Number of Distinct Observations	38
		Number of Missing Observations	59
Minimum	24.4	Mean	36.88
Maximum	64.4	Median	35.5
SD	7.978	Std. Error of Mean	1.217
Coefficient of Variation	0.216	Skewness	1.475
Normal GOF Test			
Shapiro Wilk Test Statistic	0.891	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.144	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.134	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	38.92	95% Adjusted-CLT UCL (Chen-1995)	39.17
		95% Modified-t UCL (Johnson-1978)	38.97
Gamma GOF Test			
A-D Test Statistic	0.843	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.747	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.114	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.135	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data follow Appr. Gamma Distribution at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	24.91	k star (bias corrected MLE)	23.19
Theta hat (MLE)	1.48	Theta star (bias corrected MLE)	1.59
nu hat (MLE)	2142	nu star (bias corrected)	1994
MLE Mean (bias corrected)	36.88	MLE Sd (bias corrected)	7.658
		Approximate Chi Square Value (0.05)	1891
Adjusted Level of Significance	0.0444	Adjusted Chi Square Value	1888
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50)	38.88	95% Adjusted Gamma UCL (use when n<50)	38.95
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.943	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.103	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.134	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	3.195	Mean of logged Data	3.587
Maximum of Logged Data	4.165	SD of logged Data	0.198
Assuming Lognormal Distribution			
95% H-UCL	38.83	90% Chebyshev (MVUE) UCL	40.21
95% Chebyshev (MVUE) UCL	41.73	97.5% Chebyshev (MVUE) UCL	43.85
99% Chebyshev (MVUE) UCL	48.01		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	38.88	95% Jackknife UCL	38.92
95% Standard Bootstrap UCL	38.81	95% Bootstrap-t UCL	39.3
95% Hall's Bootstrap UCL	39.52	95% Percentile Bootstrap UCL	38.89
95% BCA Bootstrap UCL	39.15		
90% Chebyshev(Mean, Sd) UCL	40.53	95% Chebyshev(Mean, Sd) UCL	42.18
97.5% Chebyshev(Mean, Sd) UCL	44.47	99% Chebyshev(Mean, Sd) UCL	48.98
Suggested UCL to Use			
95% Adjusted Gamma UCL	38.95		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_Pest_PCBs|TOTAL AROCLORS			
General Statistics			
Total Number of Observations	104	Number of Distinct Observations	70
Number of Detects	63	Number of Non-Detects	41
Number of Distinct Detects	61	Number of Distinct Non-Detects	12
Minimum Detect	0.012	Minimum Non-Detect	0.002
Maximum Detect	83	Maximum Non-Detect	0.0215
Variance Detects	115.9	Percent Non-Detects	39.42%
Mean Detects	2.599	SD Detects	10.77
Median Detects	0.215	CV Detects	4.143
Skewness Detects	7.006	Kurtosis Detects	52.24
Mean of Logged Detects	-1.303	SD of Logged Detects	1.957
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.257	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.405	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.111	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	1.575	KM Standard Error of Mean	0.831
KM SD	8.408	95% KM (BCA) UCL	3.356
95% KM (t) UCL	2.955	95% KM (Percentile Bootstrap) UCL	3.111
95% KM (z) UCL	2.942	95% KM Bootstrap t UCL	7.135
90% KM Chebyshev UCL	4.069	95% KM Chebyshev UCL	5.198
97.5% KM Chebyshev UCL	6.766	99% KM Chebyshev UCL	9.845
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	5.162	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.863	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.217	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.122	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.305	k star (bias corrected MLE)	0.301
Theta hat (MLE)	8.53	Theta star (bias corrected MLE)	8.641
nu hat (MLE)	38.39	nu star (bias corrected)	37.89
Mean (detects)	2.599		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	1.578
Maximum	83	Median	0.0405
SD	8.448	CV	5.354
k hat (MLE)	0.234	k star (bias corrected MLE)	0.234
Theta hat (MLE)	6.731	Theta star (bias corrected MLE)	6.741
nu hat (MLE)	48.77	nu star (bias corrected)	48.69
Adjusted Level of Significance (β)	0.0477		
Approximate Chi Square Value (48.69, α)	33.68	Adjusted Chi Square Value (48.69, β)	33.5
95% Gamma Approximate UCL (use when n>=50)	2.282	95% Gamma Adjusted UCL (use when n<50)	2.294
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	1.575	SD (KM)	8.408
Variance (KM)	70.7	SE of Mean (KM)	0.831
k hat (KM)	0.0351	k star (KM)	0.0405
nu hat (KM)	7.302	nu star (KM)	8.424
theta hat (KM)	44.88	theta star (KM)	38.9
80% gamma percentile (KM)	0.0915	90% gamma percentile (KM)	1.747
95% gamma percentile (KM)	7.611	99% gamma percentile (KM)	37.07
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (8.42, α)	2.983	Adjusted Chi Square Value (8.42, β)	2.938
95% Gamma Approximate KM-UCL (use when n>=50)	4.449	95% Gamma Adjusted KM-UCL (use when n<50)	4.517
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Approximate Test Statistic	0.959	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk P Value	0.0848	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0715	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.111	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	1.576	Mean in Log Scale	-3.178
SD in Original Scale	8.449	SD in Log Scale	2.882
95% t UCL (assumes normality of ROS data)	2.951	95% Percentile Bootstrap UCL	3.141
95% BCA Bootstrap UCL	4.341	95% Bootstrap t UCL	6.9
95% H-UCL (Log ROS)	9.324		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-3.171	KM Geo Mean	0.0419
KM SD (logged)	2.787	95% Critical H Value (KM-Log)	4.3
KM Standard Error of Mean (logged)	0.28	95% H-UCL (KM -Log)	6.644
KM SD (logged)	2.787	95% Critical H Value (KM-Log)	4.3
KM Standard Error of Mean (logged)	0.28		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.577	Mean in Log Scale	-2.8
SD in Original Scale	8.449	SD in Log Scale	2.441
95% t UCL (Assumes normality)	2.952	95% H-Stat UCL	3.026
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
KM H-UCL	6.644		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_SVOCs|BENZO[A]PYRENE			
General Statistics			
Total Number of Observations	42	Number of Distinct Observations	16
		Number of Missing Observations	60
Number of Detects	3	Number of Non-Detects	39
Number of Distinct Detects	3	Number of Distinct Non-Detects	13
Minimum Detect	0.005	Minimum Non-Detect	0.0085
Maximum Detect	0.1	Maximum Non-Detect	0.016
Variance Detects	0.00278	Percent Non-Detects	92.86%
Mean Detects	0.0393	SD Detects	0.0527
Median Detects	0.013	CV Detects	1.34
Skewness Detects	1.687	Kurtosis Detects	N/A
Mean of Logged Detects	-3.981	SD of Logged Detects	1.53
Warning: Data set has only 3 Detected Values.			
This is not enough to compute meaningful or reliable statistics and estimates.			
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.813	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.358	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.00746	KM Standard Error of Mean	0.00274
KM SD	0.0145	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.0121	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.012	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.0157	95% KM Chebyshev UCL	0.0194
97.5% KM Chebyshev UCL	0.0246	99% KM Chebyshev UCL	0.0347
Gamma GOF Tests on Detected Observations Only			
Not Enough Data to Perform GOF Test			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.797	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.0494	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	4.779	nu star (bias corrected)	N/A
Mean (detects)	0.0393		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.005	Mean	0.0129
Maximum	0.1	Median	0.01
SD	0.0141	CV	1.093
k hat (MLE)	3.362	k star (bias corrected MLE)	3.137
Theta hat (MLE)	0.00384	Theta star (bias corrected MLE)	0.00412
nu hat (MLE)	282.4	nu star (bias corrected)	263.5
Adjusted Level of Significance (β)	0.0443		
Approximate Chi Square Value (263.54, α)	226.9	Adjusted Chi Square Value (263.54, β)	225.7
95% Gamma Approximate UCL (use when n>=50)	0.015	95% Gamma Adjusted UCL (use when n<50)	N/A
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.00746	SD (KM)	0.0145
Variance (KM)	2.1041E-4	SE of Mean (KM)	0.00274
k hat (KM)	0.264	k star (KM)	0.261
nu hat (KM)	22.2	nu star (KM)	21.95
theta hat (KM)	0.0282	theta star (KM)	0.0285
80% gamma percentile (KM)	0.011	90% gamma percentile (KM)	0.0223
95% gamma percentile (KM)	0.0356	99% gamma percentile (KM)	0.0708
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (21.95, α)	12.3	Adjusted Chi Square Value (21.95, β)	12.04
95% Gamma Approximate KM-UCL (use when n>=50)	0.0133	95% Gamma Adjusted KM-UCL (use when n<50)	0.0136
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.958	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.26	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.00757	Mean in Log Scale	-5.378
SD in Original Scale	0.015	SD in Log Scale	0.829
95% t UCL (assumes normality of ROS data)	0.0115	95% Percentile Bootstrap UCL	0.0121
95% BCA Bootstrap UCL	0.0145	95% Bootstrap t UCL	0.0217
95% H-UCL (Log ROS)	0.00864		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-5.204	KM Geo Mean	0.0055
KM SD (logged)	0.476	95% Critical H Value (KM-Log)	1.882
KM Standard Error of Mean (logged)	0.0901	95% H-UCL (KM -Log)	0.00708
KM SD (logged)	0.476	95% Critical H Value (KM-Log)	1.882
KM Standard Error of Mean (logged)	0.0901		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0076	Mean in Log Scale	-5.18
SD in Original Scale	0.0147	SD in Log Scale	0.489
95% t UCL (Assumes normality)	0.0114	95% H-Stat UCL	0.00732
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	0.0121		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

FFTA_RA_SO_SVOCs|DIBENZ[A,H]ANTHRACENE			
General Statistics			
Total Number of Observations	42	Number of Distinct Observations	21
		Number of Missing Observations	60
Number of Detects	3	Number of Non-Detects	39
Number of Distinct Detects	3	Number of Distinct Non-Detects	18
Minimum Detect	0.0025	Minimum Non-Detect	0.0085
Maximum Detect	0.021	Maximum Non-Detect	0.3
Variance Detects	1.0936E-4	Percent Non-Detects	92.86%
Mean Detects	0.00893	SD Detects	0.0105
Median Detects	0.0033	CV Detects	1.171
Skewness Detects	1.721	Kurtosis Detects	N/A
Mean of Logged Detects	-5.19	SD of Logged Detects	1.157
Warning: Data set has only 3 Detected Values.			
This is not enough to compute meaningful or reliable statistics and estimates.			
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.782	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.372	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.00362	KM Standard Error of Mean	9.3027E-4
KM SD	0.00357	95% KM (BCA) UCL	N/A
95% KM (t) UCL	0.00519	95% KM (Percentile Bootstrap) UCL	N/A
95% KM (z) UCL	0.00515	95% KM Bootstrap t UCL	N/A
90% KM Chebyshev UCL	0.00641	95% KM Chebyshev UCL	0.00768
97.5% KM Chebyshev UCL	0.00943	99% KM Chebyshev UCL	0.0129
Gamma GOF Tests on Detected Observations Only			
Not Enough Data to Perform GOF Test			
Gamma Statistics on Detected Data Only			
k hat (MLE)	1.2	k star (bias corrected MLE)	N/A
Theta hat (MLE)	0.00745	Theta star (bias corrected MLE)	N/A
nu hat (MLE)	7.197	nu star (bias corrected)	N/A
Mean (detects)	0.00893		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0025	Mean	0.00992
Maximum	0.021	Median	0.01
SD	0.00233	CV	0.234
k hat (MLE)	14.83	k star (bias corrected MLE)	13.79
Theta hat (MLE)	6.6910E-4	Theta star (bias corrected MLE)	7.1974E-4
nu hat (MLE)	1246	nu star (bias corrected)	1158
Adjusted Level of Significance (β)	0.0443		
Approximate Chi Square Value (N/A, α)	1080	Adjusted Chi Square Value (N/A, β)	1078
95% Gamma Approximate UCL (use when n>=50)	0.0106	95% Gamma Adjusted UCL (use when n<50)	N/A
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.00362	SD (KM)	0.00357
Variance (KM)	1.2734E-5	SE of Mean (KM)	9.3027E-4
k hat (KM)	1.031	k star (KM)	0.974
nu hat (KM)	86.64	nu star (KM)	81.78
theta hat (KM)	0.00351	theta star (KM)	0.00372
80% gamma percentile (KM)	0.00585	90% gamma percentile (KM)	0.0084
95% gamma percentile (KM)	0.011	99% gamma percentile (KM)	0.0169
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (81.78, α)	61.94	Adjusted Chi Square Value (81.78, β)	61.33
95% Gamma Approximate KM-UCL (use when n>=50)	0.00478	95% Gamma Adjusted KM-UCL (use when n<50)	0.00483
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.846	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.767	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.341	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.425	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0038	Mean in Log Scale	-5.747
SD in Original Scale	0.00314	SD in Log Scale	0.544
95% t UCL (assumes normality of ROS data)	0.00461	95% Percentile Bootstrap UCL	0.00467
95% BCA Bootstrap UCL	0.00488	95% Bootstrap t UCL	0.00532
95% H-UCL (Log ROS)	0.00436		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-5.773	KM Geo Mean	0.00311
KM SD (logged)	0.413	95% Critical H Value (KM-Log)	1.84
KM Standard Error of Mean (logged)	0.15	95% H-UCL (KM -Log)	0.00381
KM SD (logged)	0.413	95% Critical H Value (KM-Log)	1.84
KM Standard Error of Mean (logged)	0.15		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.056	Mean in Log Scale	-3.957
SD in Original Scale	0.0621	SD in Log Scale	1.622
95% t UCL (Assumes normality)	0.0721	95% H-Stat UCL	0.157
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	0.00519		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

UCL Statistics for Data Sets with Non-Detects			
User Selected Options			
Date/Time of Computation	ProUCL 5.110/28/2016 1:03:50 PM		
From File	WorkSheet.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
ARSENIC			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	1.6	Mean	6.639
Maximum	19	Median	5.91
SD	3.889	Std. Error of Mean	0.972
Coefficient of Variation	0.586	Skewness	2.221
Normal GOF Test			
Shapiro Wilk Test Statistic	0.794	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level	
Data appear Approximate Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.343	95% Adjusted-CLT UCL (Chen-1995)	8.815
		95% Modified-t UCL (Johnson-1978)	8.433
Gamma GOF Test			
A-D Test Statistic	0.405	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.131	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	3.909	k star (bias corrected MLE)	3.217
Theta hat (MLE)	1.698	Theta star (bias corrected MLE)	2.063
nu hat (MLE)	125.1	nu star (bias corrected)	103
MLE Mean (bias corrected)	6.639	MLE Sd (bias corrected)	3.701
		Approximate Chi Square Value (0.05)	80.55
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	78.29
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	8.486	95% Adjusted Gamma UCL (use when n<50)	8.73
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.149	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	0.47	Mean of logged Data	1.76
Maximum of Logged Data	2.944	SD of logged Data	0.536
Assuming Lognormal Distribution			
95% H-UCL	8.96	90% Chebyshev (MVUE) UCL	9.411
95% Chebyshev (MVUE) UCL	10.66	97.5% Chebyshev (MVUE) UCL	12.41
99% Chebyshev (MVUE) UCL	15.82		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	8.238	95% Jackknife UCL	8.343
95% Standard Bootstrap UCL	8.186	95% Bootstrap-t UCL	9.363
95% Hall's Bootstrap UCL	16.11	95% Percentile Bootstrap UCL	8.394
95% BCA Bootstrap UCL	8.757		
90% Chebyshev(Mean, Sd) UCL	9.556	95% Chebyshev(Mean, Sd) UCL	10.88
97.5% Chebyshev(Mean, Sd) UCL	12.71	99% Chebyshev(Mean, Sd) UCL	16.31
Suggested UCL to Use			
95% Student's-t UCL	8.343		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

COBALT			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	3.56	Mean	7.566
Maximum	19	Median	6.385
SD	4.093	Std. Error of Mean	1.023
Coefficient of Variation	0.541	Skewness	1.579
Normal GOF Test			
Shapiro Wilk Test Statistic	0.85	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.176	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level	
Data appear Approximate Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.359	95% Adjusted-CLT UCL (Chen-1995)	9.68
		95% Modified-t UCL (Johnson-1978)	9.427
Gamma GOF Test			
A-D Test Statistic	0.357	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.115	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	4.46	k star (bias corrected MLE)	3.665
Theta hat (MLE)	1.696	Theta star (bias corrected MLE)	2.064
nu hat (MLE)	142.7	nu star (bias corrected)	117.3
MLE Mean (bias corrected)	7.566	MLE Sd (bias corrected)	3.952
		Approximate Chi Square Value (0.05)	93.28
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	90.85
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	9.513	95% Adjusted Gamma UCL (use when n<50)	9.768
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.102	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	1.27	Mean of logged Data	1.907
Maximum of Logged Data	2.944	SD of logged Data	0.485
Assuming Lognormal Distribution			
95% H-UCL	9.773	90% Chebyshev (MVUE) UCL	10.33
95% Chebyshev (MVUE) UCL	11.6	97.5% Chebyshev (MVUE) UCL	13.37
99% Chebyshev (MVUE) UCL	16.85		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	9.249	95% Jackknife UCL	9.359
95% Standard Bootstrap UCL	9.205	95% Bootstrap-t UCL	10.11
95% Hall's Bootstrap UCL	10.67	95% Percentile Bootstrap UCL	9.303
95% BCA Bootstrap UCL	9.866		
90% Chebyshev(Mean, Sd) UCL	10.64	95% Chebyshev(Mean, Sd) UCL	12.03
97.5% Chebyshev(Mean, Sd) UCL	13.96	99% Chebyshev(Mean, Sd) UCL	17.75
Suggested UCL to Use			
95% Student's-t UCL	9.359		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

IRON			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	15
		Number of Missing Observations	0
Minimum	8100	Mean	15313
Maximum	25600	Median	14850
SD	4723	Std. Error of Mean	1181
Coefficient of Variation	0.308	Skewness	0.631
Normal GOF Test			
Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.175	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level	
Data appear Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	17382	95% Adjusted-CLT UCL (Chen-1995)	17453
		95% Modified-t UCL (Johnson-1978)	17413
Gamma GOF Test			
A-D Test Statistic	0.173	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.136	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.215	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	11.45	k star (bias corrected MLE)	9.344
Theta hat (MLE)	1338	Theta star (bias corrected MLE)	1639
nu hat (MLE)	366.4	nu star (bias corrected)	299
MLE Mean (bias corrected)	15313	MLE Sd (bias corrected)	5009
		Approximate Chi Square Value (0.05)	259.9
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	255.8
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50))	17613	95% Adjusted Gamma UCL (use when n<50)	17898
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.122	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	9	Mean of logged Data	9.592
Maximum of Logged Data	10.15	SD of logged Data	0.309
Assuming Lognormal Distribution			
95% H-UCL	17850	90% Chebyshev (MVUE) UCL	18915
95% Chebyshev (MVUE) UCL	20544	97.5% Chebyshev (MVUE) UCL	22805
99% Chebyshev (MVUE) UCL	27246		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	17254	95% Jackknife UCL	17382
95% Standard Bootstrap UCL	17136	95% Bootstrap-t UCL	17549
95% Hall's Bootstrap UCL	17640	95% Percentile Bootstrap UCL	17275
95% BCA Bootstrap UCL	17363		
90% Chebyshev(Mean, Sd) UCL	18854	95% Chebyshev(Mean, Sd) UCL	20459
97.5% Chebyshev(Mean, Sd) UCL	22686	99% Chebyshev(Mean, Sd) UCL	27060
Suggested UCL to Use			
95% Student's-t UCL	17382		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
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Wetland Sediment

TOTAL AROCLORS			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	15	Number of Non-Detects	1
Number of Distinct Detects	15	Number of Distinct Non-Detects	1
Minimum Detect	0.028	Minimum Non-Detect	0.026
Maximum Detect	2.1	Maximum Non-Detect	0.026
Variance Detects	0.377	Percent Non-Detects	6.25%
Mean Detects	0.65	SD Detects	0.614
Median Detects	0.44	CV Detects	0.946
Skewness Detects	1.059	Kurtosis Detects	0.499
Mean of Logged Detects	-1.007	SD of Logged Detects	1.269
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.88	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Approximate Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.611	KM Standard Error of Mean	0.154
KM SD	0.594	95% KM (BCA) UCL	0.889
95% KM (t) UCL	0.88	95% KM (Percentile Bootstrap) UCL	0.856
95% KM (z) UCL	0.863	95% KM Bootstrap t UCL	0.956
90% KM Chebyshev UCL	1.072	95% KM Chebyshev UCL	1.281
97.5% KM Chebyshev UCL	1.571	99% KM Chebyshev UCL	2.14
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.207	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.763	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.109	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.228	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	1.002	k star (bias corrected MLE)	0.846
Theta hat (MLE)	0.648	Theta star (bias corrected MLE)	0.768
nu hat (MLE)	30.07	nu star (bias corrected)	25.39
Mean (detects)	0.65		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	0.61
Maximum	2.1	Median	0.365
SD	0.615	CV	1.008
k hat (MLE)	0.805	k star (bias corrected MLE)	0.695
Theta hat (MLE)	0.758	Theta star (bias corrected MLE)	0.877
nu hat (MLE)	25.75	nu star (bias corrected)	22.25
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (22.25, α)	12.53	Adjusted Chi Square Value (22.25, β)	11.7
95% Gamma Approximate UCL (use when n>=50)	1.083	95% Gamma Adjusted UCL (use when n<50)	1.159
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.611	SD (KM)	0.594
Variance (KM)	0.353	SE of Mean (KM)	0.154
k hat (KM)	1.056	k star (KM)	0.9
nu hat (KM)	33.8	nu star (KM)	28.8
theta hat (KM)	0.578	theta star (KM)	0.678
80% gamma percentile (KM)	0.991	90% gamma percentile (KM)	1.443
95% gamma percentile (KM)	1.899	99% gamma percentile (KM)	2.966
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (28.80, α)	17.55	Adjusted Chi Square Value (28.80, β)	16.56
95% Gamma Approximate KM-UCL (use when n>=50)	1.002	95% Gamma Adjusted KM-UCL (use when n<50)	1.062
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.119	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.61	Mean in Log Scale	-1.2
SD in Original Scale	0.614	SD in Log Scale	1.447
95% t UCL (assumes normality of ROS data)	0.879	95% Percentile Bootstrap UCL	0.869
95% BCA Bootstrap UCL	0.903	95% Bootstrap t UCL	0.961
95% H-UCL (Log ROS)	3.115		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-1.172	KM Geo Mean	0.31
KM SD (logged)	1.348	95% Critical H Value (KM-Log)	3.276
KM Standard Error of Mean (logged)	0.349	95% H-UCL (KM -Log)	2.403
KM SD (logged)	1.348	95% Critical H Value (KM-Log)	3.276
KM Standard Error of Mean (logged)	0.349		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.61	Mean in Log Scale	-1.216
SD in Original Scale	0.614	SD in Log Scale	1.482
95% t UCL (Assumes normality)	0.879	95% H-Stat UCL	3.413
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	0.88		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

BENZO(A)ANTHRACENE			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	14
Number of Detects	14	Number of Non-Detects	2
Number of Distinct Detects	13	Number of Distinct Non-Detects	1
Minimum Detect	0.0078	Minimum Non-Detect	0.024
Maximum Detect	3.6	Maximum Non-Detect	0.024
Variance Detects	0.873	Percent Non-Detects	12.5%
Mean Detects	0.373	SD Detects	0.934
Median Detects	0.125	CV Detects	2.503
Skewness Detects	3.666	Kurtosis Detects	13.59
Mean of Logged Detects	-2.321	SD of Logged Detects	1.571
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.393	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.443	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.328	KM Standard Error of Mean	0.221
KM SD	0.85	95% KM (BCA) UCL	0.762
95% KM (t) UCL	0.715	95% KM (Percentile Bootstrap) UCL	0.76
95% KM (z) UCL	0.691	95% KM Bootstrap t UCL	2.937
90% KM Chebyshev UCL	0.99	95% KM Chebyshev UCL	1.29
97.5% KM Chebyshev UCL	1.706	99% KM Chebyshev UCL	2.524
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.147	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.797	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.273	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.242	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.479	k star (bias corrected MLE)	0.424
Theta hat (MLE)	0.78	Theta star (bias corrected MLE)	0.881
nu hat (MLE)	13.41	nu star (bias corrected)	11.87
Mean (detects)	0.373		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0078	Mean	0.328
Maximum	3.6	Median	0.0915
SD	0.879	CV	2.68
k hat (MLE)	0.435	k star (bias corrected MLE)	0.395
Theta hat (MLE)	0.753	Theta star (bias corrected MLE)	0.829
nu hat (MLE)	13.93	nu star (bias corrected)	12.65
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (12.65, α)	5.659	Adjusted Chi Square Value (12.65, β)	5.135
95% Gamma Approximate UCL (use when n>=50)	0.733	95% Gamma Adjusted UCL (use when n<50)	0.808
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.328	SD (KM)	0.85
Variance (KM)	0.723	SE of Mean (KM)	0.221
k hat (KM)	0.149	k star (KM)	0.163
nu hat (KM)	4.767	nu star (KM)	5.207
theta hat (KM)	2.203	theta star (KM)	2.017
80% gamma percentile (KM)	0.381	90% gamma percentile (KM)	0.983
95% gamma percentile (KM)	1.777	99% gamma percentile (KM)	4.044
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (5.21, α)	1.249	Adjusted Chi Square Value (5.21, β)	1.045
95% Gamma Approximate KM-UCL (use when n>=50)	1.369	95% Gamma Adjusted KM-UCL (use when n<50)	1.636
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.328	Mean in Log Scale	-2.586
SD in Original Scale	0.878	SD in Log Scale	1.638
95% t UCL (assumes normality of ROS data)	0.713	95% Percentile Bootstrap UCL	0.758
95% BCA Bootstrap UCL	0.996	95% Bootstrap t UCL	2.895
95% H-UCL (Log ROS)	1.434		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.578	KM Geo Mean	0.0759
KM SD (logged)	1.576	95% Critical H Value (KM-Log)	3.681
KM Standard Error of Mean (logged)	0.411	95% H-UCL (KM -Log)	1.175
KM SD (logged)	1.576	95% Critical H Value (KM-Log)	3.681
KM Standard Error of Mean (logged)	0.411		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.328	Mean in Log Scale	-2.584
SD in Original Scale	0.878	SD in Log Scale	1.629
95% t UCL (Assumes normality)	0.713	95% H-Stat UCL	1.394
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
97.5% KM (Chebyshev) UCL	1.706	99% KM (Chebyshev) UCL	2.524
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

BENZO(A)PYRENE			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	15	Number of Non-Detects	1
Number of Distinct Detects	15	Number of Distinct Non-Detects	1
Minimum Detect	0.0072	Minimum Non-Detect	0.024
Maximum Detect	2.4	Maximum Non-Detect	0.024
Variance Detects	0.361	Percent Non-Detects	6.25%
Mean Detects	0.244	SD Detects	0.601
Median Detects	0.09	CV Detects	2.46
Skewness Detects	3.771	Kurtosis Detects	14.43
Mean of Logged Detects	-2.665	SD of Logged Detects	1.507
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.393	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.43	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.23	KM Standard Error of Mean	0.146
KM SD	0.565	95% KM (BCA) UCL	0.524
95% KM (t) UCL	0.486	95% KM (Percentile Bootstrap) UCL	0.513
95% KM (z) UCL	0.47	95% KM Bootstrap t UCL	1.741
90% KM Chebyshev UCL	0.668	95% KM Chebyshev UCL	0.867
97.5% KM Chebyshev UCL	1.143	99% KM Chebyshev UCL	1.685
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.16	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.793	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.259	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.234	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.505	k star (bias corrected MLE)	0.448
Theta hat (MLE)	0.484	Theta star (bias corrected MLE)	0.545
nu hat (MLE)	15.15	nu star (bias corrected)	13.45
Mean (detects)	0.244		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0072	Mean	0.23
Maximum	2.4	Median	0.071
SD	0.584	CV	2.541
k hat (MLE)	0.485	k star (bias corrected MLE)	0.436
Theta hat (MLE)	0.474	Theta star (bias corrected MLE)	0.527
nu hat (MLE)	15.52	nu star (bias corrected)	13.94
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (13.94, α)	6.533	Adjusted Chi Square Value (13.94, β)	5.964
95% Gamma Approximate UCL (use when n>=50)	0.49	95% Gamma Adjusted UCL (use when n<50)	0.537
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.23	SD (KM)	0.565
Variance (KM)	0.319	SE of Mean (KM)	0.146
k hat (KM)	0.165	k star (KM)	0.176
nu hat (KM)	5.294	nu star (KM)	5.634
theta hat (KM)	1.389	theta star (KM)	1.305
80% gamma percentile (KM)	0.281	90% gamma percentile (KM)	0.692
95% gamma percentile (KM)	1.222	99% gamma percentile (KM)	2.713
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (5.63, α)	1.456	Adjusted Chi Square Value (5.63, β)	1.23
95% Gamma Approximate KM-UCL (use when n>=50)	0.889	95% Gamma Adjusted KM-UCL (use when n<50)	1.053
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.943	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.131	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.23	Mean in Log Scale	-2.776
SD in Original Scale	0.584	SD in Log Scale	1.522
95% t UCL (assumes normality of ROS data)	0.486	95% Percentile Bootstrap UCL	0.511
95% BCA Bootstrap UCL	0.676	95% Bootstrap t UCL	1.743
95% H-UCL (Log ROS)	0.811		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.779	KM Geo Mean	0.0621
KM SD (logged)	1.478	95% Critical H Value (KM-Log)	3.505
KM Standard Error of Mean (logged)	0.383	95% H-UCL (KM -Log)	0.706
KM SD (logged)	1.478	95% Critical H Value (KM-Log)	3.505
KM Standard Error of Mean (logged)	0.383		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.23	Mean in Log Scale	-2.775
SD in Original Scale	0.584	SD in Log Scale	1.521
95% t UCL (Assumes normality)	0.486	95% H-Stat UCL	0.809
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
97.5% KM (Chebyshev) UCL	1.143	99% KM (Chebyshev) UCL	1.685
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

BENZO(B)FLUORANTHENE			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	13
Number of Detects	13	Number of Non-Detects	3
Number of Distinct Detects	12	Number of Distinct Non-Detects	2
Minimum Detect	0.013	Minimum Non-Detect	0.024
Maximum Detect	3.2	Maximum Non-Detect	0.042
Variance Detects	0.724	Percent Non-Detects	18.75%
Mean Detects	0.395	SD Detects	0.851
Median Detects	0.17	CV Detects	2.155
Skewness Detects	3.489	Kurtosis Detects	12.4
Mean of Logged Detects	-1.992	SD of Logged Detects	1.44
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.435	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.425	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.324	KM Standard Error of Mean	0.195
KM SD	0.751	95% KM (BCA) UCL	0.698
95% KM (t) UCL	0.667	95% KM (Percentile Bootstrap) UCL	0.707
95% KM (z) UCL	0.646	95% KM Bootstrap t UCL	1.978
90% KM Chebyshev UCL	0.911	95% KM Chebyshev UCL	1.176
97.5% KM Chebyshev UCL	1.545	99% KM Chebyshev UCL	2.269
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.988	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.783	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.266	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.248	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.584	k star (bias corrected MLE)	0.5
Theta hat (MLE)	0.676	Theta star (bias corrected MLE)	0.789
nu hat (MLE)	15.17	nu star (bias corrected)	13.01
Mean (detects)	0.395		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	0.323
Maximum	3.2	Median	0.112
SD	0.777	CV	2.407
k hat (MLE)	0.474	k star (bias corrected MLE)	0.427
Theta hat (MLE)	0.681	Theta star (bias corrected MLE)	0.756
nu hat (MLE)	15.17	nu star (bias corrected)	13.66
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (13.66, α)	6.338	Adjusted Chi Square Value (13.66, β)	5.779
95% Gamma Approximate UCL (use when n>=50)	0.695	95% Gamma Adjusted UCL (use when n<50)	0.763
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.324	SD (KM)	0.751
Variance (KM)	0.564	SE of Mean (KM)	0.195
k hat (KM)	0.186	k star (KM)	0.193
nu hat (KM)	5.959	nu star (KM)	6.175
theta hat (KM)	1.741	theta star (KM)	1.68
80% gamma percentile (KM)	0.419	90% gamma percentile (KM)	0.98
95% gamma percentile (KM)	1.686	99% gamma percentile (KM)	3.641
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (6.18, α)	1.73	Adjusted Chi Square Value (6.18, β)	1.477
95% Gamma Approximate KM-UCL (use when n>=50)	1.157	95% Gamma Adjusted KM-UCL (use when n<50)	1.356
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.936	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.156	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.324	Mean in Log Scale	-2.39
SD in Original Scale	0.776	SD in Log Scale	1.554
95% t UCL (assumes normality of ROS data)	0.664	95% Percentile Bootstrap UCL	0.69
95% BCA Bootstrap UCL	0.911	95% Bootstrap t UCL	2.065
95% H-UCL (Log ROS)	1.319		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.376	KM Geo Mean	0.093
KM SD (logged)	1.486	95% Critical H Value (KM-Log)	3.518
KM Standard Error of Mean (logged)	0.39	95% H-UCL (KM -Log)	1.081
KM SD (logged)	1.486	95% Critical H Value (KM-Log)	3.518
KM Standard Error of Mean (logged)	0.39		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.324	Mean in Log Scale	-2.413
SD in Original Scale	0.776	SD in Log Scale	1.578
95% t UCL (Assumes normality)	0.664	95% H-Stat UCL	1.397
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	1.176		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

DIBENZ(A,H)ANTHRACENE			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	15
Number of Detects	7	Number of Non-Detects	9
Number of Distinct Detects	6	Number of Distinct Non-Detects	9
Minimum Detect	0.0058	Minimum Non-Detect	0.024
Maximum Detect	0.51	Maximum Non-Detect	1.2
Variance Detects	0.0339	Percent Non-Detects	56.25%
Mean Detects	0.0935	SD Detects	0.184
Median Detects	0.022	CV Detects	1.97
Skewness Detects	2.61	Kurtosis Detects	6.853
Mean of Logged Detects	-3.496	SD of Logged Detects	1.452
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.529	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.455	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.0634	KM Standard Error of Mean	0.0424
KM SD	0.135	95% KM (BCA) UCL	0.142
95% KM (t) UCL	0.138	95% KM (Percentile Bootstrap) UCL	0.141
95% KM (z) UCL	0.133	95% KM Bootstrap t UCL	0.541
90% KM Chebyshev UCL	0.19	95% KM Chebyshev UCL	0.248
97.5% KM Chebyshev UCL	0.328	99% KM Chebyshev UCL	0.485
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.86	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.748	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.349	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.326	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.555	k star (bias corrected MLE)	0.412
Theta hat (MLE)	0.169	Theta star (bias corrected MLE)	0.227
nu hat (MLE)	7.766	nu star (bias corrected)	5.771
Mean (detects)	0.0935		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0058	Mean	0.0473
Maximum	0.51	Median	0.0131
SD	0.124	CV	2.619
k hat (MLE)	0.614	k star (bias corrected MLE)	0.541
Theta hat (MLE)	0.077	Theta star (bias corrected MLE)	0.0875
nu hat (MLE)	19.66	nu star (bias corrected)	17.31
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (17.31, α)	8.891	Adjusted Chi Square Value (17.31, β)	8.211
95% Gamma Approximate UCL (use when n>=50)	0.0921	95% Gamma Adjusted UCL (use when n<50)	0.0997
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.0634	SD (KM)	0.135
Variance (KM)	0.0183	SE of Mean (KM)	0.0424
k hat (KM)	0.219	k star (KM)	0.22
nu hat (KM)	7.016	nu star (KM)	7.034
theta hat (KM)	0.289	theta star (KM)	0.288
80% gamma percentile (KM)	0.0874	90% gamma percentile (KM)	0.191
95% gamma percentile (KM)	0.318	99% gamma percentile (KM)	0.663
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (7.03, α)	2.189	Adjusted Chi Square Value (7.03, β)	1.895
95% Gamma Approximate KM-UCL (use when n>=50)	0.204	95% Gamma Adjusted KM-UCL (use when n<50)	0.235
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.9	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.233	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0524	Mean in Log Scale	-3.726
SD in Original Scale	0.122	SD in Log Scale	0.953
95% t UCL (assumes normality of ROS data)	0.106	95% Percentile Bootstrap UCL	0.113
95% BCA Bootstrap UCL	0.144	95% Bootstrap t UCL	0.635
95% H-UCL (Log ROS)	0.0725		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-3.746	KM Geo Mean	0.0236
KM SD (logged)	1.166	95% Critical H Value (KM-Log)	2.968
KM Standard Error of Mean (logged)	0.41	95% H-UCL (KM -Log)	0.114
KM SD (logged)	1.166	95% Critical H Value (KM-Log)	2.968
KM Standard Error of Mean (logged)	0.41		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.212	Mean in Log Scale	-2.403
SD in Original Scale	0.216	SD in Log Scale	1.606
95% t UCL (Assumes normality)	0.307	95% H-Stat UCL	1.544
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.248		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Sediment

INDENO(1,2,3-CD)PYRENE			
General Statistics			
Total Number of Observations	16	Number of Distinct Observations	14
Number of Detects	13	Number of Non-Detects	3
Number of Distinct Detects	11	Number of Distinct Non-Detects	3
Minimum Detect	0.012	Minimum Non-Detect	0.024
Maximum Detect	2.4	Maximum Non-Detect	0.031
Variance Detects	0.411	Percent Non-Detects	18.75%
Mean Detects	0.279	SD Detects	0.641
Median Detects	0.1	CV Detects	2.294
Skewness Detects	3.533	Kurtosis Detects	12.63
Mean of Logged Detects	-2.356	SD of Logged Detects	1.361
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.408	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.454	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.23	KM Standard Error of Mean	0.147
KM SD	0.564	95% KM (BCA) UCL	0.525
95% KM (t) UCL	0.488	95% KM (Percentile Bootstrap) UCL	0.51
95% KM (z) UCL	0.472	95% KM Bootstrap t UCL	1.764
90% KM Chebyshev UCL	0.671	95% KM Chebyshev UCL	0.87
97.5% KM Chebyshev UCL	1.147	99% KM Chebyshev UCL	1.691
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.288	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.784	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.303	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.249	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.575	k star (bias corrected MLE)	0.494
Theta hat (MLE)	0.485	Theta star (bias corrected MLE)	0.566
nu hat (MLE)	14.96	nu star (bias corrected)	12.84
Mean (detects)	0.279		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	0.229
Maximum	2.4	Median	0.079
SD	0.583	CV	2.549
k hat (MLE)	0.489	k star (bias corrected MLE)	0.439
Theta hat (MLE)	0.468	Theta star (bias corrected MLE)	0.521
nu hat (MLE)	15.66	nu star (bias corrected)	14.05
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (14.05, α)	6.608	Adjusted Chi Square Value (14.05, β)	6.034
95% Gamma Approximate UCL (use when n>=50)	0.487	95% Gamma Adjusted UCL (use when n<50)	0.533
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.23	SD (KM)	0.564
Variance (KM)	0.318	SE of Mean (KM)	0.147
k hat (KM)	0.166	k star (KM)	0.177
nu hat (KM)	5.324	nu star (KM)	5.659
theta hat (KM)	1.384	theta star (KM)	1.302
80% gamma percentile (KM)	0.282	90% gamma percentile (KM)	0.694
95% gamma percentile (KM)	1.223	99% gamma percentile (KM)	2.711
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (5.66, α)	1.468	Adjusted Chi Square Value (5.66, β)	1.241
95% Gamma Approximate KM-UCL (use when n>=50)	0.887	95% Gamma Adjusted KM-UCL (use when n<50)	1.05
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.917	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.181	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.23	Mean in Log Scale	-2.678
SD in Original Scale	0.583	SD in Log Scale	1.4
95% t UCL (assumes normality of ROS data)	0.486	95% Percentile Bootstrap UCL	0.519
95% BCA Bootstrap UCL	0.661	95% Bootstrap t UCL	1.802
95% H-UCL (Log ROS)	0.619		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.683	KM Geo Mean	0.0684
KM SD (logged)	1.365	95% Critical H Value (KM-Log)	3.305
KM Standard Error of Mean (logged)	0.357	95% H-UCL (KM -Log)	0.556
KM SD (logged)	1.365	95% Critical H Value (KM-Log)	3.305
KM Standard Error of Mean (logged)	0.357		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.23	Mean in Log Scale	-2.718
SD in Original Scale	0.583	SD in Log Scale	1.445
95% t UCL (Assumes normality)	0.485	95% H-Stat UCL	0.679
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.87		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Surface Water

UCL Statistics for Data Sets with Non-Detects			
User Selected Options			
Date/Time of Computation	ProUCL 5.110/31/2016 9:19:36 AM		
From File	WorkSheet_c.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
ARSENIC			
General Statistics			
Total Number of Observations	14	Number of Distinct Observations	8
Number of Detects	9	Number of Non-Detects	5
Number of Distinct Detects	7	Number of Distinct Non-Detects	2
Minimum Detect	3.3	Minimum Non-Detect	3
Maximum Detect	7.9	Maximum Non-Detect	4
Variance Detects	3.29	Percent Non-Detects	35.71%
Mean Detects	4.967	SD Detects	1.814
Median Detects	4	CV Detects	0.365
Skewness Detects	1.034	Kurtosis Detects	-0.474
Mean of Logged Detects	1.549	SD of Logged Detects	0.337
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.805	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.259	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Approximate Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	4.396	KM Standard Error of Mean	0.452
KM SD	1.582	95% KM (BCA) UCL	5.169
95% KM (t) UCL	5.196	95% KM (Percentile Bootstrap) UCL	5.129
95% KM (z) UCL	5.139	95% KM Bootstrap t UCL	5.75
90% KM Chebyshev UCL	5.751	95% KM Chebyshev UCL	6.366
97.5% KM Chebyshev UCL	7.218	99% KM Chebyshev UCL	8.892
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.69	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.722	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.259	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.279	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	9.54	k star (bias corrected MLE)	6.434
Theta hat (MLE)	0.521	Theta star (bias corrected MLE)	0.772
nu hat (MLE)	171.7	nu star (bias corrected)	115.8
Mean (detects)	4.967		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	1.457	Mean	4.177
Maximum	7.9	Median	3.7
SD	1.891	CV	0.453
k hat (MLE)	5.441	k star (bias corrected MLE)	4.323
Theta hat (MLE)	0.768	Theta star (bias corrected MLE)	0.966
nu hat (MLE)	152.4	nu star (bias corrected)	121
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (121.04, α)	96.63	Adjusted Chi Square Value (121.04, β)	93.74
95% Gamma Approximate UCL (use when n>=50)	5.231	95% Gamma Adjusted UCL (use when n<50)	5.393
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	4.396	SD (KM)	1.582
Variance (KM)	2.501	SE of Mean (KM)	0.452
k hat (KM)	7.725	k star (KM)	6.117
nu hat (KM)	216.3	nu star (KM)	171.3
theta hat (KM)	0.569	theta star (KM)	0.719
80% gamma percentile (KM)	5.78	90% gamma percentile (KM)	6.771
95% gamma percentile (KM)	7.667	99% gamma percentile (KM)	9.544
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (171.28, α)	142	Adjusted Chi Square Value (171.28, β)	138.5
95% Gamma Approximate KM-UCL (use when n>=50)	5.302	95% Gamma Adjusted KM-UCL (use when n<50)	5.437
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	4.284	Mean in Log Scale	1.386
SD in Original Scale	1.763	SD in Log Scale	0.377
95% t UCL (assumes normality of ROS data)	5.118	95% Percentile Bootstrap UCL	5.06
95% BCA Bootstrap UCL	5.147	95% Bootstrap t UCL	5.563
95% H-UCL (Log ROS)	5.269		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	1.428	KM Geo Mean	4.171
KM SD (logged)	0.307	95% Critical H Value (KM-Log)	1.9
KM Standard Error of Mean (logged)	0.0887	95% H-UCL (KM -Log)	5.142
KM SD (logged)	0.307	95% Critical H Value (KM-Log)	1.9
KM Standard Error of Mean (logged)	0.0887		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.871	Mean in Log Scale	1.223
SD in Original Scale	2.089	SD in Log Scale	0.531
95% t UCL (Assumes normality)	4.86	95% H-Stat UCL	5.288
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	5.196		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

Wetland Surface Water

MANGANESE			
General Statistics			
Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	0
Minimum	28.3	Mean	407
Maximum	1190	Median	244.5
SD	430.1	Std. Error of Mean	114.9
Coefficient of Variation	1.057	Skewness	0.846
Normal GOF Test			
Shapiro Wilk Test Statistic	0.821	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	610.6	95% Adjusted-CLT UCL (Chen-1995)	623.8
		95% Modified-t UCL (Johnson-1978)	614.9
Gamma GOF Test			
A-D Test Statistic	0.712	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.77	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.218	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.237	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	0.771	k star (bias corrected MLE)	0.653
Theta hat (MLE)	528.1	Theta star (bias corrected MLE)	623.1
nu hat (MLE)	21.58	nu star (bias corrected)	18.29
MLE Mean (bias corrected)	407	MLE Sd (bias corrected)	503.6
		Approximate Chi Square Value (0.05)	9.601
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	8.776
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50)	775.4	95% Adjusted Gamma UCL (use when n<50)	848.3
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.878	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.191	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	3.343	Mean of logged Data	5.235
Maximum of Logged Data	7.082	SD of logged Data	1.429
Assuming Lognormal Distribution			
95% H-UCL	2135	90% Chebyshev (MVUE) UCL	1052
95% Chebyshev (MVUE) UCL	1320	97.5% Chebyshev (MVUE) UCL	1693
99% Chebyshev (MVUE) UCL	2424		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	596.1	95% Jackknife UCL	610.6
95% Standard Bootstrap UCL	590.1	95% Bootstrap-t UCL	648.7
95% Hall's Bootstrap UCL	596.3	95% Percentile Bootstrap UCL	600.4
95% BCA Bootstrap UCL	628.8		
90% Chebyshev(Mean, Sd) UCL	751.8	95% Chebyshev(Mean, Sd) UCL	908
97.5% Chebyshev(Mean, Sd) UCL	1125	99% Chebyshev(Mean, Sd) UCL	1551
Suggested UCL to Use			
95% Adjusted Gamma UCL	848.3		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

UCL Statistics for Data Sets with Non-Detects			
User Selected Options			
Date/Time of Computation	ProUCL 5.12/22/2017 4:57:58 PM		
From File	ProUCL_Inputs_AllMedia_COPConly_f.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Number of Bootstrap Operations	2000		
ALUMINUM			
General Statistics			
Total Number of Observations	28	Number of Distinct Observations	23
		Number of Missing Observations	2
Number of Detects	22	Number of Non-Detects	6
Number of Distinct Detects	22	Number of Distinct Non-Detects	1
Minimum Detect	24	Minimum Non-Detect	100
Maximum Detect	3080	Maximum Non-Detect	100
Variance Detects	551729	Percent Non-Detects	21.43%
Mean Detects	374.2	SD Detects	742.8
Median Detects	82.2	CV Detects	1.985
Skewness Detects	2.89	Kurtosis Detects	8.534
Mean of Logged Detects	4.794	SD of Logged Detects	1.363
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.518	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.369	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.184	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	305.5	KM Standard Error of Mean	127
KM SD	656.6	95% KM (BCA) UCL	534.3
95% KM (t) UCL	521.9	95% KM (Percentile Bootstrap) UCL	521.1
95% KM (z) UCL	514.5	95% KM Bootstrap t UCL	760.4
90% KM Chebyshev UCL	686.6	95% KM Chebyshev UCL	859.2
97.5% KM Chebyshev UCL	1099	99% KM Chebyshev UCL	1569
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	2.215	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.8	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.276	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.195	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.553	k star (bias corrected MLE)	0.508
Theta hat (MLE)	676.3	Theta star (bias corrected MLE)	736.4
nu hat (MLE)	24.34	nu star (bias corrected)	22.36
Mean (detects)	374.2		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	300.3
Maximum	3080	Median	62.4
SD	671.2	CV	2.235
k hat (MLE)	0.3	k star (bias corrected MLE)	0.291
Theta hat (MLE)	1002	Theta star (bias corrected MLE)	1031
nu hat (MLE)	16.79	nu star (bias corrected)	16.32
Adjusted Level of Significance (β)	0.0404		
Approximate Chi Square Value (16.32, α)	8.189	Adjusted Chi Square Value (16.32, β)	7.834
95% Gamma Approximate UCL (use when n>=50)	598.6	95% Gamma Adjusted UCL (use when n<50)	625.8
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	305.5	SD (KM)	656.6
Variance (KM)	431181	SE of Mean (KM)	127
k hat (KM)	0.216	k star (KM)	0.217
nu hat (KM)	12.12	nu star (KM)	12.16
theta hat (KM)	1411	theta star (KM)	1407
80% gamma percentile (KM)	419.1	90% gamma percentile (KM)	923.3
95% gamma percentile (KM)	1540	99% gamma percentile (KM)	3216
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (12.16, α)	5.33	Adjusted Chi Square Value (12.16, β)	5.052
95% Gamma Approximate KM-UCL (use when n>=50)	696.8	95% Gamma Adjusted KM-UCL (use when n<50)	735.1
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.881	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.911	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.184	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.184	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Approximate Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	307.9	Mean in Log Scale	4.617
SD in Original Scale	668	SD in Log Scale	1.291
95% t UCL (assumes normality of ROS data)	522.9	95% Percentile Bootstrap UCL	533.8
95% BCA Bootstrap UCL	631.5	95% Bootstrap t UCL	791.5
95% H-UCL (Log ROS)	470.6		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	4.603	KM Geo Mean	99.77
KM SD (logged)	1.251	95% Critical H Value (KM-Log)	2.78
KM Standard Error of Mean (logged)	0.246	95% H-UCL (KM -Log)	426.1
KM SD (logged)	1.251	95% Critical H Value (KM-Log)	2.78
KM Standard Error of Mean (logged)	0.246		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	304.7	Mean in Log Scale	4.605
SD in Original Scale	668.9	SD in Log Scale	1.257
95% t UCL (Assumes normality)	520	95% H-Stat UCL	432.9
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
KM H-UCL	426.1		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

ARSENIC			
General Statistics			
Total Number of Observations	28	Number of Distinct Observations	16
		Number of Missing Observations	2
Number of Detects	17	Number of Non-Detects	11
Number of Distinct Detects	14	Number of Distinct Non-Detects	3
Minimum Detect	2.5	Minimum Non-Detect	4
Maximum Detect	16	Maximum Non-Detect	6.6
Variance Detects	14.23	Percent Non-Detects	39.29%
Mean Detects	5.471	SD Detects	3.772
Median Detects	4	CV Detects	0.69
Skewness Detects	1.625	Kurtosis Detects	2.579
Mean of Logged Detects	1.519	SD of Logged Detects	0.592
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.79	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.259	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	4.432	KM Standard Error of Mean	0.616
KM SD	3.141	95% KM (BCA) UCL	5.6
95% KM (t) UCL	5.481	95% KM (Percentile Bootstrap) UCL	5.516
95% KM (z) UCL	5.445	95% KM Bootstrap t UCL	6.091
90% KM Chebyshev UCL	6.279	95% KM Chebyshev UCL	7.116
97.5% KM Chebyshev UCL	8.277	99% KM Chebyshev UCL	10.56
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.933	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.746	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.21	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.211	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data follow Appr. Gamma Distribution at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	2.922	k star (bias corrected MLE)	2.445
Theta hat (MLE)	1.872	Theta star (bias corrected MLE)	2.237
nu hat (MLE)	99.34	nu star (bias corrected)	83.14
Mean (detects)	5.471		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.214	Mean	4.31
Maximum	16	Median	2.971
SD	3.351	CV	0.778
k hat (MLE)	2.02	k star (bias corrected MLE)	1.828
Theta hat (MLE)	2.134	Theta star (bias corrected MLE)	2.358
nu hat (MLE)	113.1	nu star (bias corrected)	102.3
Adjusted Level of Significance (β)	0.0404		
Approximate Chi Square Value (102.35, α)	80	Adjusted Chi Square Value (102.35, β)	78.78
95% Gamma Approximate UCL (use when n>=50)	5.514	95% Gamma Adjusted UCL (use when n<50)	5.6
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	4.432	SD (KM)	3.141
Variance (KM)	9.865	SE of Mean (KM)	0.616
k hat (KM)	1.991	k star (KM)	1.802
nu hat (KM)	111.5	nu star (KM)	100.9
theta hat (KM)	2.226	theta star (KM)	2.46
80% gamma percentile (KM)	6.717	90% gamma percentile (KM)	8.836
95% gamma percentile (KM)	10.87	99% gamma percentile (KM)	15.41
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (100.89, α)	78.72	Adjusted Chi Square Value (100.89, β)	77.51
95% Gamma Approximate KM-UCL (use when n>=50)	5.68	95% Gamma Adjusted KM-UCL (use when n<50)	5.769
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.881	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.892	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.173	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.207	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Approximate Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	4.498	Mean in Log Scale	1.338
SD in Original Scale	3.195	SD in Log Scale	0.543
95% t UCL (assumes normality of ROS data)	5.527	95% Percentile Bootstrap UCL	5.553
95% BCA Bootstrap UCL	5.84	95% Bootstrap t UCL	6.102
95% H-UCL (Log ROS)	5.427		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	1.327	KM Geo Mean	3.768
KM SD (logged)	0.514	95% Critical H Value (KM-Log)	1.953
KM Standard Error of Mean (logged)	0.103	95% H-UCL (KM -Log)	5.216
KM SD (logged)	0.514	95% Critical H Value (KM-Log)	1.953
KM Standard Error of Mean (logged)	0.103		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.189	Mean in Log Scale	1.227
SD in Original Scale	3.338	SD in Log Scale	0.597
95% t UCL (Assumes normality)	5.264	95% H-Stat UCL	5.145
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Gamma Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM Adjusted Gamma UCL	5.769	95% GROS Adjusted Gamma UCL	5.6
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

CADMIUM			
General Statistics			
Total Number of Observations	28	Number of Distinct Observations	13
		Number of Missing Observations	2
Number of Detects	12	Number of Non-Detects	16
Number of Distinct Detects	12	Number of Distinct Non-Detects	1
Minimum Detect	0.04	Minimum Non-Detect	0.2
Maximum Detect	1.6	Maximum Non-Detect	0.2
Variance Detects	0.3	Percent Non-Detects	57.14%
Mean Detects	0.305	SD Detects	0.548
Median Detects	0.0695	CV Detects	1.797
Skewness Detects	2.083	Kurtosis Detects	2.938
Mean of Logged Detects	-2.221	SD of Logged Detects	1.29
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.533	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.438	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.172	KM Standard Error of Mean	0.0723
KM SD	0.363	95% KM (BCA) UCL	0.314
95% KM (t) UCL	0.295	95% KM (Percentile Bootstrap) UCL	0.295
95% KM (z) UCL	0.291	95% KM Bootstrap t UCL	0.87
90% KM Chebyshev UCL	0.389	95% KM Chebyshev UCL	0.487
97.5% KM Chebyshev UCL	0.623	99% KM Chebyshev UCL	0.891
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.976	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.777	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.337	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.257	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.598	k star (bias corrected MLE)	0.504
Theta hat (MLE)	0.51	Theta star (bias corrected MLE)	0.605
nu hat (MLE)	14.35	nu star (bias corrected)	12.1
Mean (detects)	0.305		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	0.216
Maximum	1.6	Median	0.0555
SD	0.389	CV	1.803
k hat (MLE)	0.543	k star (bias corrected MLE)	0.509
Theta hat (MLE)	0.397	Theta star (bias corrected MLE)	0.424
nu hat (MLE)	30.42	nu star (bias corrected)	28.49
Adjusted Level of Significance (β)	0.0404		
Approximate Chi Square Value (28.49, α)	17.31	Adjusted Chi Square Value (28.49, β)	16.77
95% Gamma Approximate UCL (use when n>=50)	0.355	95% Gamma Adjusted UCL (use when n<50)	0.366
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.172	SD (KM)	0.363
Variance (KM)	0.132	SE of Mean (KM)	0.0723
k hat (KM)	0.224	k star (KM)	0.223
nu hat (KM)	12.52	nu star (KM)	12.51
theta hat (KM)	0.769	theta star (KM)	0.769
80% gamma percentile (KM)	0.239	90% gamma percentile (KM)	0.519
95% gamma percentile (KM)	0.859	99% gamma percentile (KM)	1.78
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (12.51, α)	5.566	Adjusted Chi Square Value (12.51, β)	5.281
95% Gamma Approximate KM-UCL (use when n>=50)	0.386	95% Gamma Adjusted KM-UCL (use when n<50)	0.407
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.74	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data Not Lognormal at 5% Significance Level	
Detected Data Not Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.191	Mean in Log Scale	-2.438
SD in Original Scale	0.37	SD in Log Scale	1.081
95% t UCL (assumes normality of ROS data)	0.31	95% Percentile Bootstrap UCL	0.312
95% BCA Bootstrap UCL	0.349	95% Bootstrap t UCL	0.753
95% H-UCL (Log ROS)	0.267		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-2.518	KM Geo Mean	0.0806
KM SD (logged)	0.914	95% Critical H Value (KM-Log)	2.354
KM Standard Error of Mean (logged)	0.211	95% H-UCL (KM -Log)	0.185
KM SD (logged)	0.914	95% Critical H Value (KM-Log)	2.354
KM Standard Error of Mean (logged)	0.211		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.188	Mean in Log Scale	-2.268
SD in Original Scale	0.365	SD in Log Scale	0.824
95% t UCL (Assumes normality)	0.305	95% H-Stat UCL	0.208
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.487		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

COBALT			
General Statistics			
Total Number of Observations	28	Number of Distinct Observations	26
		Number of Missing Observations	2
Minimum	0.087	Mean	1.959
Maximum	8.02	Median	1.35
SD	2.056	Std. Error of Mean	0.389
Coefficient of Variation	1.049	Skewness	1.286
Normal GOF Test			
Shapiro Wilk Test Statistic	0.838	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.197	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.164	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2.621	95% Adjusted-CLT UCL (Chen-1995)	2.7
		95% Modified-t UCL (Johnson-1978)	2.637
Gamma GOF Test			
A-D Test Statistic	0.504	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.782	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.143	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.171	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	0.81	k star (bias corrected MLE)	0.747
Theta hat (MLE)	2.419	Theta star (bias corrected MLE)	2.622
nu hat (MLE)	45.37	nu star (bias corrected)	41.84
MLE Mean (bias corrected)	1.959	MLE Sd (bias corrected)	2.267
		Approximate Chi Square Value (0.05)	28.01
Adjusted Level of Significance	0.0404	Adjusted Chi Square Value	27.31
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50)	2.927	95% Adjusted Gamma UCL (use when n<50)	3.002
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.922	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.129	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.164	Data appear Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	-2.442	Mean of logged Data	-0.0587
Maximum of Logged Data	2.082	SD of logged Data	1.408
Assuming Lognormal Distribution			
95% H-UCL	5.724	90% Chebyshev (MVUE) UCL	4.727
95% Chebyshev (MVUE) UCL	5.79	97.5% Chebyshev (MVUE) UCL	7.264
99% Chebyshev (MVUE) UCL	10.16		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	2.599	95% Jackknife UCL	2.621
95% Standard Bootstrap UCL	2.591	95% Bootstrap-t UCL	2.768
95% Hall's Bootstrap UCL	2.741	95% Percentile Bootstrap UCL	2.597
95% BCA Bootstrap UCL	2.699		
90% Chebyshev(Mean, Sd) UCL	3.125	95% Chebyshev(Mean, Sd) UCL	3.653
97.5% Chebyshev(Mean, Sd) UCL	4.386	99% Chebyshev(Mean, Sd) UCL	5.826
Suggested UCL to Use			
95% Adjusted Gamma UCL	3.002		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

IRON			
General Statistics			
Total Number of Observations	28	Number of Distinct Observations	25
		Number of Missing Observations	2
Number of Detects	25	Number of Non-Detects	3
Number of Distinct Detects	24	Number of Distinct Non-Detects	1
Minimum Detect	9.2	Minimum Non-Detect	80
Maximum Detect	4100	Maximum Non-Detect	80
Variance Detects	1709510	Percent Non-Detects	10.71%
Mean Detects	1523	SD Detects	1307
Median Detects	1240	CV Detects	0.858
Skewness Detects	0.577	Kurtosis Detects	-0.936
Mean of Logged Detects	6.571	SD of Logged Detects	1.702
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.904	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data appear Normal at 5% Significance Level	
Detected Data appear Approximate Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	1364	KM Standard Error of Mean	249.8
KM SD	1295	95% KM (BCA) UCL	1791
95% KM (t) UCL	1789	95% KM (Percentile Bootstrap) UCL	1764
95% KM (z) UCL	1775	95% KM Bootstrap t UCL	1847
90% KM Chebyshev UCL	2113	95% KM Chebyshev UCL	2453
97.5% KM Chebyshev UCL	2924	99% KM Chebyshev UCL	3849
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.569	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.782	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.127	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.181	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data appear Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.786	k star (bias corrected MLE)	0.718
Theta hat (MLE)	1939	Theta star (bias corrected MLE)	2122
nu hat (MLE)	39.28	nu star (bias corrected)	35.9
Mean (detects)	1523		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	9.2	Mean	1388
Maximum	4100	Median	1072
SD	1295	CV	0.933
k hat (MLE)	0.77	k star (bias corrected MLE)	0.711
Theta hat (MLE)	1803	Theta star (bias corrected MLE)	1952
nu hat (MLE)	43.12	nu star (bias corrected)	39.83
Adjusted Level of Significance (β)	0.0404		
Approximate Chi Square Value (39.83, α)	26.37	Adjusted Chi Square Value (39.83, β)	25.69
95% Gamma Approximate UCL (use when n>=50)	2097	95% Gamma Adjusted UCL (use when n<50)	2152
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	1364	SD (KM)	1295
Variance (KM)	1676814	SE of Mean (KM)	249.8
k hat (KM)	1.109	k star (KM)	1.014
nu hat (KM)	62.13	nu star (KM)	56.8
theta hat (KM)	1229	theta star (KM)	1345
80% gamma percentile (KM)	2193	90% gamma percentile (KM)	3130
95% gamma percentile (KM)	4065	99% gamma percentile (KM)	6236
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (56.80, α)	40.48	Adjusted Chi Square Value (56.80, β)	39.63
95% Gamma Approximate KM-UCL (use when n>=50)	1914	95% Gamma Adjusted KM-UCL (use when n<50)	1955
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.85	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.19	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data Not Lognormal at 5% Significance Level	
Detected Data Not Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	1367	Mean in Log Scale	6.307
SD in Original Scale	1315	SD in Log Scale	1.79
95% t UCL (assumes normality of ROS data)	1791	95% Percentile Bootstrap UCL	1765
95% BCA Bootstrap UCL	1807	95% Bootstrap t UCL	1829
95% H-UCL (Log ROS)	9285		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	6.22	KM Geo Mean	502.6
KM SD (logged)	1.893	95% Critical H Value (KM-Log)	3.72
KM Standard Error of Mean (logged)	0.371	95% H-UCL (KM -Log)	11691
KM SD (logged)	1.893	95% Critical H Value (KM-Log)	3.72
KM Standard Error of Mean (logged)	0.371		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1364	Mean in Log Scale	6.262
SD in Original Scale	1318	SD in Log Scale	1.844
95% t UCL (Assumes normality)	1789	95% H-Stat UCL	10461
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Approximate Normal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (t) UCL	1789		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

MANGANESE			
General Statistics			
Total Number of Observations	28	Number of Distinct Observations	28
		Number of Missing Observations	2
Minimum	34.8	Mean	939.5
Maximum	3850	Median	278.5
SD	1193	Std. Error of Mean	225.5
Coefficient of Variation	1.27	Skewness	1.334
Normal GOF Test			
Shapiro Wilk Test Statistic	0.754	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.262	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.164	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			
Assuming Normal Distribution			
95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1324	95% Adjusted-CLT UCL (Chen-1995)	1371
		95% Modified-t UCL (Johnson-1978)	1333
Gamma GOF Test			
A-D Test Statistic	1.044	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.798	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.159	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.173	Detected data appear Gamma Distributed at 5% Significance Level	
Detected data follow Appr. Gamma Distribution at 5% Significance Level			
Gamma Statistics			
k hat (MLE)	0.619	k star (bias corrected MLE)	0.577
Theta hat (MLE)	1517	Theta star (bias corrected MLE)	1628
nu hat (MLE)	34.69	nu star (bias corrected)	32.31
MLE Mean (bias corrected)	939.5	MLE Sd (bias corrected)	1237
		Approximate Chi Square Value (0.05)	20.32
Adjusted Level of Significance	0.0404	Adjusted Chi Square Value	19.73
Assuming Gamma Distribution			
95% Approximate Gamma UCL (use when n>=50)	1494	95% Adjusted Gamma UCL (use when n<50)	1539
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.924	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.152	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.164	Data appear Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Lognormal Statistics			
Minimum of Logged Data	3.55	Mean of logged Data	5.853
Maximum of Logged Data	8.256	SD of logged Data	1.555
Assuming Lognormal Distribution			
95% H-UCL	3051	90% Chebyshev (MVUE) UCL	2263
95% Chebyshev (MVUE) UCL	2802	97.5% Chebyshev (MVUE) UCL	3552
99% Chebyshev (MVUE) UCL	5023		
Nonparametric Distribution Free UCL Statistics			
Data appear to follow a Discernible Distribution at 5% Significance Level			
Nonparametric Distribution Free UCLs			
95% CLT UCL	1310	95% Jackknife UCL	1324
95% Standard Bootstrap UCL	1308	95% Bootstrap-t UCL	1451
95% Hall's Bootstrap UCL	1351	95% Percentile Bootstrap UCL	1311
95% BCA Bootstrap UCL	1373		
90% Chebyshev(Mean, Sd) UCL	1616	95% Chebyshev(Mean, Sd) UCL	1923
97.5% Chebyshev(Mean, Sd) UCL	2348	99% Chebyshev(Mean, Sd) UCL	3183
Suggested UCL to Use			
95% Adjusted Gamma UCL	1539		
When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test			
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL			
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

PFOS			
General Statistics			
Total Number of Observations	22	Number of Distinct Observations	15
		Number of Missing Observations	8
Number of Detects	13	Number of Non-Detects	9
Number of Distinct Detects	11	Number of Distinct Non-Detects	4
Minimum Detect	0.0013	Minimum Non-Detect	0.003
Maximum Detect	0.25	Maximum Non-Detect	0.02
Variance Detects	0.00898	Percent Non-Detects	40.91%
Mean Detects	0.0777	SD Detects	0.0947
Median Detects	0.015	CV Detects	1.219
Skewness Detects	0.812	Kurtosis Detects	-1.139
Mean of Logged Detects	-3.773	SD of Logged Detects	1.883
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.763	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.358	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.048	KM Standard Error of Mean	0.0175
KM SD	0.0786	95% KM (BCA) UCL	0.0802
95% KM (t) UCL	0.0781	95% KM (Percentile Bootstrap) UCL	0.0759
95% KM (z) UCL	0.0767	95% KM Bootstrap t UCL	0.0856
90% KM Chebyshev UCL	0.1	95% KM Chebyshev UCL	0.124
97.5% KM Chebyshev UCL	0.157	99% KM Chebyshev UCL	0.222
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	0.866	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.789	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.274	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.25	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.518	k star (bias corrected MLE)	0.45
Theta hat (MLE)	0.15	Theta star (bias corrected MLE)	0.173
nu hat (MLE)	13.48	nu star (bias corrected)	11.7
Mean (detects)	0.0777		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0013	Mean	0.0515
Maximum	0.25	Median	0.011
SD	0.0787	CV	1.528
k hat (MLE)	0.582	k star (bias corrected MLE)	0.533
Theta hat (MLE)	0.0885	Theta star (bias corrected MLE)	0.0966
nu hat (MLE)	25.63	nu star (bias corrected)	23.46
Adjusted Level of Significance (β)	0.0386		
Approximate Chi Square Value (23.46, α)	13.44	Adjusted Chi Square Value (23.46, β)	12.88
95% Gamma Approximate UCL (use when n>=50)	0.09	95% Gamma Adjusted UCL (use when n<50)	0.0939
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.048	SD (KM)	0.0786
Variance (KM)	0.00619	SE of Mean (KM)	0.0175
k hat (KM)	0.372	k star (KM)	0.352
nu hat (KM)	16.38	nu star (KM)	15.48
theta hat (KM)	0.129	theta star (KM)	0.136
80% gamma percentile (KM)	0.076	90% gamma percentile (KM)	0.138
95% gamma percentile (KM)	0.208	99% gamma percentile (KM)	0.386
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (15.48, α)	7.596	Adjusted Chi Square Value (15.48, β)	7.185
95% Gamma Approximate KM-UCL (use when n>=50)	0.0978	95% Gamma Adjusted KM-UCL (use when n<50)	0.103
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	
Detected Data appear Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0481	Mean in Log Scale	-4.594
SD in Original Scale	0.0805	SD in Log Scale	1.87
95% t UCL (assumes normality of ROS data)	0.0776	95% Percentile Bootstrap UCL	0.0776
95% BCA Bootstrap UCL	0.081	95% Bootstrap t UCL	0.0884
95% H-UCL (Log ROS)	0.292		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-4.614	KM Geo Mean	0.00991
KM SD (logged)	1.832	95% Critical H Value (KM-Log)	3.897
KM Standard Error of Mean (logged)	0.434	95% H-UCL (KM -Log)	0.252
KM SD (logged)	1.832	95% Critical H Value (KM-Log)	3.897
KM Standard Error of Mean (logged)	0.434		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0487	Mean in Log Scale	-4.39
SD in Original Scale	0.0801	SD in Log Scale	1.708
95% t UCL (Assumes normality)	0.0781	95% H-Stat UCL	0.21
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Detected Data appear Lognormal Distributed at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.124		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

PFOA			
General Statistics			
Total Number of Observations	22	Number of Distinct Observations	22
		Number of Missing Observations	8
Number of Detects	20	Number of Non-Detects	2
Number of Distinct Detects	20	Number of Distinct Non-Detects	2
Minimum Detect	0.0014	Minimum Non-Detect	0.0074
Maximum Detect	0.45	Maximum Non-Detect	0.0075
Variance Detects	0.0251	Percent Non-Detects	9.091%
Mean Detects	0.114	SD Detects	0.158
Median Detects	0.0215	CV Detects	1.39
Skewness Detects	1.208	Kurtosis Detects	-0.18
Mean of Logged Detects	-3.331	SD of Logged Detects	1.644
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.689	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.389	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.192	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.104	KM Standard Error of Mean	0.0329
KM SD	0.15	95% KM (BCA) UCL	0.159
95% KM (t) UCL	0.161	95% KM (Percentile Bootstrap) UCL	0.158
95% KM (z) UCL	0.158	95% KM Bootstrap t UCL	0.175
90% KM Chebyshev UCL	0.203	95% KM Chebyshev UCL	0.247
97.5% KM Chebyshev UCL	0.309	99% KM Chebyshev UCL	0.431
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.754	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.799	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.296	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.204	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.541	k star (bias corrected MLE)	0.494
Theta hat (MLE)	0.21	Theta star (bias corrected MLE)	0.231
nu hat (MLE)	21.66	nu star (bias corrected)	19.74
Mean (detects)	0.114		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.0014	Mean	0.104
Maximum	0.45	Median	0.0195
SD	0.154	CV	1.471
k hat (MLE)	0.53	k star (bias corrected MLE)	0.488
Theta hat (MLE)	0.197	Theta star (bias corrected MLE)	0.214
nu hat (MLE)	23.31	nu star (bias corrected)	21.47
Adjusted Level of Significance (β)	0.0386		
Approximate Chi Square Value (21.47, α)	11.94	Adjusted Chi Square Value (21.47, β)	11.41
95% Gamma Approximate UCL (use when n>=50)	0.188	95% Gamma Adjusted UCL (use when n<50)	0.197
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.104	SD (KM)	0.15
Variance (KM)	0.0226	SE of Mean (KM)	0.0329
k hat (KM)	0.476	k star (KM)	0.442
nu hat (KM)	20.96	nu star (KM)	19.43
theta hat (KM)	0.218	theta star (KM)	0.235
80% gamma percentile (KM)	0.169	90% gamma percentile (KM)	0.288
95% gamma percentile (KM)	0.417	99% gamma percentile (KM)	0.738
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (19.43, α)	10.43	Adjusted Chi Square Value (19.43, β)	9.943
95% Gamma Approximate KM-UCL (use when n>=50)	0.193	95% Gamma Adjusted KM-UCL (use when n<50)	0.203
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.889	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.218	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.192	Detected Data Not Lognormal at 5% Significance Level	
Detected Data Not Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.104	Mean in Log Scale	-3.579
SD in Original Scale	0.154	SD in Log Scale	1.757
95% t UCL (assumes normality of ROS data)	0.16	95% Percentile Bootstrap UCL	0.156
95% BCA Bootstrap UCL	0.168	95% Bootstrap t UCL	0.181
95% H-UCL (Log ROS)	0.554		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-3.563	KM Geo Mean	0.0284
KM SD (logged)	1.707	95% Critical H Value (KM-Log)	3.684
KM Standard Error of Mean (logged)	0.379	95% H-UCL (KM -Log)	0.48
KM SD (logged)	1.707	95% Critical H Value (KM-Log)	3.684
KM Standard Error of Mean (logged)	0.379		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.104	Mean in Log Scale	-3.537
SD in Original Scale	0.154	SD in Log Scale	1.699
95% t UCL (Assumes normality)	0.16	95% H-Stat UCL	0.481
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.247		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

CIS-1,2-DICHLOROETHENE			
General Statistics			
Total Number of Observations	30	Number of Distinct Observations	13
Number of Detects	13	Number of Non-Detects	17
Number of Distinct Detects	12	Number of Distinct Non-Detects	1
Minimum Detect	0.24	Minimum Non-Detect	0.5
Maximum Detect	26	Maximum Non-Detect	0.5
Variance Detects	107.8	Percent Non-Detects	56.67%
Mean Detects	6.976	SD Detects	10.38
Median Detects	0.43	CV Detects	1.489
Skewness Detects	1.04	Kurtosis Detects	-0.937
Mean of Logged Detects	0.301	SD of Logged Detects	1.939
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.652	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.422	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	3.225	KM Standard Error of Mean	1.395
KM SD	7.341	95% KM (BCA) UCL	5.437
95% KM (t) UCL	5.595	95% KM (Percentile Bootstrap) UCL	5.538
95% KM (z) UCL	5.519	95% KM Bootstrap t UCL	7.242
90% KM Chebyshev UCL	7.41	95% KM Chebyshev UCL	9.306
97.5% KM Chebyshev UCL	11.94	99% KM Chebyshev UCL	17.11
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	2.078	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.81	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.399	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.253	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.401	k star (bias corrected MLE)	0.359
Theta hat (MLE)	17.41	Theta star (bias corrected MLE)	19.41
nu hat (MLE)	10.42	nu star (bias corrected)	9.347
Mean (detects)	6.976		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	3.517
Maximum	26	Median	0.386
SD	7.445	CV	2.117
k hat (MLE)	0.261	k star (bias corrected MLE)	0.258
Theta hat (MLE)	13.45	Theta star (bias corrected MLE)	13.66
nu hat (MLE)	15.69	nu star (bias corrected)	15.45
Adjusted Level of Significance (β)	0.041		
Approximate Chi Square Value (15.45, α)	7.578	Adjusted Chi Square Value (15.45, β)	7.26
95% Gamma Approximate UCL (use when n>=50)	7.172	95% Gamma Adjusted UCL (use when n<50)	7.486
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	3.225	SD (KM)	7.341
Variance (KM)	53.9	SE of Mean (KM)	1.395
k hat (KM)	0.193	k star (KM)	0.196
nu hat (KM)	11.58	nu star (KM)	11.75
theta hat (KM)	16.71	theta star (KM)	16.46
80% gamma percentile (KM)	4.202	90% gamma percentile (KM)	9.751
95% gamma percentile (KM)	16.71	99% gamma percentile (KM)	35.92
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (11.75, α)	5.063	Adjusted Chi Square Value (11.75, β)	4.812
95% Gamma Approximate KM-UCL (use when n>=50)	7.483	95% Gamma Adjusted KM-UCL (use when n<50)	7.875
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.71	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.348	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Lognormal at 5% Significance Level	
Detected Data Not Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	3.375	Mean in Log Scale	-0.408
SD in Original Scale	7.42	SD in Log Scale	1.62
95% t UCL (assumes normality of ROS data)	5.677	95% Percentile Bootstrap UCL	5.723
95% BCA Bootstrap UCL	6.18	95% Bootstrap t UCL	7.32
95% H-UCL (Log ROS)	6.759		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-0.465	KM Geo Mean	0.628
KM SD (logged)	1.405	95% Critical H Value (KM-Log)	3.025
KM Standard Error of Mean (logged)	0.272	95% H-UCL (KM -Log)	3.707
KM SD (logged)	1.405	95% Critical H Value (KM-Log)	3.025
KM Standard Error of Mean (logged)	0.272		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.165	Mean in Log Scale	-0.655
SD in Original Scale	7.491	SD in Log Scale	1.51
95% t UCL (Assumes normality)	5.488	95% H-Stat UCL	3.956
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	9.306		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

VINYL CHLORIDE			
General Statistics			
Total Number of Observations	20	Number of Distinct Observations	8
		Number of Missing Observations	9
Number of Detects	7	Number of Non-Detects	13
Number of Distinct Detects	6	Number of Distinct Non-Detects	2
Minimum Detect	0.053	Minimum Non-Detect	0.025
Maximum Detect	0.84	Maximum Non-Detect	0.05
Variance Detects	0.123	Percent Non-Detects	65%
Mean Detects	0.269	SD Detects	0.351
Median Detects	0.069	CV Detects	1.301
Skewness Detects	1.268	Kurtosis Detects	-0.583
Mean of Logged Detects	-2.031	SD of Logged Detects	1.226
Normal GOF Test on Detects Only			
Shapiro Wilk Test Statistic	0.653	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.419	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data Not Normal at 5% Significance Level	
Detected Data Not Normal at 5% Significance Level			
Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs			
KM Mean	0.111	KM Standard Error of Mean	0.0543
KM SD	0.225	95% KM (BCA) UCL	0.213
95% KM (t) UCL	0.204	95% KM (Percentile Bootstrap) UCL	0.195
95% KM (z) UCL	0.2	95% KM Bootstrap t UCL	0.987
90% KM Chebyshev UCL	0.273	95% KM Chebyshev UCL	0.347
97.5% KM Chebyshev UCL	0.449	99% KM Chebyshev UCL	0.65
Gamma GOF Tests on Detected Observations Only			
A-D Test Statistic	1.21	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.734	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.411	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.322	Detected Data Not Gamma Distributed at 5% Significance Level	
Detected Data Not Gamma Distributed at 5% Significance Level			
Gamma Statistics on Detected Data Only			
k hat (MLE)	0.822	k star (bias corrected MLE)	0.565
Theta hat (MLE)	0.328	Theta star (bias corrected MLE)	0.477
nu hat (MLE)	11.5	nu star (bias corrected)	7.905
Mean (detects)	0.269		
Gamma ROS Statistics using Imputed Non-Detects			
GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs			
GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)			
For such situations, GROS method may yield incorrect values of UCLs and BTVs			
This is especially true when the sample size is small.			
For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates			
Minimum	0.01	Mean	0.101
Maximum	0.84	Median	0.01
SD	0.234	CV	2.325
k hat (MLE)	0.457	k star (bias corrected MLE)	0.422
Theta hat (MLE)	0.221	Theta star (bias corrected MLE)	0.239
nu hat (MLE)	18.28	nu star (bias corrected)	16.87
Adjusted Level of Significance (β)	0.038		
Approximate Chi Square Value (16.87, α)	8.58	Adjusted Chi Square Value (16.87, β)	8.114
95% Gamma Approximate UCL (use when n>=50)	0.198	95% Gamma Adjusted UCL (use when n<50)	0.21
Estimates of Gamma Parameters using KM Estimates			
Mean (KM)	0.111	SD (KM)	0.225
Variance (KM)	0.0505	SE of Mean (KM)	0.0543
k hat (KM)	0.242	k star (KM)	0.239
nu hat (KM)	9.685	nu star (KM)	9.566
theta hat (KM)	0.457	theta star (KM)	0.462
80% gamma percentile (KM)	0.158	90% gamma percentile (KM)	0.333
95% gamma percentile (KM)	0.542	99% gamma percentile (KM)	1.103
Gamma Kaplan-Meier (KM) Statistics			
Approximate Chi Square Value (9.57, α)	3.672	Adjusted Chi Square Value (9.57, β)	3.388
95% Gamma Approximate KM-UCL (use when n>=50)	0.288	95% Gamma Adjusted KM-UCL (use when n<50)	0.312
Lognormal GOF Test on Detected Observations Only			
Shapiro Wilk Test Statistic	0.71	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.367	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data Not Lognormal at 5% Significance Level	
Detected Data Not Lognormal at 5% Significance Level			
Lognormal ROS Statistics Using Imputed Non-Detects			
Mean in Original Scale	0.0974	Mean in Log Scale	-4.628
SD in Original Scale	0.236	SD in Log Scale	2.342
95% t UCL (assumes normality of ROS data)	0.189	95% Percentile Bootstrap UCL	0.183
95% BCA Bootstrap UCL	0.222	95% Bootstrap t UCL	0.757
95% H-UCL (Log ROS)	2.142		
Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution			
KM Mean (logged)	-3.109	KM Geo Mean	0.0447
KM SD (logged)	1.037	95% Critical H Value (KM-Log)	2.689
KM Standard Error of Mean (logged)	0.25	95% H-UCL (KM -Log)	0.145
KM SD (logged)	1.037	95% Critical H Value (KM-Log)	2.689
KM Standard Error of Mean (logged)	0.25		
DL/2 Statistics			
DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.106	Mean in Log Scale	-3.351
SD in Original Scale	0.232	SD in Log Scale	1.242
95% t UCL (Assumes normality)	0.196	95% H-Stat UCL	0.178
DL/2 is not a recommended method, provided for comparisons and historical reasons			
Nonparametric Distribution Free UCL Statistics			
Data do not follow a Discernible Distribution at 5% Significance Level			
Suggested UCL to Use			
95% KM (Chebyshev) UCL	0.347		
Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
Recommendations are based upon data size, data distribution, and skewness.			
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			

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ATTACHMENT C

SUPPLEMENTAL TABLES FOR DERMAL EXPOSURE

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ATTACHMENT C, TABLE C-1
DEFAULT ABSORPTION FACTORS FOR COPCS IN SOIL/SEDIMENT
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemicals of Potential Concern in Soil/Sediment	CAS Number	Oral - Absorption Adjustment Factor		Dermal - Absorption Adjustment Fraction	
		Default		Default	
Metals					
ALUMINUM	7429-90-5	1	(a)	N/A	(c)
ARSENIC	7440-38-2	0.6	(b)	0.03	(c)
COBALT	7440-48-4	1	(a)	N/A	(c)
IRON	7439-89-6	1	(a)	N/A	(c)
MANGANESE	7439-96-5	1	(a)	N/A	(c)
THALLIUM	7440-28-0	1	(a)	N/A	(c)
VANADIUM	7440-62-2	1	(a)	N/A	(c)
Pesticides					
DIELDRIN	60-57-1	1	(a)	0.1	(c)
ENDRIN KETONE	53494-70-5	1	(a)	0.1	(c)
HEPTACHLOR EPOXIDE	1024-57-3	1	(a)	0.1	(c)
PCBs					
TOTAL PCBs	RATotAroclors	1	(a)	0.14	(c)
SVOCs					
BENZO[A]ANTHRACENE	56-55-3	1	(a)	0.13	(c)
BENZO[A]PYRENE	50-32-8	1	(a)	0.13	(c)
BENZO[B]FLUORANTHENE	205-99-2	1	(a)	0.13	(c)
BENZO[K]FLUORANTHENE	207-08-9	1	(a)	0.13	(c)
DIBENZ[A,H]ANTHRACENE	53-70-3	1	(a)	0.13	(c)
INDENO[1,2,3-CD]PYRENE	193-39-5	1	(a)	0.13	(c)
VOCs/VPHs					
VINYL CHLORIDE	75-01-4	1	(a)	N/A	(c)

Notes:
CAS - Chemical Abstracts Service.
N/A - Not Applicable. Chemical is not assessed via this pathway.
PCBs - Polychlorinated biphenyls.
SVOCs - Semi-volatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.
VPHs - Volatile petroleum hydrocarbons.
(a) Absorption is assumed to be 100% (absorption factor = 1) (USEPA Risk Assessment Guidance for Superfund (RAGS), Part A, 1989; USEPA Regional Screening Level (RSL) Table, November 2015).
(b) Recommendations for Default Value for Relative Bioavailability of Arsenic in Soil. OSWER Directive 9200.1-113. USEPA, December 2012. Consistent with the approach used by the USEPA Regional Screening Level (RSL) table (May 2016).
(c) USEPA, 2004. Risk Assessment Guidance for Superfund. Vol. 1, Part E. July, 2004. Exhibit 3-4.

ATTACHMENT C, TABLE C-2

DERMAL WATER PARAMETERS FOR COPCS IN GROUNDWATER AND SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Chemical of Potential Concern in Groundwater or Surface Water	CAS Number	Chemical Properties		Dermal Water Parameters											
		MW (f) g/mol	log Kow (f) unitless	Kp (cm/hr)	B unitless	Lag Time t hr/event	t* hr	FA unitless	lsc (e) cm	log (Dsc/lsc) unitless	Dsc/lsc unitless	Dsc unitless	b (a) unitless	c (a) unitless
Metals															
ALUMINUM	7429-90-5	--	--	1.00E-03 (b,c)	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	7440-38-2	--	--	1.00E-03 (b,c)	--	--	--	--	--	--	--	--	--	--	--
CADMIUM	7440-43-9	--	--	1.00E-03 (b)	--	--	--	--	--	--	--	--	--	--	--
COBALT	7440-48-4	--	--	4.00E-04 (b)	--	--	--	--	--	--	--	--	--	--	--
IRON	7439-89-6	--	--	1.00E-03 (b,c)	--	--	--	--	--	--	--	--	--	--	--
MANGANESE	7439-96-5	--	--	1.00E-03 (b,c)	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	7440-28-0			1.00E-03 (b,c)	--	--	--	--	--	--	--	--	--	--	--
PCBs															
TOTAL PCBS	RATotAroclor	--	--	-- (g)	--	--	--	--	--	--	--	--	--	--	--
PFASs															
PFOS	1763-23-1	--	--	-- (g)	--	--	--	--	--	--	--	--	--	--	--
PFOA	335-67-1	--	--	-- (g)	--	--	--	--	--	--	--	--	--	--	--
SVOCs															
1,1-BIPHENYL	92-52-4	1.54E+02	4.01E+00	9.90E-02 (a)	4.73E-01 (a)	7.78E-01 (a)	1.87E+00 (a)	5.00E-01 (a)	1.00E-03	-3.67E+00	2.14E-04	2.14E-07	6.82E-01	6.99E-01
1,2,4,5-TETRACHLOROBENZENE	95-94-3	2.16E+02	4.64E+00	1.17E-01 (a)	6.59E-01 (a)	1.73E+00 (a)	6.81E+00 (a)	5.00E-01 (a)	1.00E-03	-4.02E+00	9.61E-05	9.61E-08	8.92E-01	8.60E-01
BENZO[A]ANTHRACENE	56-55-3	--	--	-- (g)	--	--	--	--	--	--	--	--	--	--
BENZO[A]PYRENE	50-32-8	--	--	-- (g)	--	--	--	--	--	--	--	--	--	--
BENZO[K]FLUORANTHENE	207-08-9	--	--	-- (g)	--	--	--	--	--	--	--	--	--	--
BIS(2-CHLOROETHYL)ETHER	111-44-4	1.43E+02	1.29E+00	1.78E-03 (a)	8.17E-03 (a)	6.75E-01 (a)	1.62E+00 (a)	5.00E-01 (a)	1.00E-03	-3.61E+00	2.47E-04	2.47E-07	3.08E-01	3.39E-01
HEXACHLOROCYCLOPENTADIENE	77-47-4	2.73E+02	5.04E+00	1.03E-01 (a)	6.54E-01 (a)	3.62E+00 (a)	1.42E+01 (a)	5.00E-01 (a)	1.00E-03	-4.34E+00	4.60E-05	4.60E-08	8.86E-01	8.55E-01
INDENO[1,2,3-CD]PYRENE	193-39-5	--	--	-- (g)	--	--	--	--	--	--	--	--	--	--
VOCs/VPHs															
CIS-1,2-DICHLOROETHENE	156-59-2	9.69E+01	1.86E+00	7.71E-03 (a)	2.92E-02 (a)	3.72E-01 (a)	8.93E-01 (a)	1.00E+00 (a)	1.00E-03	-3.35E+00	4.48E-04	4.48E-07	3.21E-01	3.53E-01
TRICHLOROETHENE	79-01-6	1.31E+02	2.42E+00	1.16E-02 (a)	5.13E-02 (a)	5.81E-01 (a)	1.39E+00 (a)	1.00E+00 (a)	1.00E-03	-3.54E+00	2.87E-04	2.87E-07	3.35E-01	3.68E-01
VINYL CHLORIDE	75-01-4	6.25E+01	1.36E+00	5.60E-03 (a)	1.70E-02 (a)	2.39E-01 (a)	5.73E-01 (a)	1.00E+00 (a)	1.00E-03	-3.16E+00	6.99E-04	6.99E-07	3.14E-01	3.45E-01

See notes on following page.

ATTACHMENT C, TABLE C-2

DERMAL WATER PARAMETERS FOR COPCS IN GROUNDWATER AND SURFACE WATER

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Chemical of Potential Concern in Groundwater or Surface Water	CAS Number	Chemical Properties		Dermal Water Parameters										
		MW (f) g/mol	log Kow (f) unitless	Kp (cm/hr)	B unitless	Lag Time t hr/event	t* hr	FA unitless	lsc (e) cm	log (Dsc/lsc) unitless	Dsc/lsc unitless	Dsc unitless	b (a) unitless	c (a) unitless

Notes:

CAS - Chemical Abstracts Service.

PCBs - Polychlorinated biphenyls.

PFASs - Poly- and Perfluoroalkyl Substances.

PFOA - Perfluorooctanoic acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

SVOCs - Semi-volatile organic compounds.

VPHs - Volatile petroleum hydrocarbons.

VOCs - Volatile organic compounds.

(a) USEPA, 2004. Risk Assessment Guidance for Superfund. Vol. 1, Part E. July, 2004. Exhibit B-3 (Organics). Values calculated based the equations below may have rounding different from that presented in Exhibit B-3.
Values for trans-1,2-dichloroethene used for cis-1,2-dichloroethene.

(b) USEPA, 2004. Risk Assessment Guidance for Superfund. Vol. 1, Part E. July, 2004. Exhibit 3-1. (Inorganics)

(c) Default for all other inorganics.

(d) Calculated. See equations below.

(e) USEPA, 2004. Risk Assessment Guidance for Superfund. Vol. 1, Part E. July, 2004. Equation A-4. Default value.

(f) USEPA, 2004. Risk Assessment Guidance for Superfund. Vol. 1, Part E. July, 2004. Exhibit B-2.
Values for trans-1,2-dichloroethene used for cis-1,2-dichloroethene.

(g) Dermal pathway is considered to be negligible, therefore, the dermal exposure pathway is not quantitatively evaluated, as discussed in the report text.

Equations:

USEPA, 2004. Risk Assessment Guidance for Superfund. Volume 1, Part E, Supplemental Guidance for Dermal Risk Assessment

Equation 3.8:	$\text{Log } Kp = -2.80 + 0.66 \log Kow - 0.0056\ MW$
Equation A.1:	$B = Kp \times MW^{0.5}/2.6$
Equation A.2:	$\text{Log Dsc/lsc} = -2.8\text{-}0.0056\ MW$, where lsc = 1E-3 cm. Solving for Dsc: $Dsc = 10^{-2.8\text{-}0.0056\ MW} * lsc$.
Equation A.4:	$t = lsc^2/(6*Dsc)$
Equation A.5:	If $B \leq 0.6$, Equation A.5: $t^* = 2.4* t$
Equation A.6:	If $B > 0.6$: $t^* = (b\text{-}(b^2\text{-}c^2)^{0.5}) * l^2sc/(Dsc)$
Equation A-7:	$b = (2*(1+B)^2/p) - c$
Equation A-8:	$c = (1+3B+3B^2)/(3*(1+B))$

Definitions:

B - Relative Contribution of Permeability Coefficient.
Dsc - Effective diffusion coefficent through stratum corneum.
FA - Fraction Absorbed.
Kow - Octanol-Water Partition Coefficient.
Kp - Dermal Permeability Coefficient.
lsc - Apparent thickness of stratum corneum.
MW - Molecular Weight.
t - lag time (hr/event).
t* - Time to reach steady state.

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ATTACHMENT D

AIR MODEL SPREADSHEETS

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PARTICULATE EMISSION FACTORS

ATTACHMENT D, TABLE D-1
DERIVATION OF PARTICULATE EMISSION FACTOR FOR THE SOIL TO OUTDOOR AIR PATHWAY (NON-EXCAVATION PATHWAY)
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Parameter	Definition	Units	Value	Notes
A_c	Areal extent of site	acres	10.3	Size of Fire Training Area
A	Dispersion modeling constants (Portland, Maine)	unitless	10.466	USEPA 2002, Exhibit D-2
B			20.9077	
C			238.0318	
Q/C_{wind}	Dispersion Factor - Inverse of mean concentration at center of source	g/m^2-s per kg/m^3	44.60	USEPA 2002, Equation D-1
V	Fraction of vegetative cover	unitless	0.5	USEPA, 2002 Default Value Equation 4-5
U_m	Mean annual windspeed	m/s	4.69	
U_t	Equivalent threshold value of windspeed at 7 m	m/s	11.32	
F(x)	Function dependent on U_m/U_t	unitless	0.194	
PEF	**Particulate emission factor**	**m^3/kg**	**6.47E+08**	USEPA 2002, Equation 4-5

Equations:

Equation D-1

$$Q/C_{wind} = A \times \exp\left[\frac{(\ln A_c - B)^2}{C}\right]$$

Equation 4-5

$$PEF(m^3/kg) = \frac{Q/C_{w\,ind}(3600s/h)}{0.036(1-V)(U_m/U_t)^3 F(x)}$$

Source:
United States Environmental Protection Agency (USEPA) 2002.
Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.

ATTACHMENT D, TABLE D-2
DERIVATION OF PARTICULATE EMISSION FACTOR FOR UNPAVED ROAD TRAFFIC FOR THE CONSTRUCTION WORKER SCENARIO
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Parameter	Definition	Units	Values	Notes
A	constant	unitless	12.9351	USEPA 2002 default Equation E-19
B	constant	unitless	5.7383	USEPA 2002 default Equation E-19
C	constant	unitless	71.7711	USEPA 2002 default Equation E-19
A_s	areal extent of site surface soil contamination	acres	10.3	Size of Fire Training Area
A_s	areal extent of site surface soil contamination	m^2	41,683	Acres x 4046.86 m^2
L_R	length of contaminated road segment	m	204	square root of A_s
T	total time over which construction occurs	weeks	26	Construction activities are assumed to occur over a 6-month (26 week) period.
T	total time over which construction occurs	days	130	# weeks x 5 days/week
t_c	Overall duration of construction	unitless	4368	# weeks x 7 days/week x 24 hours per day
T	total time over which construction occurs	seconds	3,744,000	# days x 8 hr/day x 3600 sec/hr
W_R	width of contaminated road segment	m	6.096	USEPA 2002 default (20 feet) Equation E-18
A_R	surface area of contaminated road segment	m^2	1245	L_R x W_R
W	mean vehicle weight	tons	8	Value used by USEPA 2002 example, Page E-20
p	number of days with at least 0.01 inches of precipitation	days/yr	140	USEPA 2002 Exhibit E-1 Southern Maine
s	Road surface silt content	%	8.5	USEPA 2002 default Equation E-18
M_{dry}	Road surface material moisture content under dry, uncontrolled conditions	%	0.2	USEPA 2002 default Equation E-18
v	number of vehicles	#/day	30	Value used by USEPA 2002 example, Page E-20
VKT	sum of fleet vehicle kilometers traveled during the exposure duration	km	796	USEPA 2002 Equation E-18 v x Lr x T (weeks) x 5 days/week
Q/C_{sr}	inverse of the ratio of the 1-hr geometric mean air concentration to the emission flux along a straight road segment bisecting a square site	g/m^2-s per kg/m^3	15.20457	USEPA 2002 Equation E-19
F_D	dispersion correction factor	unitless	0.186	USEPA 2002 Equation E-16
PEF_{SC}	subchronic road particulate emission factor	m^3/kg	9.40E+05	USEPA 2002 Equation E-18

Equations:

Equation E-16

$$F_D = 0.1852 + \frac{5.3537}{t_c} + \frac{-9.6318}{t_c^2}$$

Equation E-18

$$PEF_{sc} = Q/C_{sr} \times \frac{1}{F_D} \times \frac{T \times A_R}{\frac{2.6 \times (s/12)^{0.8} (W/3)^{0.4}}{(M_{dry}/0.2)^{0.3}} \times \left[\frac{(365 - p)}{365}\right] \times 281.9 \times \Sigma VKT}$$

Equation E-19

$$Q/C_{sr} = A \times \exp\left[\frac{(\ln A_S - B)^2}{C}\right]$$

Source:
United States Environmental Protection Agency (USEPA) 2002.
Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites.

TRENCH MODEL

ATTACHMENT D

CALCULATION OF EXCAVATION AIR VOC ATTENUATION FACTORS FROM STANDING WATER-EXCAVATION TRENCH

Excavation trench air concentrations of a COPC resulting from volatilization from groundwater and leachate infiltrating an excavation trench can be predicted by the use of the method recommended by USEPA (1994) for predicting volatilization from standing water.

Air Concentration

In this model, the air concentration of a COPC is estimated at the downwind boundary of the water. For the purposes of calculating this concentration, a rectangular box with the base corresponding to the water surface is considered. The height of the box, H_b, is the height to which the chemical emissions from the water surface are uniformly mixed with the air. W_b is the width of the box perpendicular to the airflow. If U is the wind speed along the length of the trench, then, by conservation of mass, the air concentration, C_a, of chemical within the box is given by:

$$C_a = \frac{Q}{H_b W_b U} \quad (1)$$

The diffusion height, H_b, above the water surface is approximately equal to 5% of the length of the trench, i.e., parallel to the wind flow (Jackson, 1976). If the length of the trench is expressed as the surface area of the water on the bottom of the trench divided by the trench width, the equation for the air concentration becomes:

$$C_a = \frac{Q}{0.05\,AU} \quad (2)$$

where:

Q = chemical emission rate (g/s)

A = water surface area (m^2)

U = wind speed along the trench (m/s)

The chemical emission rate, Q, can be expressed as follows:

$$Q = KAC_L \quad (3)$$

where:

Q = chemical emission rate (g/s)

K = overall mass transfer coefficient (m/s)

A = water surface area (m^2)

C_L = chemical concentration in water (g/m^3)

With the substitution of equation (3) into equation (2), the equation for air concentration simplifies to:

$$C_a = \frac{KC_L}{0.05\,U} \quad (4)$$

For the purpose of calculating the concentration in air from a given concentration in water, it is convenient to use this equation to define an **attenuation factor**, α, defined as the ratio of the airborne concentration of the COPC above the water to the COPC concentration in the water. If the air and water COPC concentrations are in the same units α is dimensionless. If, as is common practice, the concentration in water is expressed in mass units per liter (L) and the air concentration is expressed as mass units per cubic meter (m^3), then the attenuation factor can be expressed as:

$$\alpha\ (L/m^3) = \frac{20000K}{U} \quad (5)$$

In applying the attenuation factor, the computation of the COPC air concentration requires the COPC concentration in water, wind speed and mass transfer coefficient.

Mass Transfer Coefficient

Volatilization is considered the primary pathway of mass transfer from the liquid to the vapor phase. It occurs when molecules of a dissolved substance escape to the gas phase due to a concentration gradient. The mass transfer coefficient is defined by USEPA (1994) as follows:

$$K = \left[\frac{1}{k_l^o \left(\frac{D_l^c}{D_l^o} \right)^m} + \frac{RT}{(10^6) H \; k_g^w \left(\frac{D_g^c}{D_g^w} \right)^n} \right]^{-1} \quad (6)$$

Where:

k_l^o = mass transfer coefficient of oxygen in water, cm/s;

D_l = diffusivity of the chemical (c) or oxygen (o) in water, cm^2/s;

m = liquid turbulence exponent, 0.5 to 1, dimensionless;

R = ideal gas constant, atm cm^3/ (mol.K);

T = temperature, K;

H = Henry's law constant, atm m^3/mol;

k_w^g = mass transfer coefficient for water vapor in air, cm/s;

D_g = diffusivity of the chemical (c) or water (w) in air, cm^2/s;

n = gas turbulence exponent, 0.5 to 1.0, dimensionless

The elements of this equation can be described by:

$$K = \left[\frac{1}{K_L} + \frac{1}{K_G K_{eq}} \right]^{-1} \quad (7)$$

where,

K_L = Liquid phase mass transfer coefficient, cm/s;

K_G = Gas phase mass transfer coefficient, cm/s;

K_{eq} = Equilibrium mass transfer coefficient, unit less;

K_L, K_G and K_{eq} may be expressed as follows:

$$K_{eq} = \frac{H}{RT} \quad (8)$$

$$K_L = k_l^o \left(\frac{D_l^c}{D_l^o} \right)^m \quad (9)$$

$$K_G = k_g^w \left(\frac{D_g^c}{D_g^o} \right)^n \quad (10)$$

Equation 6 requires values of diffusion coefficients and Henry's law constants which are presented in the accompanying table. The constants used in Equation 6 are presented below.

Values of Constants for use in Equation 6 (Source: USEPA (1994), Table 2-1):

Constant	Value for Lakes
k_l^o (cm/s)	0.0005
m	1.0
T (K)	293
RT (cm^3.atm/mol)	24042.4
k_w^g (cm/s)	0.58
n	0.7

Model Applications and Results

The accompanying table provides model inputs and the intermediate steps in the process of modeling the attenuation factor. A surface wind speed of 2.25 m/s was applied (ASTM, 1994).

References

ASTM International, 2004. Standard Guide for Risk-Based Corrective Action. Table X3.2. Value for ambient air velocity in mixing zone.

Jackson, N.A. 1976. The Propagation of Modified Flow Downstream of a Change in Roughness. Quarterly Journal of the Royal Meteorological Society. 102:924.

USEPA 1994. Air Emissions Models for Waste and Wastewater. EPA-453/R-94-080A. November 1994.

ATTACHMENT D, TABLE D-3
DEVELOPMENT OF ATTENUATION FACTORS FOR THE GROUNDWATER TO EXCAVATION TRENCH AIR PATHWAY
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Assumption: Losses from a trench occur in a manner similar to volatilization losses from a lake; using equation 2-4 from the "Air Emissions Models for the Waste and Wastewater"; EPA, Nov. 1994.
The overall mass transfer coefficient, K is calculated as follows:

$$K = [1/(k_l^o * (D_l^c/D_l^o)^m) + (RT/(10^6*H*K_g^w*(D_g^c/D_g^w)^n))]^{-1}$$ ------ (1) (a)

$$K = (B+C)^{-1}$$; Where

$$B = 1/(k_l^o * (D_l^c/D_l^o)^m)$$ and

$$C = (RT/(10^6*H*K_g^w*(D_g^c/D_g^w)^n))$$

Input Parameters	
Wind speed (m/s) (d)	2.25

(b) Table 1: Values of Constants for Use in Equation (1)

Parameter	Value for Lakes	Units	
K_l^o	5.00E-04	cm/s	mass transfer coefficient of oxygen in water
R	8.21E+01	cm^3*atm/(mol*K)	ideal gas constant
T	2.93E+02	K	Temperature
RT	2.40E+04	cm^3*atm/mol	R times T
K_g^w	5.80E-01	cm/s	mass transfer coefficient for water vapor in air
n	7.00E-01	N/A	gas turbulence exponent
D_l^o	2.20E-05	cm^2/s	diffusivity of oxygen in air
D_g^w	2.14E-01	cm^2/s	diffusivity of oxygen in water
m	1.00E+00	N/A	liquid turbulence exponent

Constituent	Molecular Weight (c) (g/mol)	Henry's Law Constant (c) (atm*m³/mole)	Diffusivity In Air (c) (cm²/s)	Diffusivity In Water (c) (cm²/s)	B =1/(k_l^o * (D_l^c/D_l^o)^m)	C = RT/10^6*H*K_g^w*(D_g^c/D_g^w)^n	K = (B+C)^-1 (cm/s)	K (m/s)	Groundwater to air attenuation factor (L/m³)	RME Groundwater Exposure Point Concentration (ug/L)	Concentration in Air (ug/m³)
1,1-BIPHENYL	154.21	3.08E-04	4.71E-02	7.56E-06	5.82E+03	3.89E+02	1.61E-04	1.61E-06	1.43E-02	2.10E-01	3.01E-03
HEXACHLOROCYCLOPENTADIENE	272.77	2.70E-02	2.72E-02	7.22E-06	6.10E+03	6.50E+00	1.64E-04	1.64E-06	1.46E-02	1.10E-01	1.60E-03
TRICHLOROETHENE	131.39	9.85E-03	6.87E-02	1.02E-05	4.31E+03	9.33E+00	2.31E-04	2.31E-06	2.06E-02	1.00E+01	2.06E-01
VINYL CHLORIDE	62.5	2.78E-02	1.07E-01	1.20E-05	3.67E+03	2.42E+00	2.73E-04	2.73E-06	2.42E-02	3.47E-01	8.41E-03

Constituent	Molecular Weight (c) (g/mol)	Henry's Law Constant (c) (atm*m³/mole)	Diffusivity In Air (c) (cm²/s)	Diffusivity In Water (c) (cm²/s)	B =1/(k_l^o * (D_l^c/D_l^o)^m)	C = RT/10^6*H*K_g^w*(D_g^c/D_g^w)^n	K = (B+C)^-1 (cm/s)	K (m/s)	Groundwater to air attenuation (L/m³)	Groundwater Exposure Point (ug/L)	Concentration in Air (ug/m³)
1,1-BIPHENYL	154.21	3.08E-04	4.71E-02	7.56E-06	5.82E+03	3.89E+02	1.61E-04	1.61E-06	1.43E-02	2.10E-01	3.01E-03
HEXACHLOROCYCLOPENTADIENE	272.77	2.70E-02	2.72E-02	7.22E-06	6.10E+03	6.50E+00	1.64E-04	1.64E-06	1.46E-02	1.10E-01	1.60E-03
TRICHLOROETHENE	131.39	9.85E-03	6.87E-02	1.02E-05	4.31E+03	9.33E+00	2.31E-04	2.31E-06	2.06E-02	1.00E+01	2.06E-01
VINYL CHLORIDE	62.5	2.78E-02	1.07E-01	1.20E-05	3.67E+03	2.42E+00	2.73E-04	2.73E-06	2.42E-02	3.47E-01	8.41E-03

Notes:
(a) Equation 2-4 of of section 2-2 of the "Air Emissions Models for Waste and Wastewater", 1994; EPA-453/R-94-080A.
(b) Table 2-1 of of section 2-2 of the "Air Emissions Models for Waste and Wastewater", 1994; EPA-453/R-94-080A; For Lakes.
(c) Parameters taken from the USEPA (May 2016) Regional Screening Level (RSL) tables.
(d) ASTM International, 2004. Standard Guide for Risk-Based Corrective Action. Table X3.2. Value for ambient air velocity in mixing zone.

SHOWER MODEL

Attachment D

Shower Air Concentrations

The showering inhalation pathway requires modeling to derive exposure point concentrations. Foster and Chrostowski (1987) have presented a predictive model to estimate an indoor (bathroom) concentration. This theoretical approach is based on the experimental work of Andelman (1985), who measured air concentrations of trichloroethylene and chloroform in a bench scale shower assembly.

The shower model utilizes several assumptions, including a 12 cubic meter (m^3) bathroom volume and instant equilibrium in the air between the shower stall and the rest of the bathroom. The volumetric flow rate through the bathroom was assumed to be 0.1 m^3/min. This gives an effective air change rate of 0.5 air changes/hour (ACH). This value represents a reasonably conservative estimate given that median values for homes with closed windows is about 0.5 ACH (TRJ Environmental, 2002), and bathrooms with showers generally need a greater air exchange rate to remove moisture. No modifications were made to the model assumptions for this evaluation.

The model calculates the maximum concentrations, assuming that exposure time equals duration of the shower use. In reality, an individual would experience an integrated exposure that would gradually increase during shower usage and decrease again after the water was turned off. It was conservatively assumed that the peak concentration would persist for the entire duration of exposure.

The equation to calculate air concentrations in the bathroom is shown below:

$$C_{VOC} = \frac{S\,(e^{RDs} - 1)(e^{-Rt})}{R} \qquad \text{(Eq. 1)}$$

where:

C_{VOC} = bathroom VOC air concentration, ug/m^3
S = VOC source generation rate, ug/m^3- minute
R = air exchange rate of bathroom, min^{-1}
t = time at which concentration is being calculated, min
D_s = duration of shower, min

R, the air exchange rate, is calculated as the volumetric flow rate through the bathroom (m^3/min) divided by the volume of the bathroom (m^3).

S, the VOC source generation rate, is calculated based on the concentration of the compound in the water, emission of compound from a droplet, flow rate of water, and volume of room for dilution. S is calculated from the following series of equations:

$$S = \frac{C_{wd}\, Fr}{S_v} \qquad \text{(Eq. 2)}$$

where:

S = VOC source generation rate, ug/m^3-min
C_{wd} = concentration of VOC leaving the shower droplet, µg/l
F_r = water flow rate in shower, 10 liters/min
S_v = shower volume, 2.94 m^3

C_{wd} is calculated as follows:

$$C_{wd} = C_{wc} * (1 - e^{[(-KaL)(ts)/600d]}) \qquad \text{(Eq. 3)}$$

Where:

C_{wc} = concentration of VOC in water, µg/l
K_{aL} = temperature-connected mass transfer coefficient, cm/hr
t_s = shower droplet drop time, 2 sec
d = droplet diameter, 0.1 cm
1/600d = 6/d (mm) * (1 hr/3600 sec)

K_{aL} is calculated according to:

$$K_{aL} = K_L * [(T_1 * u_s)/(T_s * u_1)]^{-0.5} \qquad \text{(Eq. 4)}$$

Where:

K_L = mass transfer coefficient at reference conditions (20°C and 1 atm), cm/hr
T_1 = reference temperature, 293°K
T_s = temperature of shower water, 318°K
u_1 = viscosity of water at reference temperature, 1.002 cp
u_s = viscosity of water at shower temperature, 0.5960 cp

K_L is calculated according to:

$$K_L = 1/[1/k_I + RT/(H\, k_g)] \qquad \text{(Eq. 5)}$$

Where:

k_I = liquid-film mass transfer, cm/hr
k_g = gas-film mass transfer, cm/hr
H = Henry's Law constant, atm-m^3/mole
R = molar gas constant, 8.191×10^{-5} atm-m^3/mole-k
T = temperature, 293°K

The input values of k_I and k_g are based on the mass transfer coefficients of carbon dioxide (CO_2) and water. They are calculated for the particular constituent of potential interest according to the following equations:

$$k_I = (kCO_2)\,[(44g/mole)/MW_{VOC}]^{0.5} \qquad \text{(Eq. 6)}$$

$$k_g = (kH_2O)\,[(18g/mole)/MW_{VOC}]^{0.5} \qquad \text{(Eq. 7)}$$

where:

kCO_2 = 20 cm/hr
kH_2O = 3,000 cm/hr
MW = molecular weight of constituent of potential interest, g/mole

These equations were used to calculate bathroom air VOC concentrations derived from VOCs in groundwater, as presented in the accompanying table. The air VOC concentrations were then used to calculate potential inhalation risks for the adult and child resident.

Uncertainties

There are uncertainties associated with the modeling of VOC volatilization from indoor water use for showering. Activity parameters that have uncertainty associated with them include shower durations and time spent in the room after a shower. Uncertain elements related to the modeling include chemical-specific input parameters (e.g., Henry's law constants), flow rate and temperature assumptions, and calculation of mass transfer coefficients. Measurement uncertainty is associated with some input parameters used in the model (e.g., droplet size) as well as the experimental data used to validate the model. Although the main source of VOCs in the air while showering is expected to be the shower spray itself, the conceptualization of the model as falling droplets only may result in an underestimation of modeled indoor concentrations (Foster and Chrostowski, 2003). The model also makes several conservative assumptions such as assuming exposure time equals duration of shower use and not accounting for the actual decrease in concentration

after the water is turned off. Therefore, when all of the exposure and modeling assumptions are combined, it is much more likely that potential risks are significantly overestimated rather than underestimated.

References

Andelman, J.B. 1985. Human exposures to volatile halogenated organic chemicals in indoor and outdoor air. Environ. Health Persp. 62:313-318.

Foster, S.A. and P.C. Chrostowski. 1987. Inhalation exposures to volatile organic contaminants in the shower. APCA 80th Annual Meeting, New York, New York.

Foster, S.A. and P.C. Chrostowski. 2003. Integrated Human Exposure Model, Version 2 (IHEM2) For Volatile Organic Compounds. December 26, 2003.

ATTACHMENT D, TABLE D-4

CALCULATION OF CHEMICAL VAPOR CONCENTRATIONS IN SHOWER STALL AIR (a)
FIRE TRAING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Non-Chemical Specific Parameters (a)			
Parameter	**Symbol**	**Units**	**Value**
Air exchange rate in shower stall	R	min^{-1}	8.33E-03
Shower stall volume	S_v	m^3	2.94
Duration of shower	D_s	min	10
Time at which concentration is calculated	t	min	10
Water flow rate in shower	F_r	L/min	10
Shower droplet drop time	t_s	sec	2
Shower droplet diameter	d	cm	0.1
Calibration water temperature of transfer coefficient	T_1	^oK	293
Shower water temperature	T_s	^oK	318
Water viscosity at calibration temperature	u_1	cp	1.002
Water viscosity at shower temperature	u_s	cp	0.596
Mass transfer coefficient for water	k_{water}	cm/hr	3000
Mass transfer coefficient for carbon dioxide	k_{co2}	cm/hr	20

Intermediate Calculations (a)			
Parameter	**Symbol**	**Units**	**Value**
Temperature correction factor for transfer rate	$[(T_1 * u_s)/(T_s * u_1)]^{-0.5}$	--	1.351
Gas constant ("R") (atm m^3/(g-mole ^oK))	R	atm m^3/(g-mole ^oK)	8.20E-05
Gas constant * calibration water temperature	$R*T_1$	atm m^3/g-mole	2.40E-02

,

Chemical (b)	**RME Groundwater Exposure Point Concentration** C_{wc} (ug/L)	**Molecular Weight** MW (g/mole)	**Henry's Law Constant** H (atm m^3/g-mole)	**Gas-film mass transfer** k_g (cm/hr)	**Liquid-film mass transfer** k_l (cm/hr)	**Mass transfer coefficient at reference conditions** K_L (cm/hr)	**Temperature-connected mass transfer coefficient** K_{aL} (cm/hr)	**Concentration Leaving Shower Droplet** C_{wd} (ug/L)	**VOC Source Generation Rate** S (ug/(m^3 min))	**Bathroom Air Concentration** C_{voc} (ug/m^3)
1,1-Biphenyl	0.21	154.21	3.08E-04	1.02E+03	1.07E+01	5.89E+00	7.96E+00	4.89E-02	1.66E-01	1.60E+00
Hexachlorocyclopentadiene	0.11	272.77	2.70E-02	7.71E+02	8.03E+00	7.96E+00	1.08E+01	3.31E-02	1.13E-01	1.08E+00
Trichloroethene	10	131.39	9.85E-03	1.11E+03	1.16E+01	1.13E+01	1.52E+01	3.98E+00	1.36E+01	1.30E+02
Vinyl chloride	0.347	62.5	2.78E-02	1.61E+03	1.68E+01	1.66E+01	2.25E+01	1.83E-01	6.22E-01	5.97E+00

Chemical (b)	**CTE Groundwater Exposure Point Concentration** C_{wc} (ug/L)	**Molecular Weight** MW (g/mole)	**Henry's Law Constant** H (atm m^3/g-mole)	**Gas-film mass transfer** k_g (cm/hr)	**Liquid-film mass transfer** k_l (cm/hr)	**Mass transfer coefficient at reference conditions** K_L (cm/hr)	**Temperature-connected mass transfer coefficient** K_{aL} (cm/hr)	**Concentration Leaving Shower Droplet** C_{wd} (ug/L)	**VOC Source Generation Rate** S (ug/(m^3 min))	**Bathroom Air Concentration** C_{voc} (ug/m^3)
1,1-Biphenyl	0.15	154.21	3.08E-04	1.02E+03	1.07E+01	5.89E+00	7.96E+00	3.50E-02	1.19E-01	1.14E+00
Hexachlorocyclopentadiene	0.11	272.77	2.70E-02	7.71E+02	8.03E+00	7.96E+00	1.08E+01	3.31E-02	1.13E-01	1.08E+00
Trichloroethene	8.2	131.39	9.85E-03	1.11E+03	1.16E+01	1.13E+01	1.52E+01	3.27E+00	1.11E+01	1.07E+02
Vinyl chloride	0.347	62.5	2.78E-02	1.61E+03	1.68E+01	1.66E+01	2.25E+01	1.83E-01	6.22E-01	5.97E+00

Notes:

(a) The Foster and Chrostowski (1987) shower model was used to estimate an indoor (bathroom) air vapor concentration. The model is based on the experimental work of Andelman (1985), who measured air concentrations of trichloroethylene and chloroform in a bench scale shower assembly.

(b) Molecular weight and Henry's Law Constant parameter values taken from the USEPA (May 2016) Regional Screening Level (RSL) tables. Remaining parameters calculated by the Foster and Chrostowski model, referenced below.

References:

Andelman, J.B. 1985. Human exposures to volatile halogenated organic chemicals in indoor and outdoor air. Environ. Health Persp. 62:313-318.

Foster, S.A. and P.C. Chrostowski. 1987. Inhalation exposures to volatile organic contaminants in the shower. APCA 80th Annual Meeting, New York, New York.

JOHNSON AND ETTINGER MODEL SPREADSHEETS

DATA ENTRY SHEET

GW-ADV Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
77474	1.10E-01	Hexachlorocyclopentadiene

MORE ↓

ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, h_B (cm)	ENTER Thickness of soil stratum C, h_C (cm)	ENTER Soil stratum directly above water table, (Enter A, B, or C)	ENTER SCS soil type directly above water table	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
			Totals must add up to value of L_{WT} (cell G28)							
7	55	74	74	0	0	A	LS	LS		
	ft: 1.9	2.4								

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
Lookup Soil Parameters				Lookup Soil Parameters				Lookup Soil Parameters			
LS	1.62	0.390	0.076								

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP (g/cm-s^2)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.25	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

Not used; model used to calculate indoor air concentration

END

INTERMEDIATE CALCULATIONS SHEET

Hexachlorocyclopentadiene

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
0.00E+00	18.7616	0.314	ERROR	ERROR	0.079	1.61E-08	0.957	1.55E-08	18.75	0.39	0.087	0.303	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
1.69E+04	1.22E+06	3.28E-04	55	14,322	5.70E-03	2.48E-01	1.74E-04	2.24E-03	0.00E+00	0.00E+00	3.52E-05	3.52E-05	18.7616

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	**Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)**	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
55	2.73E+01	0.10	8.33E+01	2.24E-03	4.00E+02	#NUM!	1.32E-04	**3.59E-03**	NA	2.0E-04

END

DATA ENTRY SHEET

GW-ADV
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
79016	1.00E+01	Trichloroethylene

MORE ↓

ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum directly above water table, (Enter A, B, or C)	ENTER SCS soil type directly above water table	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
			Totals must add up to value of L_{WT} (cell G28)							
7	55	74	74	0	0	A	LS	LS		
	ft: 1.9	2.4								

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
Lookup Soil Parameters				Lookup Soil Parameters				Lookup Soil Parameters			
LS	1.62	0.390	0.076								

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP (g/cm-s^2)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.25	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

Not used; model used to calculate indoor air concentration

END

INTERMEDIATE CALCULATIONS SHEET

Trichloroethylene

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
0.00E+00	18.7616	0.314	ERROR	ERROR	0.079	1.61E-08	0.957	1.55E-08	18.75	0.39	0.087	0.303	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
1.69E+04	1.22E+06	3.28E-04	55	8,593	4.05E-03	1.76E-01	1.74E-04	1.10E-02	0.00E+00	0.00E+00	1.62E-04	1.62E-04	18.7616

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	**Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)**	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
55	1.76E+03	0.10	8.33E+01	1.10E-02	4.00E+02	2.91E+82	5.51E-04	**9.70E-01**	1.1E-04	4.0E-02

END

DATA ENTRY SHEET

GW-ADV
Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES X

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
75014	3.47E-01	Vinyl chloride (chloroethene)

MORE ↓

ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER Totals must add up to value of L_{WT} (cell G28) Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, (Enter value or 0) h_B (cm)	Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum directly above water table, (Enter A, B, or C)	ENTER SCS soil type directly above water table	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
7	55	74	74	0	0	A	LS	LS		
	ft: 1.9	2.4								

MORE ↓

ENTER Stratum A SCS soil type	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
Lookup Soil Parameters				Lookup Soil Parameters				Lookup Soil Parameters			
LS	1.62	0.390	0.076								

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)
10	40	1000	1000	244	0.1	0.25	5

MORE ↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)

Not used; model used to calculate indoor air concentration

END

INTERMEDIATE CALCULATIONS SHEET

Vinyl chloride (chloroethene)

Exposure duration, τ (sec)	Source-building separation, L_T (cm)	Stratum A soil air-filled porosity, θ_a^A (cm^3/cm^3)	Stratum B soil air-filled porosity, θ_a^B (cm^3/cm^3)	Stratum C soil air-filled porosity, θ_a^C (cm^3/cm^3)	Stratum A effective total fluid saturation, S_{te} (cm^3/cm^3)	Stratum A soil intrinsic permeability, k_i (cm^2)	Stratum A soil relative air permeability, k_{rg} (cm^2)	Stratum A soil effective vapor permeability, k_v (cm^2)	Thickness of capillary zone, L_{cz} (cm)	Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)	Floor-wall seam perimeter, X_{crack} (cm)
0.00E+00	18.7616	0.314	ERROR	ERROR	0.079	1.61E-08	0.957	1.55E-08	18.75	0.39	0.087	0.303	4,000

Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. groundwater temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. groundwater temperature, H_{TS} (atm-m^3/mol)	Henry's law constant at ave. groundwater temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Stratum A effective diffusion coefficient, D^{eff}_A (cm^2/s)	Stratum B effective diffusion coefficient, D^{eff}_B (cm^2/s)	Stratum C effective diffusion coefficient, D^{eff}_C (cm^2/s)	Capillary zone effective diffusion coefficient, D^{eff}_{cz} (cm^2/s)	Total overall effective diffusion coefficient, D^{eff}_T (cm^2/s)	Diffusion path length, L_d (cm)
1.69E+04	1.22E+06	3.28E-04	55	5,033	1.56E-02	6.79E-01	1.74E-04	1.47E-02	0.00E+00	0.00E+00	2.11E-04	2.11E-04	18.7616

Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, $\exp(Pe^f)$ (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	**Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)**	Unit risk factor, URF ($\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)
55	2.36E+02	0.10	8.33E+01	1.47E-02	4.00E+02	2.88E+61	6.94E-04	**1.64E-01**	8.8E-06	1.0E-01

END

ATTACHMENT E

RAGS PART D TABLES 7S, CALCULATION OF CHEMICAL RISKS AND NON-CANCER HAZARDS

Table 7.1.RME – Current/Future Construction Worker

Table 7.2.RME – Current/Future Recreational User

Table 7.3.RME – Future Outdoor Industrial Worker

Table 7.4.RME – Future Indoor Industrial Worker

Table 7.5.RME – Hypothetical Future On-Site Resident

Table 7.1.CTE – Current/Future Construction Worker

Table 7.2.CTE – Current/Future Recreational User

Table 7.3.CTE – Future Outdoor Industrial Worker

Table 7.4.CTE – Future Indoor Industrial Worker

Table 7.5.CTE – Hypothetical Future On-Site Resident

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TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	3.00E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.19E-02	mg/kg-day	1.00E+00	mg/kg-day	4.19E-02
				ARSENIC	8.11E+00	mg/kg	9.82E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.47E-07	1.37E-05	mg/kg-day	3.00E-04	mg/kg-day	4.58E-02
				COBALT	1.50E+01	mg/kg	3.03E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.24E-05	mg/kg-day	3.00E-03	mg/kg-day	1.41E-02
				IRON	2.21E+04	mg/kg	4.45E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.23E-02	mg/kg-day	7.00E-01	mg/kg-day	8.90E-02
				MANGANESE	5.23E+03	mg/kg	1.06E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.48E-02	mg/kg-day	2.40E-02	mg/kg-day	6.16E-01
				THALLIUM	8.61E-02	mg/kg	1.74E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.43E-07	mg/kg-day	4.00E-05	mg/kg-day	6.08E-03
				VANADIUM	3.47E+01	mg/kg	7.01E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.81E-05	mg/kg-day	5.04E-03	mg/kg-day	1.95E-02
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.55E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	3.10E-08	2.17E-06	mg/kg-day	6.00E-05	mg/kg-day	3.61E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	7.47E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	7.47E-10	1.05E-07	mg/kg-day	3.00E-04	mg/kg-day	3.48E-04
			Exp. Route Total									1.79E-07					8.68E-01
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	1.57E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.36E-08	2.20E-06	mg/kg-day	3.00E-04	mg/kg-day	7.35E-03
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	6.95E-09	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.39E-08	9.73E-07	mg/kg-day	6.00E-05	mg/kg-day	1.62E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	3.11E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.11E-10	4.36E-08	mg/kg-day	3.00E-04	mg/kg-day	1.45E-04
			Exp. Route Total									3.78E-08					2.37E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	2.57E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.60E+00	ug/m^3	5.00E+00	ug/m^3	7.21E-01
				ARSENIC	8.11E+00	mg/kg	1.41E-05	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	6.05E-08	1.97E-03	ug/m^3	1.50E-02	ug/m^3	1.31E-01
				COBALT	1.50E+01	mg/kg	2.60E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.34E-07	3.64E-03	ug/m^3	2.00E-02	ug/m^3	1.82E-01
				IRON	2.21E+04	mg/kg	3.83E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.36E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	9.07E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.27E+00	ug/m^3	5.00E-02	ug/m^3	2.54E+01
				THALLIUM	8.61E-02	mg/kg	1.49E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.09E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	6.03E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.44E-03	ug/m^3	1.00E-01	ug/m^3	8.44E-02
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.33E-06	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	7.58E-10	1.86E-04	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	6.42E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	3.85E-11	8.99E-06	ug/m^3	2.00E-03	ug/m^3	4.49E-03
			Exp. Route Total									2.95E-07					2.65E+01
Surface Soil Area 1 Total												**5.12E-07**					**2.74E+01**

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	2.93E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.11E-02	mg/kg-day	1.00E+00	mg/kg-day	4.11E-02
				ARSENIC	8.50E+00	mg/kg	1.03E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.54E-07	1.44E-05	mg/kg-day	3.00E-04	mg/kg-day	4.80E-02
				COBALT	1.17E+01	mg/kg	2.36E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.30E-05	mg/kg-day	3.00E-03	mg/kg-day	1.10E-02
				IRON	2.43E+04	mg/kg	4.90E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.86E-02	mg/kg-day	7.00E-01	mg/kg-day	9.80E-02
				MANGANESE	5.29E+02	mg/kg	1.07E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.49E-03	mg/kg-day	2.40E-02	mg/kg-day	6.23E-02
				THALLIUM	8.88E-02	mg/kg	1.79E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.51E-07	mg/kg-day	4.00E-05	mg/kg-day	6.27E-03
				VANADIUM	3.66E+01	mg/kg	7.39E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.03E-04	mg/kg-day	5.04E-03	mg/kg-day	2.05E-02
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	2.38E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	3.81E-08	3.33E-07	mg/kg-day	5.00E-05	mg/kg-day	6.67E-03
				ENDRIN KETONE	7.74E-01	mg/kg	1.56E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.19E-06	mg/kg-day	2.00E-03	mg/kg-day	1.09E-03
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	1.76E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	1.60E-08	2.46E-07	mg/kg-day	1.30E-05	mg/kg-day	1.89E-02
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.05E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.09E-06	1.47E-04	mg/kg-day	6.00E-05	mg/kg-day	2.44E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	3.65E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.65E-09	5.11E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.79E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.79E-08	2.50E-06	mg/kg-day	3.00E-04	mg/kg-day	8.34E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	3.40E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.40E-09	4.76E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	4.64E-08	mg/kg-day	1.00E-02	kg-day/mg	N/A	4.64E-10	6.50E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	4.08E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	4.08E-09	5.71E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.95E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.95E-09	2.72E-06	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.33E-06					2.76E+00
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	1.65E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.48E-08	2.31E-06	mg/kg-day	3.00E-04	mg/kg-day	7.70E-03
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	7.64E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	1.22E-08	1.07E-07	mg/kg-day	5.00E-05	mg/kg-day	2.14E-03
				ENDRIN KETONE	7.74E-01	mg/kg	5.01E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.01E-07	mg/kg-day	2.00E-03	mg/kg-day	3.51E-04
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	5.63E-10	mg/kg-day	9.10E+00	kg-day/mg	N/A	5.12E-09	7.88E-08	mg/kg-day	1.30E-05	mg/kg-day	6.06E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.70E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	9.40E-07	6.58E-05	mg/kg-day	6.00E-05	mg/kg-day	1.10E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.52E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.52E-09	2.13E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	7.45E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	7.45E-09	1.04E-06	mg/kg-day	3.00E-04	mg/kg-day	3.48E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.42E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.42E-09	1.98E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	1.93E-08	mg/kg-day	1.00E-02	kg-day/mg	N/A	1.93E-10	2.71E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.70E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.70E-09	2.38E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	8.11E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	8.11E-10	1.14E-06	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									9.95E-07					1.12E+00

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	2.52E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.53E+00	ug/m^3	5.00E+00	ug/m^3	7.06E-01
				ARSENIC	8.50E+00	mg/kg	1.47E-05	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	6.34E-08	2.06E-03	ug/m^3	1.50E-02	ug/m^3	1.38E-01
				COBALT	1.17E+01	mg/kg	2.02E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.82E-07	2.83E-03	ug/m^3	2.00E-02	ug/m^3	1.42E-01
				IRON	2.43E+04	mg/kg	4.21E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.90E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	9.18E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.29E-01	ug/m^3	5.00E-02	ug/m^3	2.57E+00
				THALLIUM	8.88E-02	mg/kg	1.54E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.16E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	6.35E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.89E-03	ug/m^3	1.00E-01	ug/m^3	8.89E-02
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	2.05E-07	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	9.42E-10	2.87E-05	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	1.34E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.88E-04	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	1.51E-07	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	3.92E-10	2.11E-05	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	9.00E-05	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	5.13E-08	1.26E-02	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	3.14E-06	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	1.88E-10	4.39E-04	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.54E-06	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	9.22E-10	2.15E-04	ug/m^3	2.00E-03	ug/m^3	1.08E-01
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	2.92E-06	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	1.75E-10	4.09E-04	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	3.99E-06	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	N/A	2.39E-11	5.59E-04	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	3.50E-07	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	2.10E-10	4.91E-05	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.67E-06	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	1.00E-10	2.34E-04	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									3.00E-07					3.75E+00
Surface Soil Area 2 Total												**3.63E-06**					**7.63E+00**

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	3.25E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.55E-02	mg/kg-day	1.00E+00	mg/kg-day	4.55E-02
				ARSENIC	9.77E+00	mg/kg	1.18E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.77E-07	1.66E-05	mg/kg-day	3.00E-04	mg/kg-day	5.52E-02
				COBALT	1.25E+01	mg/kg	2.51E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.52E-05	mg/kg-day	3.00E-03	mg/kg-day	1.17E-02
				IRON	2.74E+04	mg/kg	5.54E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.75E-02	mg/kg-day	7.00E-01	mg/kg-day	1.11E-01
				MANGANESE	8.02E+02	mg/kg	1.62E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.27E-03	mg/kg-day	2.40E-02	mg/kg-day	9.44E-02
				THALLIUM	1.09E-01	mg/kg	2.20E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.08E-07	mg/kg-day	4.00E-05	mg/kg-day	7.70E-03
				VANADIUM	3.88E+01	mg/kg	7.83E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.10E-04	mg/kg-day	5.04E-03	mg/kg-day	2.17E-02
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.68E-09	mg/kg-day	7.20E-01	kg-day/mg	N/A	1.21E-09	2.35E-07	mg/kg-day	3.00E-03	mg/kg-day	7.82E-05
			Exp. Route Total									1.79E-07					3.47E-01
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	1.90E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.84E-08	2.66E-06	mg/kg-day	3.00E-04	mg/kg-day	8.85E-03
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	7.20E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									2.84E-08					8.85E-03
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	2.79E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.91E+00	ug/m^3	5.00E+00	ug/m^3	7.82E-01
				ARSENIC	9.77E+00	mg/kg	1.69E-05	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	7.29E-08	2.37E-03	ug/m^3	1.50E-02	ug/m^3	1.58E-01
				COBALT	1.25E+01	mg/kg	2.16E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.95E-07	3.03E-03	ug/m^3	2.00E-02	ug/m^3	1.51E-01
				IRON	2.74E+04	mg/kg	4.76E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.66E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	1.39E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.95E-01	ug/m^3	5.00E-02	ug/m^3	3.90E+00
				THALLIUM	1.09E-01	mg/kg	1.89E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.65E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	6.73E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.42E-03	ug/m^3	1.00E-01	ug/m^3	9.42E-02
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.44E-07	ug/m^3	4.40E-06	(ug/m^3)$^{-1}$	N/A	6.34E-13	2.02E-05	ug/m^3	1.00E+02	ug/m^3	2.02E-07
			Exp. Route Total									2.67E-07					5.08E+00
Subsurface Soil Area 1 Total												**4.75E-07**					**5.44E+00**

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	3.20E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.48E-02	mg/kg-day	1.00E+00	mg/kg-day	4.48E-02
				ARSENIC	1.21E+01	mg/kg	1.47E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.20E-07	2.05E-05	mg/kg-day	3.00E-04	mg/kg-day	6.84E-02
				COBALT	1.29E+01	mg/kg	2.60E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.64E-05	mg/kg-day	3.00E-03	mg/kg-day	1.21E-02
				IRON	2.75E+04	mg/kg	5.54E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.76E-02	mg/kg-day	7.00E-01	mg/kg-day	1.11E-01
				MANGANESE	6.54E+02	mg/kg	1.32E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.85E-03	mg/kg-day	2.40E-02	mg/kg-day	7.69E-02
				THALLIUM	1.16E-01	mg/kg	2.34E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.28E-07	mg/kg-day	4.00E-05	mg/kg-day	8.19E-03
				VANADIUM	3.90E+01	mg/kg	7.86E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.10E-04	mg/kg-day	5.04E-03	mg/kg-day	2.18E-02
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.34E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.68E-07	1.88E-05	mg/kg-day	6.00E-05	mg/kg-day	3.13E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	2.02E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.02E-09	2.83E-07	mg/kg-day	3.00E-04	mg/kg-day	9.42E-04
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	4.24E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	4.24E-10	5.93E-08	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								4.90E-07					6.57E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	2.35E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.52E-08	3.29E-06	mg/kg-day	3.00E-04	mg/kg-day	1.10E-02
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	6.02E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.20E-07	8.43E-06	mg/kg-day	6.00E-05	mg/kg-day	1.40E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	8.41E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	8.41E-10	1.18E-07	mg/kg-day	3.00E-04	mg/kg-day	3.93E-04
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.77E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.77E-10	2.47E-08	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								1.57E-07					1.52E-01
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	2.75E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.85E+00	ug/m^3	5.00E+00	ug/m^3	7.71E-01
				ARSENIC	1.21E+01	mg/kg	2.10E-05	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	9.03E-08	2.94E-03	ug/m^3	1.50E-02	ug/m^3	1.96E-01
				COBALT	1.29E+01	mg/kg	2.23E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.01E-07	3.13E-03	ug/m^3	2.00E-02	ug/m^3	1.56E-01
				IRON	2.75E+04	mg/kg	4.76E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.67E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	1.13E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.59E-01	ug/m^3	5.00E-02	ug/m^3	3.17E+00
				THALLIUM	1.16E-01	mg/kg	2.01E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.82E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	6.76E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.46E-03	ug/m^3	1.00E-01	ug/m^3	9.46E-02
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.15E-05	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	6.57E-09	1.61E-03	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	1.73E-07	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	1.04E-10	2.43E-05	ug/m^3	2.00E-03	ug/m^3	1.21E-02
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	3.64E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	2.19E-11	5.10E-06	ug/m^3	N/A	ug/m^3	N/A
				Exp. Route Total								2.98E-07					4.40E+00
Subsurface Soil Area 2 Total												**9.45E-07**					**5.21E+00**

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Groundwater	Fire Training Area	Ingestion														
				Metals													
				ALUMINUM	4.26E+02	ug/L	1.36E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.90E-06	mg/kg-day	1.00E+00	mg/kg-day	1.90E-06
				ARSENIC	5.77E+00	ug/L	1.83E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.75E-10	2.57E-08	mg/kg-day	3.00E-04	mg/kg-day	8.56E-05
				CADMIUM	4.87E-01	ug/L	1.55E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.17E-09	mg/kg-day	5.00E-04	mg/kg-day	4.34E-06
				COBALT	3.00E+00	ug/L	9.54E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.34E-08	mg/kg-day	3.00E-03	mg/kg-day	4.45E-06
				IRON	1.79E+03	ug/L	5.69E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.96E-06	mg/kg-day	7.00E-01	mg/kg-day	1.14E-05
				MANGANESE	1.54E+03	ug/L	4.89E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.85E-06	mg/kg-day	2.40E-02	mg/kg-day	2.85E-04
				THALLIUM	1.40E-01	ug/L	4.45E-12	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.23E-10	mg/kg-day	4.00E-05	mg/kg-day	1.56E-05
				PFASs													
				PFOS	1.24E-01	ug/L	3.94E-12	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.52E-10	mg/kg-day	2.00E-05	mg/kg-day	2.76E-05
				PFOA	2.47E-01	ug/L	7.85E-12	mg/kg-day	7.00E-02	kg-day/mg	N/A	5.50E-13	1.10E-09	mg/kg-day	2.00E-05	mg/kg-day	5.50E-05
				SVOCs													
				1,1-BIPHENYL	2.10E-01	ug/L	6.68E-12	mg/kg-day	8.00E-03	kg-day/mg	N/A	5.34E-14	9.35E-10	mg/kg-day	1.00E-01	mg/kg-day	9.35E-09
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	3.50E-12	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.90E-10	mg/kg-day	1.00E-01	mg/kg-day	4.90E-09
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	2.96E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.14E-08	mg/kg-day	2.00E-02	mg/kg-day	2.07E-06
				TRICHLOROETHENE	1.00E+01	ug/L	3.18E-10	mg/kg-day	4.60E-02	kg-day/mg	N/A	1.46E-11	4.45E-08	mg/kg-day	5.00E-04	mg/kg-day	8.90E-05
				VINYL CHLORIDE	3.47E-01	ug/L	1.10E-11	mg/kg-day	7.20E-01	kg-day/mg	N/A	7.95E-12	1.54E-09	mg/kg-day	3.00E-03	mg/kg-day	5.15E-07
			Exp. Route Total									2.98E-10					5.83E-04
			Dermal														
				Metals													
				ALUMINUM	4.26E+02	ug/L	3.82E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.35E-06	mg/kg-day	1.00E+00	mg/kg-day	5.35E-06
				ARSENIC	5.77E+00	ug/L	5.18E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	7.76E-10	7.25E-08	mg/kg-day	3.00E-04	mg/kg-day	2.42E-04
				CADMIUM	4.87E-01	ug/L	4.37E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.12E-09	mg/kg-day	2.50E-05	mg/kg-day	2.45E-04
				COBALT	3.00E+00	ug/L	1.08E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.51E-08	mg/kg-day	3.00E-03	mg/kg-day	5.02E-06
				IRON	1.79E+03	ug/L	1.61E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.25E-05	mg/kg-day	7.00E-01	mg/kg-day	3.21E-05
				MANGANESE	1.54E+03	ug/L	1.38E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.93E-05	mg/kg-day	9.60E-04	mg/kg-day	2.01E-02
				THALLIUM	1.40E-01	ug/L	1.26E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.76E-09	mg/kg-day	4.00E-05	mg/kg-day	4.40E-05
				PFASs													
				PFOS	1.24E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				PFOA	2.47E-01	ug/L	N/A	mg/kg-day	7.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,1-BIPHENYL	2.10E-01	ug/L	1.15E-09	mg/kg-day	8.00E-03	kg-day/mg	N/A	9.20E-12	1.61E-07	mg/kg-day	1.00E-01	mg/kg-day	1.61E-06
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	1.34E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.87E-07	mg/kg-day	1.00E-01	mg/kg-day	1.87E-06
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	7.49E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.05E-06	mg/kg-day	2.00E-02	mg/kg-day	5.24E-05
				TRICHLOROETHENE	1.00E+01	ug/L	1.31E-08	mg/kg-day	4.60E-02	kg-day/mg	N/A	6.04E-10	1.84E-06	mg/kg-day	5.00E-04	mg/kg-day	3.67E-03
				VINYL CHLORIDE	3.47E-01	ug/L	1.93E-10	mg/kg-day	7.20E-01	kg-day/mg	N/A	1.39E-10	2.70E-08	mg/kg-day	3.00E-03	mg/kg-day	8.98E-06
			Exp. Route Total									1.53E-09					2.45E-02

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Trench Air	Fire Training Area	Inhalation	**SVOCs**													
				1,1-BIPHENYL	3.0E-03	ug/m^3	2.55E-07	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	3.57E-05	ug/m^3	4.00E-03	ug/m^3	8.93E-03
				HEXACHLOROCYCLOPENTADIENE	1.6E-03	ug/m^3	1.36E-07	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	1.90E-05	ug/m^3	1.12E-01	ug/m^3	1.70E-04
				VOCs													
				TRICHLOROETHENE	2.1E-01	ug/m^3	1.74E-05	ug/m^3	4.10E-06	$(ug/m^3)^{-1}$	N/A	7.15E-11	2.44E-03	ug/m^3	2.00E+00	ug/m^3	1.22E-03
				VINYL CHLORIDE	8.4E-03	ug/m^3	7.13E-07	ug/m^3	7.20E-01	$(ug/m^3)^{-1}$	N/A	5.13E-07	9.98E-05	ug/m^3	1.00E+02	ug/m^3	9.98E-07
			Exp. Route Total									5.13E-07					1.03E-02
Groundwater Total												**5.15E-07**					**3.53E-02**

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	5.20E+00	ug/L	1.91E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.86E-10	2.67E-08	mg/kg-day	3.00E-04	mg/kg-day	8.90E-05
				MANGANESE	8.48E+02	ug/L	3.11E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.36E-06	mg/kg-day	2.40E-02	mg/kg-day	1.82E-04
				THALLIUM	3.20E-01	ug/L	1.17E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.64E-09	mg/kg-day	4.00E-05	mg/kg-day	4.11E-05
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	1.39E-11	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.79E-11	1.95E-09	mg/kg-day	6.00E-05	mg/kg-day	3.25E-05
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	4.04E-12	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.65E-10	mg/kg-day	3.00E-05	mg/kg-day	1.88E-05
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	2.39E-12	mg/kg-day	1.00E-01	kg-day/mg	N/A	2.39E-13	3.34E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	2.79E-12	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.79E-12	3.90E-10	mg/kg-day	3.00E-04	mg/kg-day	1.30E-06
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	1.91E-12	mg/kg-day	1.00E-02	kg-day/mg	N/A	1.91E-14	2.67E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	1.61E-12	mg/kg-day	1.10E+00	kg-day/mg	N/A	1.78E-12	2.26E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	5.87E-12	mg/kg-day	1.00E-01	kg-day/mg	N/A	5.87E-13	8.22E-10	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.19E-10					3.64E-04
			Dermal														
				Metals													
				ARSENIC	5.20E+00	ug/L	3.50E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.25E-10	4.90E-08	mg/kg-day	3.00E-04	mg/kg-day	1.63E-04
				MANGANESE	8.48E+02	ug/L	5.71E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.99E-06	mg/kg-day	9.60E-04	mg/kg-day	8.33E-03
				THALLIUM	3.20E-01	ug/L	2.15E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.01E-09	mg/kg-day	4.00E-05	mg/kg-day	7.54E-05
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	2.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	6.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	9.74E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.36E-07	mg/kg-day	3.00E-05	mg/kg-day	4.54E-03
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	3.99E-12	mg/kg-day	1.10E+00	kg-day/mg	N/A	4.39E-12	5.58E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									5.29E-10					1.31E-02
Surface Water Total												**8.48E-10**					**1.35E-02**

TABLE 7.1.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	8.34E+00	mg/kg	1.21E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.82E-08	1.70E-06	mg/kg-day	3.00E-04	mg/kg-day	5.66E-03
				COBALT	9.36E+00	mg/kg	2.27E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.17E-06	mg/kg-day	3.00E-03	mg/kg-day	1.06E-03
				IRON	1.74E+04	mg/kg	4.21E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.89E-03	mg/kg-day	7.00E-01	mg/kg-day	8.42E-03
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	2.13E-09	mg/kg-day	2.00E+00	kg-day/mg	N/A	4.26E-09	2.98E-07	mg/kg-day	6.00E-05	mg/kg-day	4.97E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	4.13E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	4.13E-10	5.78E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	2.77E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.77E-09	3.88E-07	mg/kg-day	3.00E-04	mg/kg-day	1.29E-03
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	2.85E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	2.85E-10	3.99E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	6.01E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	6.01E-10	8.41E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	2.11E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	2.11E-10	2.95E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.67E-08					2.14E-02
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	1.94E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.92E-09	2.72E-07	mg/kg-day	3.00E-04	mg/kg-day	9.07E-04
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	9.57E-10	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.91E-09	1.34E-07	mg/kg-day	6.00E-05	mg/kg-day	2.23E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.72E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.72E-10	2.41E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	1.15E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.15E-09	1.62E-07	mg/kg-day	3.00E-04	mg/kg-day	5.38E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	1.19E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.19E-10	1.66E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	2.50E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.50E-10	3.50E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	8.78E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	8.78E-11	1.23E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									6.61E-09					3.68E-03
Sediment Total												**3.33E-08**					**2.51E-02**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOA = Perfluorooctanoic Acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Not applicable to adult receptors.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Risk	Value	Units	Value	Units	Quotient
Soil	Surface Soil	Fire Training Area Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	1.31E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.57E-03	mg/kg-day	1.00E+00	mg/kg-day	4.57E-03
				ARSENIC	8.11E+00	mg/kg	4.28E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.43E-07	1.50E-06	mg/kg-day	3.00E-04	mg/kg-day	5.00E-03
				COBALT	1.50E+01	mg/kg	1.32E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.62E-06	mg/kg-day	3.00E-04	mg/kg-day	1.54E-02
				IRON	2.21E+04	mg/kg	1.94E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.80E-03	mg/kg-day	7.00E-01	mg/kg-day	9.71E-03
				MANGANESE	5.23E+03	mg/kg	4.60E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.61E-03	mg/kg-day	2.40E-02	mg/kg-day	6.72E-02
				THALLIUM	8.61E-02	mg/kg	7.58E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.65E-08	mg/kg-day	1.00E-05	mg/kg-day	2.65E-03
				VANADIUM	3.47E+01	mg/kg	3.06E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.07E-05	mg/kg-day	5.04E-03	mg/kg-day	2.12E-03
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	6.75E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.35E-07	2.36E-07	mg/kg-day	2.00E-05	mg/kg-day	1.18E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	3.26E-09	mg/kg-day	1.00E+00	kg-day/mg	1	3.26E-09	1.14E-08	mg/kg-day	3.00E-04	mg/kg-day	3.80E-05
			Exp. Route Total									7.81E-07					1.18E-01
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	9.04E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.36E-07	3.17E-07	mg/kg-day	3.00E-04	mg/kg-day	1.06E-03
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	3.99E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	7.99E-08	1.40E-07	mg/kg-day	2.00E-05	mg/kg-day	6.99E-03
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	1.79E-09	mg/kg-day	1.00E+00	kg-day/mg	1	1.79E-09	6.26E-09	mg/kg-day	3.00E-04	mg/kg-day	2.09E-05
			Exp. Route Total									2.17E-07					8.06E-03
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	1.35E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.71E-04	ug/m^3	5.00E+00	ug/m^3	9.43E-05
				ARSENIC	8.11E+00	mg/kg	7.36E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.16E-10	2.58E-07	ug/m^3	1.50E-02	ug/m^3	1.72E-05
				COBALT	1.50E+01	mg/kg	1.36E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.22E-09	4.76E-07	ug/m^3	6.00E-03	ug/m^3	7.93E-05
				IRON	2.21E+04	mg/kg	2.00E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.00E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	4.74E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.66E-04	ug/m^3	5.00E-02	ug/m^3	3.32E-03
				THALLIUM	8.61E-02	mg/kg	7.81E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.73E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	3.15E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.10E-06	ug/m^3	1.00E-01	ug/m^3	1.10E-05
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	6.96E-09	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	3.97E-12	2.44E-08	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	3.36E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	2.01E-13	1.18E-09	ug/m^3	2.00E-03	ug/m^3	5.88E-07
			Exp. Route Total									1.54E-09					3.52E-03
Surface Soil Area 1 Total												**1.00E-06**					**1.30E-01**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Risk	Value	Units	Value	Units	Quotient
Soil	Surface Soil	Fire Training Area	Ingestion														
		Area 2		**Metals**													
				ALUMINUM	1.45E+04	mg/kg	1.28E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.48E-03	mg/kg-day	1.00E+00	mg/kg-day	4.48E-03
				ARSENIC	8.50E+00	mg/kg	4.49E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.74E-07	1.57E-06	mg/kg-day	3.00E-04	mg/kg-day	5.24E-03
				COBALT	1.17E+01	mg/kg	1.03E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.60E-06	mg/kg-day	3.00E-04	mg/kg-day	1.20E-02
				IRON	2.43E+04	mg/kg	2.14E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.48E-03	mg/kg-day	7.00E-01	mg/kg-day	1.07E-02
				MANGANESE	5.29E+02	mg/kg	4.66E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.63E-04	mg/kg-day	2.40E-02	mg/kg-day	6.79E-03
				THALLIUM	8.88E-02	mg/kg	7.82E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.74E-08	mg/kg-day	1.00E-05	mg/kg-day	2.74E-03
				VANADIUM	3.66E+01	mg/kg	3.22E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.13E-05	mg/kg-day	5.04E-03	mg/kg-day	2.24E-03
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.04E-08	mg/kg-day	1.60E+01	kg-day/mg	N/A	1.66E-07	3.64E-08	mg/kg-day	5.00E-05	mg/kg-day	7.27E-04
				ENDRIN KETONE	7.74E-01	mg/kg	6.82E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.39E-07	mg/kg-day	3.00E-04	mg/kg-day	7.95E-04
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	7.66E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	6.97E-08	2.68E-08	mg/kg-day	1.30E-05	mg/kg-day	2.06E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.57E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	9.14E-06	1.60E-05	mg/kg-day	2.00E-05	mg/kg-day	7.99E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.59E-07	mg/kg-day	1.00E-01	kg-day/mg	1	1.59E-08	5.57E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	7.80E-08	mg/kg-day	1.00E+00	kg-day/mg	1	7.80E-08	2.73E-07	mg/kg-day	3.00E-04	mg/kg-day	9.10E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.48E-07	mg/kg-day	1.00E-01	kg-day/mg	1	1.48E-08	5.19E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	2.03E-07	mg/kg-day	1.00E-02	kg-day/mg	1	2.03E-09	7.09E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.78E-08	mg/kg-day	1.00E+00	kg-day/mg	1	1.78E-08	6.23E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	8.49E-08	mg/kg-day	1.00E-01	kg-day/mg	1	8.49E-09	2.97E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.02E-05					8.48E-01
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	9.48E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.42E-07	3.32E-07	mg/kg-day	3.00E-04	mg/kg-day	1.11E-03
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	4.39E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	7.02E-08	1.54E-08	mg/kg-day	5.00E-05	mg/kg-day	3.07E-04
				ENDRIN KETONE	7.74E-01	mg/kg	2.88E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.01E-07	mg/kg-day	3.00E-04	mg/kg-day	3.36E-04
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	3.23E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	2.94E-08	1.13E-08	mg/kg-day	1.30E-05	mg/kg-day	8.71E-04
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	2.70E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	5.40E-06	9.45E-06	mg/kg-day	2.00E-05	mg/kg-day	4.73E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	8.74E-08	mg/kg-day	1.00E-01	kg-day/mg	1	8.74E-09	3.06E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	4.28E-08	mg/kg-day	1.00E+00	kg-day/mg	1	4.28E-08	1.50E-07	mg/kg-day	3.00E-04	mg/kg-day	5.00E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	8.14E-08	mg/kg-day	1.00E-01	kg-day/mg	1	8.14E-09	2.85E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	1.11E-07	mg/kg-day	1.00E-02	kg-day/mg	1	1.11E-09	3.89E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	9.76E-09	mg/kg-day	1.00E+00	kg-day/mg	1	9.76E-09	3.42E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	4.66E-08	mg/kg-day	1.00E-01	kg-day/mg	1	4.66E-09	1.63E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									5.72E-06					4.76E-01

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Risk	Value	Units	Value	Units	Quotient
Soil	Surface Soil	Fire Training Area Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	1.32E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.62E-04	ug/m^3	5.00E+00	ug/m^3	9.24E-05
				ARSENIC	8.50E+00	mg/kg	7.71E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.32E-10	2.70E-07	ug/m^3	1.50E-02	ug/m^3	1.80E-05
				COBALT	1.17E+01	mg/kg	1.06E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	9.53E-10	3.71E-07	ug/m^3	6.00E-03	ug/m^3	6.18E-05
				IRON	2.43E+04	mg/kg	2.20E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.71E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	4.80E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.68E-05	ug/m^3	5.00E-02	ug/m^3	3.36E-04
				THALLIUM	8.88E-02	mg/kg	8.06E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.82E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	3.32E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.16E-06	ug/m^3	1.00E-01	ug/m^3	1.16E-05
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.07E-09	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	4.93E-12	3.75E-09	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	7.02E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-08	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	7.89E-10	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	2.05E-12	2.76E-09	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.71E-07	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	2.68E-10	1.65E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.64E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	9.84E-13	5.74E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	8.04E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	4.82E-12	2.81E-08	ug/m^3	2.00E-03	ug/m^3	1.41E-05
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.53E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	9.17E-13	5.35E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	2.09E-08	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	1	1.25E-13	7.30E-08	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.83E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	1.10E-12	6.42E-09	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	8.75E-09	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	5.25E-13	3.06E-08	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									1.57E-09					5.34E-04
Surface Soil Area 2 Total												**1.59E-05**					**1.32E+00**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	1.42E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.96E-03	mg/kg-day	1.00E+00	mg/kg-day	4.96E-03
				ARSENIC	9.77E+00	mg/kg	5.16E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	7.74E-07	1.81E-06	mg/kg-day	3.00E-04	mg/kg-day	6.02E-03
				COBALT	1.25E+01	mg/kg	1.10E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.84E-06	mg/kg-day	3.00E-04	mg/kg-day	1.28E-02
				IRON	2.74E+04	mg/kg	2.42E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.45E-03	mg/kg-day	7.00E-01	mg/kg-day	1.21E-02
				MANGANESE	8.02E+02	mg/kg	7.07E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.47E-04	mg/kg-day	2.40E-02	mg/kg-day	1.03E-02
				THALLIUM	1.09E-01	mg/kg	9.60E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.36E-08	mg/kg-day	1.00E-05	mg/kg-day	3.36E-03
				VANADIUM	3.88E+01	mg/kg	3.42E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.20E-05	mg/kg-day	5.04E-03	mg/kg-day	2.37E-03
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	7.31E-09	mg/kg-day	1.40E+00	kg-day/mg	N/A	1.02E-08	2.56E-08	mg/kg-day	3.00E-03	mg/kg-day	8.53E-06
				Exp. Route Total								7.85E-07					5.19E-02
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	1.09E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.63E-07	3.81E-07	mg/kg-day	3.00E-04	mg/kg-day	1.27E-03
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				Exp. Route Total								1.63E-07					1.27E-03
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	1.46E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.11E-04	ug/m^3	5.00E+00	ug/m^3	1.02E-04
				ARSENIC	9.77E+00	mg/kg	8.87E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.81E-10	3.10E-07	ug/m^3	1.50E-02	ug/m^3	2.07E-05
				COBALT	1.25E+01	mg/kg	1.13E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.02E-09	3.96E-07	ug/m^3	6.00E-03	ug/m^3	6.60E-05
				IRON	2.74E+04	mg/kg	2.49E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.71E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	7.28E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.55E-05	ug/m^3	5.00E-02	ug/m^3	5.10E-04
				THALLIUM	1.09E-01	mg/kg	9.89E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.46E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	3.52E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.23E-06	ug/m^3	1.00E-01	ug/m^3	1.23E-05
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	7.53E-10	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	6.63E-15	2.64E-09	ug/m^3	1.00E+02	ug/m^3	2.64E-11
				Exp. Route Total								1.40E-09					7.11E-04
Subsurface Soil Area 1 Total												**9.49E-07**					**5.39E-02**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Risk	Value	Units	Value	Units	Quotient
Soil	Subsurface Soil	Fire Training Area Area 2	Ingestion	**Metals**													
				ALUMINUM	1.59E+04	mg/kg	1.40E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.89E-03	mg/kg-day	1.00E+00	mg/kg-day	4.89E-03
				ARSENIC	1.21E+01	mg/kg	6.39E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	9.59E-07	2.24E-06	mg/kg-day	3.00E-04	mg/kg-day	7.46E-03
				COBALT	1.29E+01	mg/kg	1.13E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.97E-06	mg/kg-day	3.00E-04	mg/kg-day	1.32E-02
				IRON	2.75E+04	mg/kg	2.42E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.46E-03	mg/kg-day	7.00E-01	mg/kg-day	1.21E-02
				MANGANESE	6.54E+02	mg/kg	5.76E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.01E-04	mg/kg-day	2.40E-02	mg/kg-day	8.39E-03
				THALLIUM	1.16E-01	mg/kg	1.02E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.58E-08	mg/kg-day	1.00E-05	mg/kg-day	3.58E-03
				VANADIUM	3.90E+01	mg/kg	3.43E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.20E-05	mg/kg-day	5.04E-03	mg/kg-day	2.38E-03
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	5.85E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.17E-06	2.05E-06	mg/kg-day	2.00E-05	mg/kg-day	1.02E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	8.81E-09	mg/kg-day	1.00E+00	kg-day/mg	1	8.81E-09	3.08E-08	mg/kg-day	3.00E-04	mg/kg-day	1.03E-04
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.85E-09	mg/kg-day	1.00E+00	kg-day/mg	1	1.85E-09	6.47E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.14E-06					1.55E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	1.35E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.02E-07	4.72E-07	mg/kg-day	3.00E-04	mg/kg-day	1.57E-03
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	3.46E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	6.92E-07	1.21E-06	mg/kg-day	2.00E-05	mg/kg-day	6.05E-02
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	4.83E-09	mg/kg-day	1.00E+00	kg-day/mg	1	4.83E-09	1.69E-08	mg/kg-day	3.00E-04	mg/kg-day	5.64E-05
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.02E-09	mg/kg-day	1.00E+00	kg-day/mg	1	1.02E-09	3.55E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									9.00E-07					6.22E-02
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.59E+04	mg/kg	1.44E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.04E-04	ug/m^3	5.00E+00	ug/m^3	1.01E-04
				ARSENIC	1.21E+01	mg/kg	1.10E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	4.72E-10	3.84E-07	ug/m^3	1.50E-02	ug/m^3	2.56E-05
				COBALT	1.29E+01	mg/kg	1.17E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.05E-09	4.09E-07	ug/m^3	6.00E-03	ug/m^3	6.82E-05
				IRON	2.75E+04	mg/kg	2.49E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.72E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	5.93E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.08E-05	ug/m^3	5.00E-02	ug/m^3	4.15E-04
				THALLIUM	1.16E-01	mg/kg	1.05E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.68E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	3.53E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.24E-06	ug/m^3	1.00E-01	ug/m^3	1.24E-05
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	6.03E-08	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	3.44E-11	2.11E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	9.07E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	5.44E-13	3.18E-09	ug/m^3	2.00E-03	ug/m^3	1.59E-06
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.91E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	1.14E-13	6.67E-10	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									1.56E-09					6.24E-04
Subsurface Soil Area 2 Total												**3.04E-06**					**2.17E-01**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Risk	Value	Units	Value	Units	Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	5.20E+00	ug/L	6.61E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	9.91E-09	2.31E-08	mg/kg-day	3.00E-04	mg/kg-day	7.71E-05
				MANGANESE	8.48E+02	ug/L	1.08E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.78E-06	mg/kg-day	2.40E-02	mg/kg-day	1.57E-04
				THALLIUM	3.20E-01	ug/L	4.07E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.42E-09	mg/kg-day	1.00E-05	mg/kg-day	1.42E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	4.83E-10	mg/kg-day	2.00E+00	kg-day/mg	N/A	9.67E-10	1.69E-09	mg/kg-day	2.00E-05	mg/kg-day	8.46E-05
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	1.40E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.90E-10	mg/kg-day	3.00E-04	mg/kg-day	1.63E-06
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	8.27E-11	mg/kg-day	1.00E-01	kg-day/mg	1	8.27E-12	2.89E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	9.67E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	9.67E-11	3.38E-10	mg/kg-day	3.00E-04	mg/kg-day	1.13E-06
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	6.61E-11	mg/kg-day	1.00E-02	kg-day/mg	1	6.61E-13	2.32E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	5.60E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	6.16E-11	1.96E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	2.04E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	2.04E-11	7.12E-10	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								1.11E-08					4.64E-04
			Dermal														
				Metals													
				ARSENIC	5.20E+00	ug/L	2.07E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.11E-08	7.26E-08	mg/kg-day	3.00E-04	mg/kg-day	2.42E-04
				MANGANESE	8.48E+02	ug/L	3.38E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.18E-05	mg/kg-day	9.60E-04	mg/kg-day	1.23E-02
				THALLIUM	3.20E-01	ug/L	1.28E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.47E-09	mg/kg-day	1.00E-05	mg/kg-day	4.47E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	2.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	5.77E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.02E-07	mg/kg-day	3.00E-04	mg/kg-day	6.73E-04
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	1	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	2.36E-10	mg/kg-day	1.10E+00	kg-day/mg	N/A	2.60E-10	8.27E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								3.14E-08					1.37E-02
Surface Water Total												**4.24E-08**					**1.42E-02**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion														
				Metals													
				ARSENIC	8.34E+00	mg/kg	1.27E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.91E-07	4.46E-07	mg/kg-day	3.00E-04	mg/kg-day	1.49E-03
				COBALT	9.36E+00	mg/kg	2.38E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.33E-07	mg/kg-day	3.00E-04	mg/kg-day	2.78E-03
				IRON	1.74E+04	mg/kg	4.42E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.55E-03	mg/kg-day	7.00E-01	mg/kg-day	2.21E-03
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	2.24E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	4.48E-08	7.84E-08	mg/kg-day	2.00E-05	mg/kg-day	3.92E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	4.34E-08	mg/kg-day	1.00E-01	kg-day/mg	1	4.34E-09	1.52E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	2.91E-08	mg/kg-day	1.00E+00	kg-day/mg	1	2.91E-08	1.02E-07	mg/kg-day	3.00E-04	mg/kg-day	3.39E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	2.99E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.99E-09	1.05E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	6.31E-09	mg/kg-day	1.00E+00	kg-day/mg	1	6.31E-09	2.21E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	2.21E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.21E-09	7.75E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.81E-07					1.07E-02
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	2.69E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.03E-08	9.41E-08	mg/kg-day	3.00E-04	mg/kg-day	3.14E-04
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	1.32E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.65E-08	4.63E-08	mg/kg-day	2.00E-05	mg/kg-day	2.32E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	2.38E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.38E-09	8.34E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	1.60E-08	mg/kg-day	1.00E+00	kg-day/mg	1	1.60E-08	5.59E-08	mg/kg-day	3.00E-04	mg/kg-day	1.86E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	1.64E-08	mg/kg-day	1.00E-01	kg-day/mg	1	1.64E-09	5.75E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	3.46E-09	mg/kg-day	1.00E+00	kg-day/mg	1	3.46E-09	1.21E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	1.21E-08	mg/kg-day	1.00E-01	kg-day/mg	1	1.21E-09	4.25E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									9.15E-08					2.82E-03
Sediment Total												**3.72E-07**					**1.35E-02**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR. Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	4.18E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.88E-02	mg/kg-day	1.00E+00	mg/kg-day	4.88E-02
				ARSENIC	8.11E+00	mg/kg	1.37E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.06E-06	1.60E-05	mg/kg-day	3.00E-04	mg/kg-day	5.33E-02
				COBALT	1.50E+01	mg/kg	4.22E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.93E-05	mg/kg-day	3.00E-04	mg/kg-day	1.64E-01
				IRON	2.21E+04	mg/kg	6.21E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.25E-02	mg/kg-day	7.00E-01	mg/kg-day	1.04E-01
				MANGANESE	5.23E+03	mg/kg	1.47E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.72E-02	mg/kg-day	2.40E-02	mg/kg-day	7.16E-01
				THALLIUM	8.61E-02	mg/kg	2.43E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.83E-07	mg/kg-day	1.00E-05	mg/kg-day	2.83E-02
				VANADIUM	3.47E+01	mg/kg	9.79E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.14E-04	mg/kg-day	5.04E-03	mg/kg-day	2.27E-02
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	2.16E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	4.32E-07	2.52E-06	mg/kg-day	2.00E-05	mg/kg-day	1.26E-01
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	1.04E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	5.53E-08	1.22E-07	mg/kg-day	3.00E-04	mg/kg-day	4.05E-04
				Exp. Route Total								2.54E-06					1.26E+00
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	1.63E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.44E-07	1.90E-06	mg/kg-day	3.00E-04	mg/kg-day	6.33E-03
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	7.18E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.44E-07	8.38E-07	mg/kg-day	2.00E-05	mg/kg-day	4.19E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	3.22E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.70E-08	3.75E-08	mg/kg-day	3.00E-04	mg/kg-day	1.25E-04
				Exp. Route Total								4.05E-07					4.83E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	4.04E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.71E-04	ug/m^3	5.00E+00	ug/m^3	9.43E-05
				ARSENIC	8.11E+00	mg/kg	2.21E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	9.49E-11	2.58E-07	ug/m^3	1.50E-02	ug/m^3	1.72E-05
				COBALT	1.50E+01	mg/kg	4.08E-08	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.67E-10	4.76E-07	ug/m^3	6.00E-03	ug/m^3	7.93E-05
				IRON	2.21E+04	mg/kg	6.00E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.00E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	1.42E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.66E-04	ug/m^3	5.00E-02	ug/m^3	3.32E-03
				THALLIUM	8.61E-02	mg/kg	2.34E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.73E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	9.45E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.10E-06	ug/m^3	1.00E-01	ug/m^3	1.10E-05
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	2.09E-09	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	1.19E-12	2.44E-08	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	1.01E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	3.20E-13	1.18E-09	ug/m^3	2.00E-03	ug/m^3	5.88E-07
				Exp. Route Total								4.64E-10					3.52E-03
Surface Soil Area 1 Total												**2.95E-06**					**1.32E+00**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	4.10E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.78E-02	mg/kg-day	1.00E+00	mg/kg-day	4.78E-02
				ARSENIC	8.50E+00	mg/kg	1.44E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.16E-06	1.68E-05	mg/kg-day	3.00E-04	mg/kg-day	5.59E-02
				COBALT	1.17E+01	mg/kg	3.29E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.84E-05	mg/kg-day	3.00E-04	mg/kg-day	1.28E-01
				IRON	2.43E+04	mg/kg	6.84E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.98E-02	mg/kg-day	7.00E-01	mg/kg-day	1.14E-01
				MANGANESE	5.29E+02	mg/kg	1.49E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.74E-03	mg/kg-day	2.40E-02	mg/kg-day	7.25E-02
				THALLIUM	8.88E-02	mg/kg	2.50E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.92E-07	mg/kg-day	1.00E-05	mg/kg-day	2.92E-02
				VANADIUM	3.66E+01	mg/kg	1.03E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.20E-04	mg/kg-day	5.04E-03	mg/kg-day	2.39E-02
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	3.33E-08	mg/kg-day	1.60E+01	kg-day/mg	N/A	5.32E-07	3.88E-07	mg/kg-day	5.00E-05	mg/kg-day	7.76E-03
				ENDRIN KETONE	7.74E-01	mg/kg	2.18E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.54E-06	mg/kg-day	3.00E-04	mg/kg-day	8.48E-03
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	2.45E-08	mg/kg-day	9.10E+00	kg-day/mg	N/A	2.23E-07	2.86E-07	mg/kg-day	1.30E-05	mg/kg-day	2.20E-02
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.46E-05	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.92E-05	1.71E-04	mg/kg-day	2.00E-05	mg/kg-day	8.53E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	5.09E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.70E-07	5.94E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	2.50E-07	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.32E-06	2.91E-06	mg/kg-day	3.00E-04	mg/kg-day	9.71E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	4.75E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.52E-07	5.54E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	6.48E-07	mg/kg-day	1.00E-02	kg-day/mg	5.3	3.44E-08	7.56E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	5.69E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	3.02E-07	6.64E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	2.72E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.44E-07	3.17E-06	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.45E-05					9.05E+00
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	1.71E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.56E-07	1.99E-06	mg/kg-day	3.00E-04	mg/kg-day	6.63E-03
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	7.89E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	1.26E-07	9.21E-08	mg/kg-day	5.00E-05	mg/kg-day	1.84E-03
				ENDRIN KETONE	7.74E-01	mg/kg	5.18E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.04E-07	mg/kg-day	3.00E-04	mg/kg-day	2.01E-03
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	5.82E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	5.29E-08	6.79E-08	mg/kg-day	1.30E-05	mg/kg-day	5.22E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.86E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	9.71E-06	5.67E-05	mg/kg-day	2.00E-05	mg/kg-day	2.83E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.57E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	8.33E-08	1.83E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	7.70E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.08E-07	8.99E-07	mg/kg-day	3.00E-04	mg/kg-day	3.00E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.46E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.76E-08	1.71E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	2.00E-07	mg/kg-day	1.00E-02	kg-day/mg	5.3	1.06E-08	2.33E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.76E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	9.31E-08	2.05E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	8.38E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	4.44E-08	9.78E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.09E-05					2.85E+00

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	3.96E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.62E-04	ug/m^3	5.00E+00	ug/m^3	9.24E-05
				ARSENIC	8.50E+00	mg/kg	2.31E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	9.95E-11	2.70E-07	ug/m^3	1.50E-02	ug/m^3	1.80E-05
				COBALT	1.17E+01	mg/kg	3.18E-08	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.86E-10	3.71E-07	ug/m^3	6.00E-03	ug/m^3	6.18E-05
				IRON	2.43E+04	mg/kg	6.61E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.71E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	1.44E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.68E-05	ug/m^3	5.00E-02	ug/m^3	3.36E-04
				THALLIUM	8.88E-02	mg/kg	2.42E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.82E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	9.97E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.16E-06	ug/m^3	1.00E-01	ug/m^3	1.16E-05
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	3.21E-10	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	1.48E-12	3.75E-09	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	2.11E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-08	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	2.37E-10	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	6.16E-13	2.76E-09	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.41E-07	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	8.05E-11	1.65E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	4.92E-09	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	1.57E-12	5.74E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	2.41E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	7.67E-12	2.81E-08	ug/m^3	2.00E-03	ug/m^3	1.41E-05
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	4.58E-09	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	1.46E-12	5.35E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	6.26E-09	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	5.3	1.99E-13	7.30E-08	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	5.50E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	1.75E-12	6.42E-09	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	2.62E-09	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	8.34E-13	3.06E-08	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									4.81E-10					5.34E-04
Surface Soil Area 2 Total												**4.53E-05**					**1.19E+01**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	4.54E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.29E-02	mg/kg-day	1.00E+00	mg/kg-day	5.29E-02
				ARSENIC	9.77E+00	mg/kg	1.65E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.48E-06	1.93E-05	mg/kg-day	3.00E-04	mg/kg-day	6.42E-02
				COBALT	1.25E+01	mg/kg	3.51E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.10E-05	mg/kg-day	3.00E-04	mg/kg-day	1.37E-01
				IRON	2.74E+04	mg/kg	7.73E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.02E-02	mg/kg-day	7.00E-01	mg/kg-day	1.29E-01
				MANGANESE	8.02E+02	mg/kg	2.26E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.64E-03	mg/kg-day	2.40E-02	mg/kg-day	1.10E-01
				THALLIUM	1.09E-01	mg/kg	3.07E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.58E-07	mg/kg-day	1.00E-05	mg/kg-day	3.58E-02
				VANADIUM	3.88E+01	mg/kg	1.09E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.27E-04	mg/kg-day	5.04E-03	mg/kg-day	2.53E-02
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	2.34E-08	mg/kg-day	1.40E+00	kg-day/mg	N/A	3.27E-08	2.73E-07	mg/kg-day	3.00E-03	mg/kg-day	9.10E-05
			Exp. Route Total									2.51E-06					5.54E-01
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	1.96E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.94E-07	2.29E-06	mg/kg-day	3.00E-04	mg/kg-day	7.62E-03
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									2.94E-07					7.62E-03
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	4.38E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.11E-04	ug/m^3	5.00E+00	ug/m^3	1.02E-04
				ARSENIC	9.77E+00	mg/kg	2.66E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.14E-10	3.10E-07	ug/m^3	1.50E-02	ug/m^3	2.07E-05
				COBALT	1.25E+01	mg/kg	3.39E-08	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.05E-10	3.96E-07	ug/m^3	6.00E-03	ug/m^3	6.60E-05
				IRON	2.74E+04	mg/kg	7.47E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.71E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	2.18E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.55E-05	ug/m^3	5.00E-02	ug/m^3	5.10E-04
				THALLIUM	1.09E-01	mg/kg	2.97E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.46E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	1.06E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.23E-06	ug/m^3	1.00E-01	ug/m^3	1.23E-05
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	2.26E-10	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	1.99E-15	2.64E-09	ug/m^3	1.00E+02	ug/m^3	2.64E-11
			Exp. Route Total									4.20E-10					7.11E-04
Subsurface Soil Area 1 Total												**2.81E-06**					**5.62E-01**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	4.47E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.22E-02	mg/kg-day	1.00E+00	mg/kg-day	5.22E-02
				ARSENIC	1.21E+01	mg/kg	2.05E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.07E-06	2.39E-05	mg/kg-day	3.00E-04	mg/kg-day	7.96E-02
				COBALT	1.29E+01	mg/kg	3.63E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.23E-05	mg/kg-day	3.00E-04	mg/kg-day	1.41E-01
				IRON	2.75E+04	mg/kg	7.74E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.03E-02	mg/kg-day	7.00E-01	mg/kg-day	1.29E-01
				MANGANESE	6.54E+02	mg/kg	1.84E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.15E-03	mg/kg-day	2.40E-02	mg/kg-day	8.95E-02
				THALLIUM	1.16E-01	mg/kg	3.27E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.81E-07	mg/kg-day	1.00E-05	mg/kg-day	3.81E-02
				VANADIUM	3.90E+01	mg/kg	1.10E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.28E-04	mg/kg-day	5.04E-03	mg/kg-day	2.54E-02
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.87E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	3.74E-06	2.18E-05	mg/kg-day	2.00E-05	mg/kg-day	1.09E+00
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	2.82E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.49E-07	3.29E-07	mg/kg-day	3.00E-04	mg/kg-day	1.10E-03
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	5.92E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	3.14E-08	6.90E-08	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								6.99E-06					1.65E+00
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	2.43E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.64E-07	2.83E-06	mg/kg-day	3.00E-04	mg/kg-day	9.44E-03
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	6.22E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.24E-06	7.26E-06	mg/kg-day	2.00E-05	mg/kg-day	3.63E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	8.69E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.61E-08	1.01E-07	mg/kg-day	3.00E-04	mg/kg-day	3.38E-04
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.83E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	9.68E-09	2.13E-08	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								1.66E-06					3.73E-01
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	4.32E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.04E-04	ug/m^3	5.00E+00	ug/m^3	1.01E-04
				ARSENIC	1.21E+01	mg/kg	3.29E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.42E-10	3.84E-07	ug/m^3	1.50E-02	ug/m^3	2.56E-05
				COBALT	1.29E+01	mg/kg	3.51E-08	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.16E-10	4.09E-07	ug/m^3	6.00E-03	ug/m^3	6.82E-05
				IRON	2.75E+04	mg/kg	7.47E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.72E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	1.78E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.08E-05	ug/m^3	5.00E-02	ug/m^3	4.15E-04
				THALLIUM	1.16E-01	mg/kg	3.16E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.68E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	1.06E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.24E-06	ug/m^3	1.00E-01	ug/m^3	1.24E-05
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.81E-08	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	1.03E-11	2.11E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	2.72E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	8.66E-13	3.18E-09	ug/m^3	2.00E-03	ug/m^3	1.59E-06
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	5.72E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	1.82E-13	6.67E-10	ug/m^3	N/A	ug/m^3	N/A
				Exp. Route Total								4.69E-10					6.24E-04
Subsurface Soil Area 2 Total												**8.66E-06**					**2.02E+00**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	5.20E+00	ug/L	1.06E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.59E-08	1.23E-07	mg/kg-day	3.00E-04	mg/kg-day	4.11E-04
				MANGANESE	8.48E+02	ug/L	1.73E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.01E-05	mg/kg-day	2.40E-02	mg/kg-day	8.39E-04
				THALLIUM	3.20E-01	ug/L	6.51E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.60E-09	mg/kg-day	1.00E-05	mg/kg-day	7.60E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	7.73E-10	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.55E-09	9.02E-09	mg/kg-day	2.00E-05	mg/kg-day	4.51E-04
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	2.24E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.61E-09	mg/kg-day	3.00E-04	mg/kg-day	8.71E-06
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	1.32E-10	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.01E-11	1.54E-09	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	1.55E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.55E-10	1.80E-09	mg/kg-day	3.00E-04	mg/kg-day	6.02E-06
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	1.06E-10	mg/kg-day	1.00E-02	kg-day/mg	5.3	5.61E-12	1.23E-09	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	8.95E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	9.85E-11	1.04E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	3.26E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.26E-11	3.80E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.78E-08					2.48E-03
			Dermal	**Metals**													
				ARSENIC	5.20E+00	ug/L	1.30E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.96E-08	1.52E-07	mg/kg-day	3.00E-04	mg/kg-day	5.07E-04
				MANGANESE	8.48E+02	ug/L	2.13E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.49E-05	mg/kg-day	9.60E-04	mg/kg-day	2.59E-02
				THALLIUM	3.20E-01	ug/L	8.04E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.38E-09	mg/kg-day	1.00E-05	mg/kg-day	9.38E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	2.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	3.63E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.24E-07	mg/kg-day	3.00E-04	mg/kg-day	1.41E-03
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	5.3	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	1.49E-10	mg/kg-day	1.10E+00	kg-day/mg	N/A	1.64E-10	1.74E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.97E-08					2.87E-02
Surface Water Total												**3.75E-08**					**3.12E-02**

TABLE 7.2.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion														
				Metals													
				ARSENIC	8.34E+00	mg/kg	4.08E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.11E-07	4.75E-06	mg/kg-day	3.00E-04	mg/kg-day	1.58E-02
				COBALT	9.36E+00	mg/kg	7.62E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.89E-06	mg/kg-day	3.00E-04	mg/kg-day	2.96E-02
				IRON	1.74E+04	mg/kg	1.42E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.65E-02	mg/kg-day	7.00E-01	mg/kg-day	2.36E-02
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	7.16E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.43E-07	8.36E-07	mg/kg-day	2.00E-05	mg/kg-day	4.18E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.39E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.36E-08	1.62E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	9.31E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.93E-07	1.09E-06	mg/kg-day	3.00E-04	mg/kg-day	3.62E-03
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	9.57E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	5.07E-08	1.12E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	2.02E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.07E-07	2.36E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	7.08E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.75E-08	8.26E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.52E-06					1.14E-01
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	4.84E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	7.25E-08	5.64E-07	mg/kg-day	3.00E-04	mg/kg-day	1.88E-03
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	2.38E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	4.76E-08	2.78E-07	mg/kg-day	2.00E-05	mg/kg-day	1.39E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	4.28E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.27E-08	5.00E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	2.87E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.52E-07	3.35E-07	mg/kg-day	3.00E-04	mg/kg-day	1.12E-03
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	2.95E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.57E-08	3.45E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	6.23E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	3.30E-08	7.27E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	2.18E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.16E-08	2.55E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.55E-07					1.69E-02
Sediment Total												**1.87E-06**					**1.31E-01**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR.
Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.3.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	2.72E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.62E-03	mg/kg-day	1.00E+00	mg/kg-day	7.62E-03
				ARSENIC	8.11E+00	mg/kg	8.93E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.34E-06	2.50E-06	mg/kg-day	3.00E-04	mg/kg-day	8.33E-03
				COBALT	1.50E+01	mg/kg	2.75E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.70E-06	mg/kg-day	3.00E-04	mg/kg-day	2.57E-02
				IRON	2.21E+04	mg/kg	4.05E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.13E-02	mg/kg-day	7.00E-01	mg/kg-day	1.62E-02
				MANGANESE	5.23E+03	mg/kg	9.59E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.69E-03	mg/kg-day	2.40E-02	mg/kg-day	1.12E-01
				THALLIUM	8.61E-02	mg/kg	1.58E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.42E-08	mg/kg-day	1.00E-05	mg/kg-day	4.42E-03
				VANADIUM	3.47E+01	mg/kg	6.37E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.78E-05	mg/kg-day	5.04E-03	mg/kg-day	3.54E-03
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.41E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.81E-07	3.94E-07	mg/kg-day	2.00E-05	mg/kg-day	1.97E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	6.79E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	6.79E-09	1.90E-08	mg/kg-day	3.00E-04	mg/kg-day	6.34E-05
				Exp. Route Total								1.63E-06					1.97E-01
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	1.89E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.83E-07	5.29E-07	mg/kg-day	3.00E-04	mg/kg-day	1.76E-03
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	8.34E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.67E-07	2.33E-07	mg/kg-day	2.00E-05	mg/kg-day	1.17E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	3.73E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.73E-09	1.05E-08	mg/kg-day	3.00E-04	mg/kg-day	3.49E-05
				Exp. Route Total								4.54E-07					1.35E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	1.12E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.14E-03	ug/m^3	5.00E+00	ug/m^3	6.28E-04
				ARSENIC	8.11E+00	mg/kg	6.13E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	2.64E-09	1.72E-06	ug/m^3	1.50E-02	ug/m^3	1.14E-04
				COBALT	1.50E+01	mg/kg	1.13E-06	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.02E-08	3.17E-06	ug/m^3	6.00E-03	ug/m^3	5.29E-04
				IRON	2.21E+04	mg/kg	1.67E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.67E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	3.95E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.11E-03	ug/m^3	5.00E-02	ug/m^3	2.21E-02
				THALLIUM	8.61E-02	mg/kg	6.51E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.82E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	2.63E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.35E-06	ug/m^3	1.00E-01	ug/m^3	7.35E-05
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	5.80E-08	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	3.31E-11	1.62E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	2.80E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	1.68E-12	7.83E-09	ug/m^3	2.00E-03	ug/m^3	3.92E-06
				Exp. Route Total								1.29E-08					2.35E-02
Surface Soil Area 1 Total												**2.09E-06**					**2.34E-01**

TABLE 7.3.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Ingestion	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	2.67E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.47E-03	mg/kg-day	1.00E+00	mg/kg-day	7.47E-03
				ARSENIC	8.50E+00	mg/kg	9.36E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.40E-06	2.62E-06	mg/kg-day	3.00E-04	mg/kg-day	8.73E-03
				COBALT	1.17E+01	mg/kg	2.14E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.99E-06	mg/kg-day	3.00E-04	mg/kg-day	2.00E-02
				IRON	2.43E+04	mg/kg	4.45E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.25E-02	mg/kg-day	7.00E-01	mg/kg-day	1.78E-02
				MANGANESE	5.29E+02	mg/kg	9.71E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.72E-04	mg/kg-day	2.40E-02	mg/kg-day	1.13E-02
				THALLIUM	8.88E-02	mg/kg	1.63E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.56E-08	mg/kg-day	1.00E-05	mg/kg-day	4.56E-03
				VANADIUM	3.66E+01	mg/kg	6.72E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.88E-05	mg/kg-day	5.04E-03	mg/kg-day	3.73E-03
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	2.16E-08	mg/kg-day	1.60E+01	kg-day/mg	N/A	3.46E-07	6.06E-08	mg/kg-day	5.00E-05	mg/kg-day	1.21E-03
				ENDRIN KETONE	7.74E-01	mg/kg	1.42E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.98E-07	mg/kg-day	3.00E-04	mg/kg-day	1.33E-03
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	1.60E-08	mg/kg-day	9.10E+00	kg-day/mg	N/A	1.45E-07	4.47E-08	mg/kg-day	1.30E-05	mg/kg-day	3.44E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	9.52E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.90E-05	2.66E-05	mg/kg-day	2.00E-05	mg/kg-day	1.33E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	3.32E-07	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.32E-08	9.29E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.63E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.63E-07	4.55E-07	mg/kg-day	3.00E-04	mg/kg-day	1.52E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	3.09E-07	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.09E-08	8.65E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	4.22E-07	mg/kg-day	1.00E-02	kg-day/mg	N/A	4.22E-09	1.18E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	3.71E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.71E-08	1.04E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.77E-07	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.77E-08	4.95E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.12E-05					1.41E+00
			Dermal	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	1.98E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.97E-07	5.55E-07	mg/kg-day	3.00E-04	mg/kg-day	1.85E-03
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	9.16E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	1.47E-07	2.57E-08	mg/kg-day	5.00E-05	mg/kg-day	5.13E-04
				ENDRIN KETONE	7.74E-01	mg/kg	6.01E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.68E-07	mg/kg-day	3.00E-04	mg/kg-day	5.61E-04
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	6.76E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	6.15E-08	1.89E-08	mg/kg-day	1.30E-05	mg/kg-day	1.46E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	5.64E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.13E-05	1.58E-05	mg/kg-day	2.00E-05	mg/kg-day	7.89E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.83E-07	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.83E-08	5.11E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	8.94E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	8.94E-08	2.50E-07	mg/kg-day	3.00E-04	mg/kg-day	8.35E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.70E-07	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.70E-08	4.76E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	2.32E-07	mg/kg-day	1.00E-02	kg-day/mg	N/A	2.32E-09	6.50E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	2.04E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.04E-08	5.71E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	9.73E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	9.73E-09	2.72E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.19E-05					7.95E-01

TABLE 7.3.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	1.10E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.08E-03	ug/m^3	5.00E+00	ug/m^3	6.16E-04
				ARSENIC	8.50E+00	mg/kg	6.43E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	2.76E-09	1.80E-06	ug/m^3	1.50E-02	ug/m^3	1.20E-04
				COBALT	1.17E+01	mg/kg	8.82E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	7.94E-09	2.47E-06	ug/m^3	6.00E-03	ug/m^3	4.12E-04
				IRON	2.43E+04	mg/kg	1.84E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.14E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	4.00E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.12E-04	ug/m^3	5.00E-02	ug/m^3	2.24E-03
				THALLIUM	8.88E-02	mg/kg	6.71E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.88E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	2.77E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.75E-06	ug/m^3	1.00E-01	ug/m^3	7.75E-05
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	8.92E-09	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	4.10E-11	2.50E-08	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	5.85E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.64E-07	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	6.58E-09	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	1.71E-11	1.84E-08	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	3.92E-06	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	2.24E-09	1.10E-05	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.37E-07	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	8.20E-12	3.83E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	6.70E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	4.02E-11	1.88E-07	ug/m^3	2.00E-03	ug/m^3	9.38E-05
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.27E-07	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	7.64E-12	3.57E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	1.74E-07	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	N/A	1.04E-12	4.87E-07	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.53E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	9.16E-12	4.28E-08	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	7.29E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	4.37E-12	2.04E-07	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									1.31E-08					3.56E-03
Surface Soil Area 2 Total												**3.32E-05**					**2.21E+00**

TABLE 7.3.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	2.95E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.27E-03	mg/kg-day	1.00E+00	mg/kg-day	8.27E-03
				ARSENIC	9.77E+00	mg/kg	1.08E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.61E-06	3.01E-06	mg/kg-day	3.00E-04	mg/kg-day	1.00E-02
				COBALT	1.25E+01	mg/kg	2.29E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.40E-06	mg/kg-day	3.00E-04	mg/kg-day	2.13E-02
				IRON	2.74E+04	mg/kg	5.03E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.41E-02	mg/kg-day	7.00E-01	mg/kg-day	2.01E-02
				MANGANESE	8.02E+02	mg/kg	1.47E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.12E-04	mg/kg-day	2.40E-02	mg/kg-day	1.72E-02
				THALLIUM	1.09E-01	mg/kg	2.00E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.60E-08	mg/kg-day	1.00E-05	mg/kg-day	5.60E-03
				VANADIUM	3.88E+01	mg/kg	7.11E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.99E-05	mg/kg-day	5.04E-03	mg/kg-day	3.95E-03
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.52E-08	mg/kg-day	7.20E-01	kg-day/mg	N/A	1.10E-08	4.26E-08	mg/kg-day	3.00E-03	mg/kg-day	1.42E-05
			Exp. Route Total									1.62E-06					8.65E-02
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	2.28E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.41E-07	6.37E-07	mg/kg-day	3.00E-04	mg/kg-day	2.12E-03
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	7.20E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									3.41E-07					2.12E-03
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	1.22E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.41E-03	ug/m^3	5.00E+00	ug/m^3	6.82E-04
				ARSENIC	9.77E+00	mg/kg	7.39E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.18E-09	2.07E-06	ug/m^3	1.50E-02	ug/m^3	1.38E-04
				COBALT	1.25E+01	mg/kg	9.42E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	8.48E-09	2.64E-06	ug/m^3	6.00E-03	ug/m^3	4.40E-04
				IRON	2.74E+04	mg/kg	2.07E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.81E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	6.07E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.70E-04	ug/m^3	5.00E-02	ug/m^3	3.40E-03
				THALLIUM	1.09E-01	mg/kg	8.24E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.31E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	2.93E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.21E-06	ug/m^3	1.00E-01	ug/m^3	8.21E-05
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	6.28E-09	ug/m^3	4.40E-06	(ug/m^3)$^{-1}$	N/A	2.76E-14	1.76E-08	ug/m^3	1.00E+02	ug/m^3	1.76E-10
			Exp. Route Total									1.17E-08					4.74E-03
Subsurface Soil Area 1 Total												**1.98E-06**					**9.34E-02**

TABLE 7.3.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	2.91E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.15E-03	mg/kg-day	1.00E+00	mg/kg-day	8.15E-03
				ARSENIC	1.21E+01	mg/kg	1.33E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.00E-06	3.73E-06	mg/kg-day	3.00E-04	mg/kg-day	1.24E-02
				COBALT	1.29E+01	mg/kg	2.36E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.62E-06	mg/kg-day	3.00E-04	mg/kg-day	2.21E-02
				IRON	2.75E+04	mg/kg	5.04E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.41E-02	mg/kg-day	7.00E-01	mg/kg-day	2.01E-02
				MANGANESE	6.54E+02	mg/kg	1.20E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.36E-04	mg/kg-day	2.40E-02	mg/kg-day	1.40E-02
				THALLIUM	1.16E-01	mg/kg	2.13E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.96E-08	mg/kg-day	1.00E-05	mg/kg-day	5.96E-03
				VANADIUM	3.90E+01	mg/kg	7.15E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.00E-05	mg/kg-day	5.04E-03	mg/kg-day	3.97E-03
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.22E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.44E-06	3.41E-06	mg/kg-day	2.00E-05	mg/kg-day	1.71E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	1.83E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.83E-08	5.14E-08	mg/kg-day	3.00E-04	mg/kg-day	1.71E-04
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	3.85E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.85E-09	1.08E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									4.46E-06					2.58E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	2.82E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.23E-07	7.89E-07	mg/kg-day	3.00E-04	mg/kg-day	2.63E-03
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	7.22E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.44E-06	2.02E-06	mg/kg-day	2.00E-05	mg/kg-day	1.01E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	1.01E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.01E-08	2.83E-08	mg/kg-day	3.00E-04	mg/kg-day	9.42E-05
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	2.12E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.12E-09	5.94E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.88E-06					1.04E-01
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	1.20E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.36E-03	ug/m^3	5.00E+00	ug/m^3	6.72E-04
				ARSENIC	1.21E+01	mg/kg	9.15E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.93E-09	2.56E-06	ug/m^3	1.50E-02	ug/m^3	1.71E-04
				COBALT	1.29E+01	mg/kg	9.74E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	8.77E-09	2.73E-06	ug/m^3	6.00E-03	ug/m^3	4.55E-04
				IRON	2.75E+04	mg/kg	2.08E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.81E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	4.94E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.38E-04	ug/m^3	5.00E-02	ug/m^3	2.77E-03
				THALLIUM	1.16E-01	mg/kg	8.77E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	2.95E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.25E-06	ug/m^3	1.00E-01	ug/m^3	8.25E-05
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	5.02E-07	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	2.86E-10	1.41E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	7.56E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	4.54E-12	2.12E-08	ug/m^3	2.00E-03	ug/m^3	1.06E-05
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.59E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	9.53E-13	4.45E-09	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									1.30E-08					4.16E-03
Subsurface Soil Area 2 Total												**6.35E-06**					**3.66E-01**
Total Receptor Risk/Hazard												(2)					(2)

TABLE 7.3.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. Not applicable to adult receptors.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.4.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE INDOOR INDUSTRIAL WORKER (GROUNDWATER TO INDOOR AIR)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Indoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Indoor Air	Fire Training Area	Inhalation														
				SVOCs													
				HEXACHLOROCYCLOPENTADIENE	9.0E-04	ug/m^3	7.31E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.05E-04	ug/m^3	2.00E-01	ug/m^3	1.02E-03
				VOCs													
				TRICHLOROETHENE	2.4E-01	ug/m^3	1.98E-02	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	N/A	8.10E-08	5.53E-02	ug/m^3	2.00E+00	ug/m^3	2.77E-02
				VINYL CHLORIDE	4.1E-02	ug/m^3	3.33E-03	ug/m^3	4.40E-06	(ug/m^3)$^{-1}$	N/A	1.47E-08	9.33E-03	ug/m^3	1.00E+02	ug/m^3	9.33E-05
			Exp. Route Total									9.57E-08					2.88E-02
Groundwater Total												9.57E-08					2.88E-02
Total Receptor Risk/Hazard												**9.57E-08**					**2.88E-02**

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to adult receptors.

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	2.18E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.62E-03	mg/kg-day	1.00E+00	mg/kg-day	7.62E-03
				ARSENIC	8.11E+00	mg/kg	7.14E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.07E-06	2.50E-06	mg/kg-day	3.00E-04	mg/kg-day	8.33E-03
				COBALT	1.50E+01	mg/kg	2.20E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.70E-06	mg/kg-day	3.00E-04	mg/kg-day	2.57E-02
				IRON	2.21E+04	mg/kg	3.24E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.13E-02	mg/kg-day	7.00E-01	mg/kg-day	1.62E-02
				MANGANESE	5.23E+03	mg/kg	7.67E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.69E-03	mg/kg-day	2.40E-02	mg/kg-day	1.12E-01
				THALLIUM	8.61E-02	mg/kg	1.26E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.42E-08	mg/kg-day	1.00E-05	mg/kg-day	4.42E-03
				VANADIUM	3.47E+01	mg/kg	5.10E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.78E-05	mg/kg-day	5.04E-03	mg/kg-day	3.54E-03
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.13E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.25E-07	3.94E-07	mg/kg-day	2.00E-05	mg/kg-day	1.97E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	5.43E-09	mg/kg-day	1.00E+00	kg-day/mg	1	5.43E-09	1.90E-08	mg/kg-day	3.00E-04	mg/kg-day	6.34E-05
				Exp. Route Total								1.30E-06					1.97E-01
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	1.51E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.26E-07	5.28E-07	mg/kg-day	3.00E-04	mg/kg-day	1.76E-03
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	6.65E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.33E-07	2.33E-07	mg/kg-day	2.00E-05	mg/kg-day	1.16E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	2.98E-09	mg/kg-day	1.00E+00	kg-day/mg	1	2.98E-09	1.04E-08	mg/kg-day	3.00E-04	mg/kg-day	3.48E-05
				Exp. Route Total								3.62E-07					1.34E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	2.69E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.43E-03	ug/m^3	5.00E+00	ug/m^3	1.89E-03
				ARSENIC	8.11E+00	mg/kg	1.47E-06	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	6.33E-09	5.15E-06	ug/m^3	1.50E-02	ug/m^3	3.43E-04
				COBALT	1.50E+01	mg/kg	2.72E-06	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.45E-08	9.52E-06	ug/m^3	6.00E-03	ug/m^3	1.59E-03
				IRON	2.21E+04	mg/kg	4.00E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.40E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	9.49E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.32E-03	ug/m^3	5.00E-02	ug/m^3	6.64E-02
				THALLIUM	8.61E-02	mg/kg	1.56E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.47E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	6.30E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.21E-05	ug/m^3	1.00E-01	ug/m^3	2.21E-04
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.39E-07	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	7.93E-11	4.87E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	6.71E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	4.03E-12	2.35E-08	ug/m^3	2.00E-03	ug/m^3	1.18E-05
				Exp. Route Total								3.09E-08					7.05E-02
Surface Soil Exposure Area 1 Total												**1.69E-06**					**2.81E-01**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	2.13E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.47E-03	mg/kg-day	1.00E+00	mg/kg-day	7.47E-03
				ARSENIC	8.50E+00	mg/kg	7.49E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.12E-06	2.62E-06	mg/kg-day	3.00E-04	mg/kg-day	8.73E-03
				COBALT	1.17E+01	mg/kg	1.71E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.99E-06	mg/kg-day	3.00E-04	mg/kg-day	2.00E-02
				IRON	2.43E+04	mg/kg	3.56E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.25E-02	mg/kg-day	7.00E-01	mg/kg-day	1.78E-02
				MANGANESE	5.29E+02	mg/kg	7.77E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.72E-04	mg/kg-day	2.40E-02	mg/kg-day	1.13E-02
				THALLIUM	8.88E-02	mg/kg	1.30E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.56E-08	mg/kg-day	1.00E-05	mg/kg-day	4.56E-03
				VANADIUM	3.66E+01	mg/kg	5.37E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.88E-05	mg/kg-day	5.04E-03	mg/kg-day	3.73E-03
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.73E-08	mg/kg-day	1.60E+01	kg-day/mg	N/A	2.77E-07	6.06E-08	mg/kg-day	5.00E-05	mg/kg-day	1.21E-03
				ENDRIN KETONE	7.74E-01	mg/kg	1.14E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.98E-07	mg/kg-day	3.00E-04	mg/kg-day	1.33E-03
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	1.28E-08	mg/kg-day	9.10E+00	kg-day/mg	N/A	1.16E-07	4.47E-08	mg/kg-day	1.30E-05	mg/kg-day	3.44E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	7.61E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.52E-05	2.66E-05	mg/kg-day	2.00E-05	mg/kg-day	1.33E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	2.65E-07	mg/kg-day	1.00E-01	kg-day/mg	1	2.65E-08	9.29E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.30E-07	mg/kg-day	1.00E+00	kg-day/mg	1	1.30E-07	4.55E-07	mg/kg-day	3.00E-04	mg/kg-day	1.52E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	2.47E-07	mg/kg-day	1.00E-01	kg-day/mg	1	2.47E-08	8.65E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	3.38E-07	mg/kg-day	1.00E-02	kg-day/mg	1	3.38E-09	1.18E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	2.96E-08	mg/kg-day	1.00E+00	kg-day/mg	1	2.96E-08	1.04E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.41E-07	mg/kg-day	1.00E-01	kg-day/mg	1	1.41E-08	4.95E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.70E-05					1.41E+00
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	1.58E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.37E-07	5.53E-07	mg/kg-day	3.00E-04	mg/kg-day	1.84E-03
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	7.31E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	1.17E-07	2.56E-08	mg/kg-day	5.00E-05	mg/kg-day	5.12E-04
				ENDRIN KETONE	7.74E-01	mg/kg	4.80E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.68E-07	mg/kg-day	3.00E-04	mg/kg-day	5.60E-04
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	5.39E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	4.91E-08	1.89E-08	mg/kg-day	1.30E-05	mg/kg-day	1.45E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.50E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	9.00E-06	1.58E-05	mg/kg-day	2.00E-05	mg/kg-day	7.88E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.46E-07	mg/kg-day	1.00E-01	kg-day/mg	1	1.46E-08	5.10E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	7.14E-08	mg/kg-day	1.00E+00	kg-day/mg	1	7.14E-08	2.50E-07	mg/kg-day	3.00E-04	mg/kg-day	8.33E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.36E-07	mg/kg-day	1.00E-01	kg-day/mg	1	1.36E-08	4.75E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	1.85E-07	mg/kg-day	1.00E-02	kg-day/mg	1	1.85E-09	6.49E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.63E-08	mg/kg-day	1.00E+00	kg-day/mg	1	1.63E-08	5.70E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	7.77E-08	mg/kg-day	1.00E-01	kg-day/mg	1	7.77E-09	2.72E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									9.53E-06					7.93E-01

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	2.64E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.24E-03	ug/m^3	5.00E+00	ug/m^3	1.85E-03
				ARSENIC	8.50E+00	mg/kg	1.54E-06	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	6.63E-09	5.40E-06	ug/m^3	1.50E-02	ug/m^3	3.60E-04
				COBALT	1.17E+01	mg/kg	2.12E-06	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.91E-08	7.41E-06	ug/m^3	6.00E-03	ug/m^3	1.24E-03
				IRON	2.43E+04	mg/kg	4.41E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.54E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	9.60E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.36E-04	ug/m^3	5.00E-02	ug/m^3	6.72E-03
				THALLIUM	8.88E-02	mg/kg	1.61E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.64E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	6.65E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.33E-05	ug/m^3	1.00E-01	ug/m^3	2.33E-04
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	2.14E-08	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	9.85E-11	7.50E-08	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	1.40E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.92E-07	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	1.58E-08	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	4.11E-11	5.53E-08	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	9.41E-06	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	5.37E-09	3.29E-05	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	3.28E-07	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	1.97E-11	1.15E-06	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.61E-07	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	9.65E-11	5.63E-07	ug/m^3	2.00E-03	ug/m^3	2.81E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	3.06E-07	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	1.83E-11	1.07E-06	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	4.17E-07	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	1	2.50E-12	1.46E-06	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	3.67E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	2.20E-11	1.28E-07	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.75E-07	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	1.05E-11	6.12E-07	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									3.14E-08					1.07E-02
Surface Soil Exposure Area 2 Total												**2.65E-05**					**2.22E+00**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	2.36E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.27E-03	mg/kg-day	1.00E+00	mg/kg-day	8.27E-03
				ARSENIC	9.77E+00	mg/kg	8.60E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.29E-06	3.01E-06	mg/kg-day	3.00E-04	mg/kg-day	1.00E-02
				COBALT	1.25E+01	mg/kg	1.83E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.40E-06	mg/kg-day	3.00E-04	mg/kg-day	2.13E-02
				IRON	2.74E+04	mg/kg	4.03E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.41E-02	mg/kg-day	7.00E-01	mg/kg-day	2.01E-02
				MANGANESE	8.02E+02	mg/kg	1.18E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.12E-04	mg/kg-day	2.40E-02	mg/kg-day	1.72E-02
				THALLIUM	1.09E-01	mg/kg	1.60E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.60E-08	mg/kg-day	1.00E-05	mg/kg-day	5.60E-03
				VANADIUM	3.88E+01	mg/kg	5.69E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.99E-05	mg/kg-day	5.04E-03	mg/kg-day	3.95E-03
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.22E-08	mg/kg-day	1.40E+00	kg-day/mg	N/A	1.71E-08	4.26E-08	mg/kg-day	3.00E-03	mg/kg-day	1.42E-05
			Exp. Route Total									1.31E-06					8.65E-02
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	1.82E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.72E-07	6.36E-07	mg/kg-day	3.00E-04	mg/kg-day	2.12E-03
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									2.72E-07					2.12E-03
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	2.92E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.02E-02	ug/m^3	5.00E+00	ug/m^3	2.04E-03
				ARSENIC	9.77E+00	mg/kg	1.77E-06	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	7.62E-09	6.21E-06	ug/m^3	1.50E-02	ug/m^3	4.14E-04
				COBALT	1.25E+01	mg/kg	2.26E-06	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.04E-08	7.91E-06	ug/m^3	6.00E-03	ug/m^3	1.32E-03
				IRON	2.74E+04	mg/kg	4.98E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.74E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	1.46E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.10E-04	ug/m^3	5.00E-02	ug/m^3	1.02E-02
				THALLIUM	1.09E-01	mg/kg	1.98E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.92E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	7.04E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-05	ug/m^3	1.00E-01	ug/m^3	2.46E-04
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.51E-08	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	1.33E-13	5.27E-08	ug/m^3	1.00E+02	ug/m^3	5.27E-10
			Exp. Route Total									2.80E-08					1.42E-02
Subsurface Soil Exposure Area 1 Total												**1.61E-06**					**1.03E-01**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	2.33E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.15E-03	mg/kg-day	1.00E+00	mg/kg-day	8.15E-03
				ARSENIC	1.21E+01	mg/kg	1.07E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.60E-06	3.73E-06	mg/kg-day	3.00E-04	mg/kg-day	1.24E-02
				COBALT	1.29E+01	mg/kg	1.89E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.62E-06	mg/kg-day	3.00E-04	mg/kg-day	2.21E-02
				IRON	2.75E+04	mg/kg	4.03E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.41E-02	mg/kg-day	7.00E-01	mg/kg-day	2.01E-02
				MANGANESE	6.54E+02	mg/kg	9.59E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.36E-04	mg/kg-day	2.40E-02	mg/kg-day	1.40E-02
				THALLIUM	1.16E-01	mg/kg	1.70E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.96E-08	mg/kg-day	1.00E-05	mg/kg-day	5.96E-03
				VANADIUM	3.90E+01	mg/kg	5.72E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.00E-05	mg/kg-day	5.04E-03	mg/kg-day	3.97E-03
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	9.75E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.95E-06	3.41E-06	mg/kg-day	2.00E-05	mg/kg-day	1.71E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	1.47E-08	mg/kg-day	1.00E+00	kg-day/mg	1	1.47E-08	5.14E-08	mg/kg-day	3.00E-04	mg/kg-day	1.71E-04
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	3.08E-09	mg/kg-day	1.00E+00	kg-day/mg	1	3.08E-09	1.08E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.57E-06					2.58E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	2.25E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.37E-07	7.87E-07	mg/kg-day	3.00E-04	mg/kg-day	2.62E-03
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	5.76E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.15E-06	2.02E-06	mg/kg-day	2.00E-05	mg/kg-day	1.01E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	8.06E-09	mg/kg-day	1.00E+00	kg-day/mg	1	8.06E-09	2.82E-08	mg/kg-day	3.00E-04	mg/kg-day	9.40E-05
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.69E-09	mg/kg-day	1.00E+00	kg-day/mg	1	1.69E-09	5.92E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.50E-06					1.04E-01
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	2.88E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.01E-02	ug/m^3	5.00E+00	ug/m^3	2.02E-03
				ARSENIC	1.21E+01	mg/kg	2.20E-06	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	9.44E-09	7.69E-06	ug/m^3	1.50E-02	ug/m^3	5.12E-04
				COBALT	1.29E+01	mg/kg	2.34E-06	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.10E-08	8.18E-06	ug/m^3	6.00E-03	ug/m^3	1.36E-03
				IRON	2.75E+04	mg/kg	4.98E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.74E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	1.19E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.15E-04	ug/m^3	5.00E-02	ug/m^3	8.30E-03
				THALLIUM	1.16E-01	mg/kg	2.11E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.37E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	7.07E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.47E-05	ug/m^3	1.00E-01	ug/m^3	2.47E-04
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.21E-06	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	6.87E-10	4.22E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	1.81E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	1.09E-11	6.35E-08	ug/m^3	2.00E-03	ug/m^3	3.18E-05
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	3.81E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	2.29E-12	1.33E-08	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									3.12E-08					1.25E-02
Subsurface Soil Exposure Area 2 Total												**5.10E-06**					**3.74E-01**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Groundwater	Fire Training Area	Ingestion														
				Metals													
				ALUMINUM	4.26E+02	ug/L	3.65E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.28E-02	mg/kg-day	1.00E+00	mg/kg-day	1.28E-02
				ARSENIC	5.77E+00	ug/L	4.94E-05	mg/kg-day	1.50E+00	kg-day/mg	N/A	7.41E-05	1.73E-04	mg/kg-day	3.00E-04	mg/kg-day	5.76E-01
				CADMIUM	4.87E-01	ug/L	4.17E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.46E-05	mg/kg-day	5.00E-04	mg/kg-day	2.92E-02
				COBALT	3.00E+00	ug/L	2.57E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.99E-05	mg/kg-day	3.00E-04	mg/kg-day	3.00E-01
				IRON	1.79E+03	ug/L	1.53E-02	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.36E-02	mg/kg-day	7.00E-01	mg/kg-day	7.66E-02
				MANGANESE	1.54E+03	ug/L	1.32E-02	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.61E-02	mg/kg-day	2.40E-02	mg/kg-day	1.92E+00
				THALLIUM	1.40E-01	ug/L	1.20E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.20E-06	mg/kg-day	1.00E-05	mg/kg-day	4.20E-01
				PFAS		ug/L											
				PFOS	1.24E-01	ug/L	1.06E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.72E-06	mg/kg-day	2.00E-05	mg/kg-day	1.86E-01
				PFOA	2.47E-01	ug/L	2.11E-06	mg/kg-day	7.00E-02	kg-day/mg	N/A	1.48E-07	7.40E-06	mg/kg-day	2.00E-05	mg/kg-day	3.70E-01
				SVOCs													
				1,1-BIPHENYL	2.10E-01	ug/L	1.80E-06	mg/kg-day	8.00E-03	kg-day/mg	N/A	1.44E-08	6.29E-06	mg/kg-day	5.00E-01	mg/kg-day	1.26E-05
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	9.42E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.30E-06	mg/kg-day	6.00E-03	mg/kg-day	5.49E-04
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	7.97E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.79E-04	mg/kg-day	2.00E-03	mg/kg-day	1.39E-01
				TRICHLOROETHENE	1.00E+01	ug/L	8.56E-05	mg/kg-day	4.60E-02	kg-day/mg	1	3.94E-06	3.00E-04	mg/kg-day	5.00E-04	mg/kg-day	5.99E-01
				VINYL CHLORIDE	3.47E-01	ug/L	2.97E-06	mg/kg-day	1.40E+00	kg-day/mg	N/A	4.16E-06	1.04E-05	mg/kg-day	3.00E-03	mg/kg-day	3.47E-03
			Exp. Route Total									8.23E-05					4.63E+00
			Dermal														
				Metals													
				ALUMINUM	4.26E+02	ug/L	2.04E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.13E-05	mg/kg-day	1.00E+00	mg/kg-day	7.13E-05
				ARSENIC	5.77E+00	ug/L	2.76E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.13E-07	9.65E-07	mg/kg-day	3.00E-04	mg/kg-day	3.22E-03
				CADMIUM	4.87E-01	ug/L	2.33E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.14E-08	mg/kg-day	2.50E-05	mg/kg-day	3.26E-03
				COBALT	3.00E+00	ug/L	5.73E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.01E-07	mg/kg-day	3.00E-04	mg/kg-day	6.69E-04
				IRON	1.79E+03	ug/L	8.55E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.99E-04	mg/kg-day	7.00E-01	mg/kg-day	4.27E-04
				MANGANESE	1.54E+03	ug/L	7.35E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.57E-04	mg/kg-day	9.60E-04	mg/kg-day	2.68E-01
				THALLIUM	1.40E-01	ug/L	6.69E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.34E-08	mg/kg-day	1.00E-05	mg/kg-day	2.34E-03
				PFAS													
				PFOS	1.24E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				PFOA	2.47E-01	ug/L	N/A	mg/kg-day	7.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,1-BIPHENYL	2.10E-01	ug/L	1.44E-06	mg/kg-day	8.00E-03	kg-day/mg	N/A	1.15E-08	5.03E-06	mg/kg-day	5.00E-01	mg/kg-day	1.01E-05
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	1.69E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.91E-06	mg/kg-day	6.00E-03	mg/kg-day	9.85E-04
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	6.86E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.40E-05	mg/kg-day	2.00E-03	mg/kg-day	1.20E-02
				TRICHLOROETHENE	1.00E+01	ug/L	1.39E-05	mg/kg-day	4.60E-02	kg-day/mg	1	6.40E-07	4.87E-05	mg/kg-day	5.00E-04	mg/kg-day	9.73E-02
				VINYL CHLORIDE	3.47E-01	ug/L	1.55E-07	mg/kg-day	1.40E+00	kg-day/mg	N/A	2.17E-07	5.41E-07	mg/kg-day	3.00E-03	mg/kg-day	1.80E-04
			Exp. Route Total									1.28E-06					3.89E-01

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Shower Air	Fire Training Area	Inhalation														
				SVOCs													
				1,1-BIPHENYL	1.6E+00	ug/m^3	1.29E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.53E-02	ug/m^3	4.00E-01	ug/m^3	1.13E-01
				HEXACHLOROCYCLOPENTADIENE	1.1E+00	ug/m^3	8.76E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.07E-02	ug/m^3	2.00E-01	ug/m^3	1.53E-01
				VOCs													
				TRICHLOROETHENE	1.3E+02	ug/m^3	1.05E+00	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	1	4.32E-06	3.69E+00	ug/m^3	2.00E+00	ug/m^3	1.84E+00
				VINYL CHLORIDE	6.0E+00	ug/m^3	4.84E-02	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	4.26E-07	1.69E-01	ug/m^3	1.00E+02	ug/m^3	1.69E-03
			Exp. Route Total									4.75E-06					2.11E+00
Groundwater	Indoor Air	Fire Training Area	Inhalation														
				SVOCs													
				HEXACHLOROCYCLOPENTADIENE	3.6E-03	ug/m^3	9.83E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.44E-03	ug/m^3	2.00E-01	ug/m^3	1.72E-02
				VOCs													
				TRICHLOROETHENE	9.7E-01	ug/m^3	2.66E-01	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	1	1.09E-06	9.30E-01	ug/m^3	2.00E+00	ug/m^3	4.65E-01
				VINYL CHLORIDE	1.6E-01	ug/m^3	4.48E-02	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	3.94E-07	1.57E-01	ug/m^3	1.00E+02	ug/m^3	1.57E-03
			Exp. Route Total									1.48E-06					4.84E-01
Groundwater Total												**8.99E-05**					**7.62E+00**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	5.20E+00	ug/L	6.61E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	9.91E-09	2.31E-08	mg/kg-day	3.00E-04	mg/kg-day	7.71E-05
				MANGANESE	8.48E+02	ug/L	1.08E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.78E-06	mg/kg-day	2.40E-02	mg/kg-day	1.57E-04
				THALLIUM	3.20E-01	ug/L	4.07E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.42E-09	mg/kg-day	1.00E-05	mg/kg-day	1.42E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	4.83E-10	mg/kg-day	2.00E+00	kg-day/mg	N/A	9.67E-10	1.69E-09	mg/kg-day	2.00E-05	mg/kg-day	8.46E-05
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	1.40E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.90E-10	mg/kg-day	3.00E-04	mg/kg-day	1.63E-06
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	8.27E-11	mg/kg-day	1.00E-01	kg-day/mg	1	8.27E-12	2.89E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	9.67E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	9.67E-11	3.38E-10	mg/kg-day	3.00E-04	mg/kg-day	1.13E-06
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	6.61E-11	mg/kg-day	1.00E-02	kg-day/mg	1	6.61E-13	2.32E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	5.60E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	6.16E-11	1.96E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	2.04E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	2.04E-11	7.12E-10	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.11E-08					4.64E-04
			Dermal	**Metals**													
				ARSENIC	5.20E+00	ug/L	2.07E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.11E-08	7.26E-08	mg/kg-day	3.00E-04	mg/kg-day	2.42E-04
				MANGANESE	8.48E+02	ug/L	3.38E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.18E-05	mg/kg-day	9.60E-04	mg/kg-day	1.23E-02
				THALLIUM	3.20E-01	ug/L	1.28E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.47E-09	mg/kg-day	1.00E-05	mg/kg-day	4.47E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	2.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	5.77E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.02E-07	mg/kg-day	3.00E-04	mg/kg-day	6.73E-04
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	1	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	2.36E-10	mg/kg-day	1.10E+00	kg-day/mg	N/A	2.60E-10	8.27E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.14E-08					1.37E-02
Wetland Surface Water Total												**4.24E-08**					**1.42E-02**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	8.34E+00	mg/kg	1.27E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.91E-07	4.46E-07	mg/kg-day	3.00E-04	mg/kg-day	1.49E-03
				COBALT	9.36E+00	mg/kg	2.38E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.33E-07	mg/kg-day	3.00E-04	mg/kg-day	2.78E-03
				IRON	1.74E+04	mg/kg	4.42E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.55E-03	mg/kg-day	7.00E-01	mg/kg-day	2.21E-03
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	2.24E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	4.48E-08	7.84E-08	mg/kg-day	2.00E-05	mg/kg-day	3.92E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	4.34E-08	mg/kg-day	1.00E-01	kg-day/mg	1	4.34E-09	1.52E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	2.91E-08	mg/kg-day	1.00E+00	kg-day/mg	1	2.91E-08	1.02E-07	mg/kg-day	3.00E-04	mg/kg-day	3.39E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	2.99E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.99E-09	1.05E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	6.31E-09	mg/kg-day	1.00E+00	kg-day/mg	1	6.31E-09	2.21E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	2.21E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.21E-09	7.75E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.81E-07					1.07E-02
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	2.69E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.03E-08	9.41E-08	mg/kg-day	3.00E-04	mg/kg-day	3.14E-04
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	1.32E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.65E-08	4.63E-08	mg/kg-day	2.00E-05	mg/kg-day	2.32E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	2.38E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.38E-09	8.34E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	1.60E-08	mg/kg-day	1.00E+00	kg-day/mg	1	1.60E-08	5.59E-08	mg/kg-day	3.00E-04	mg/kg-day	1.86E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	1.64E-08	mg/kg-day	1.00E-01	kg-day/mg	1	1.64E-09	5.75E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	3.46E-09	mg/kg-day	1.00E+00	kg-day/mg	1	3.46E-09	1.21E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	1.21E-08	mg/kg-day	1.00E-01	kg-day/mg	1	1.21E-09	4.25E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									9.15E-08					2.82E-03
Wetland Sediment Total												**3.72E-07**					**1.35E-02**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOA = Perfluorooctanoic Acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR.
Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	6.97E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.13E-02	mg/kg-day	1.00E+00	mg/kg-day	8.13E-02
				ARSENIC	8.11E+00	mg/kg	2.28E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.43E-06	2.67E-05	mg/kg-day	3.00E-04	mg/kg-day	8.89E-02
				COBALT	1.50E+01	mg/kg	7.04E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.21E-05	mg/kg-day	3.00E-04	mg/kg-day	2.74E-01
				IRON	2.21E+04	mg/kg	1.04E-02	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.21E-01	mg/kg-day	7.00E-01	mg/kg-day	1.73E-01
				MANGANESE	5.23E+03	mg/kg	2.46E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.87E-02	mg/kg-day	2.40E-02	mg/kg-day	1.19E+00
				THALLIUM	8.61E-02	mg/kg	4.04E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.72E-07	mg/kg-day	1.00E-05	mg/kg-day	4.72E-02
				VANADIUM	3.47E+01	mg/kg	1.63E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.90E-04	mg/kg-day	5.04E-03	mg/kg-day	3.78E-02
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	3.60E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	7.20E-07	4.20E-06	mg/kg-day	2.00E-05	mg/kg-day	2.10E-01
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	1.74E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	9.21E-08	2.03E-07	mg/kg-day	3.00E-04	mg/kg-day	6.76E-04
			Exp. Route Total									4.24E-06					2.11E+00
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	2.71E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.07E-07	3.16E-06	mg/kg-day	3.00E-04	mg/kg-day	1.05E-02
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.20E-07	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.39E-07	1.40E-06	mg/kg-day	2.00E-05	mg/kg-day	6.98E-02
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	5.36E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	2.84E-08	6.25E-08	mg/kg-day	3.00E-04	mg/kg-day	2.08E-04
			Exp. Route Total									6.74E-07					8.06E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	8.08E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.43E-03	ug/m^3	5.00E+00	ug/m^3	1.89E-03
				ARSENIC	8.11E+00	mg/kg	4.41E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.90E-09	5.15E-06	ug/m^3	1.50E-02	ug/m^3	3.43E-04
				COBALT	1.50E+01	mg/kg	8.16E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	7.34E-09	9.52E-06	ug/m^3	6.00E-03	ug/m^3	1.59E-03
				IRON	2.21E+04	mg/kg	1.20E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.40E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	2.85E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.32E-03	ug/m^3	5.00E-02	ug/m^3	6.64E-02
				THALLIUM	8.61E-02	mg/kg	4.69E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.47E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	1.89E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.21E-05	ug/m^3	1.00E-01	ug/m^3	2.21E-04
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	4.18E-08	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	2.38E-11	4.87E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.70E-02	mg/kg	2.01E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	6.41E-12	2.35E-08	ug/m^3	2.00E-03	ug/m^3	1.18E-05
			Exp. Route Total									9.27E-09					7.05E-02
Surface Soil Exposure Area 1 Total												**4.92E-06**					**2.26E+00**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	6.83E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.97E-02	mg/kg-day	1.00E+00	mg/kg-day	7.97E-02
				ARSENIC	8.50E+00	mg/kg	2.40E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.59E-06	2.80E-05	mg/kg-day	3.00E-04	mg/kg-day	9.32E-02
				COBALT	1.17E+01	mg/kg	5.48E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.39E-05	mg/kg-day	3.00E-04	mg/kg-day	2.13E-01
				IRON	2.43E+04	mg/kg	1.14E-02	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.33E-01	mg/kg-day	7.00E-01	mg/kg-day	1.90E-01
				MANGANESE	5.29E+02	mg/kg	2.49E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.90E-03	mg/kg-day	2.40E-02	mg/kg-day	1.21E-01
				THALLIUM	8.88E-02	mg/kg	4.17E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.87E-07	mg/kg-day	1.00E-05	mg/kg-day	4.87E-02
				VANADIUM	3.66E+01	mg/kg	1.72E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.01E-04	mg/kg-day	5.04E-03	mg/kg-day	3.98E-02
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	5.54E-08	mg/kg-day	1.60E+01	kg-day/mg	N/A	8.87E-07	6.47E-07	mg/kg-day	5.00E-05	mg/kg-day	1.29E-02
				ENDRIN KETONE	7.74E-01	mg/kg	3.64E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.24E-06	mg/kg-day	3.00E-04	mg/kg-day	1.41E-02
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	4.09E-08	mg/kg-day	9.10E+00	kg-day/mg	N/A	3.72E-07	4.77E-07	mg/kg-day	1.30E-05	mg/kg-day	3.67E-02
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	2.44E-05	mg/kg-day	2.00E+00	kg-day/mg	N/A	4.87E-05	2.84E-04	mg/kg-day	2.00E-05	mg/kg-day	1.42E+01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	8.49E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	4.50E-07	9.91E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	4.16E-07	mg/kg-day	1.00E+00	kg-day/mg	5.3	2.21E-06	4.85E-06	mg/kg-day	3.00E-04	mg/kg-day	1.62E-02
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	7.91E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	4.19E-07	9.23E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	1.08E-06	mg/kg-day	1.00E-02	kg-day/mg	5.3	5.73E-08	1.26E-05	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	9.49E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	5.03E-07	1.11E-06	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	4.53E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.40E-07	5.28E-06	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									5.75E-05					1.51E+01
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	2.84E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.26E-07	3.32E-06	mg/kg-day	3.00E-04	mg/kg-day	1.11E-02
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.32E-08	mg/kg-day	1.60E+01	kg-day/mg	N/A	2.10E-07	1.53E-07	mg/kg-day	5.00E-05	mg/kg-day	3.07E-03
				ENDRIN KETONE	7.74E-01	mg/kg	8.63E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.01E-06	mg/kg-day	3.00E-04	mg/kg-day	3.35E-03
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	9.70E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	8.82E-08	1.13E-07	mg/kg-day	1.30E-05	mg/kg-day	8.70E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	8.09E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.62E-05	9.44E-05	mg/kg-day	2.00E-05	mg/kg-day	4.72E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	2.62E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.39E-07	3.06E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.28E-07	mg/kg-day	1.00E+00	kg-day/mg	5.3	6.80E-07	1.50E-06	mg/kg-day	3.00E-04	mg/kg-day	4.99E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	2.44E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.29E-07	2.85E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	3.33E-07	mg/kg-day	1.00E-02	kg-day/mg	5.3	1.77E-08	3.89E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	2.93E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.55E-07	3.41E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.40E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.40E-08	1.63E-06	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.81E-05					4.75E+00

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	7.92E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.24E-03	ug/m^3	5.00E+00	ug/m^3	1.85E-03
				ARSENIC	8.50E+00	mg/kg	4.63E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.99E-09	5.40E-06	ug/m^3	1.50E-02	ug/m^3	3.60E-04
				COBALT	1.17E+01	mg/kg	6.35E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	5.72E-09	7.41E-06	ug/m^3	6.00E-03	ug/m^3	1.24E-03
				IRON	2.43E+04	mg/kg	1.32E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.54E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	2.88E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.36E-04	ug/m^3	5.00E-02	ug/m^3	6.72E-03
				THALLIUM	8.88E-02	mg/kg	4.83E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.64E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	1.99E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.33E-05	ug/m^3	1.00E-01	ug/m^3	2.33E-04
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	6.42E-09	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	2.96E-11	7.50E-08	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	4.21E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.92E-07	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	8.70E-02	mg/kg	4.74E-09	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	1.23E-11	5.53E-08	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	2.82E-06	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	1.61E-09	3.29E-05	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	9.84E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	3.13E-11	1.15E-06	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	4.82E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	1.53E-10	5.63E-07	ug/m^3	2.00E-03	ug/m^3	2.81E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	9.17E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	2.92E-11	1.07E-06	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	2.30E+00	mg/kg	1.25E-07	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	5.3	3.98E-12	1.46E-06	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.10E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	3.50E-11	1.28E-07	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	5.25E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	1.67E-11	6.12E-07	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									9.63E-09					1.07E-02
Surface Soil Exposure Area 2 Total												**7.56E-05**					**1.98E+01**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	7.56E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.82E-02	mg/kg-day	1.00E+00	mg/kg-day	8.82E-02
				ARSENIC	9.77E+00	mg/kg	2.75E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.13E-06	3.21E-05	mg/kg-day	3.00E-04	mg/kg-day	1.07E-01
				COBALT	1.25E+01	mg/kg	5.85E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.83E-05	mg/kg-day	3.00E-04	mg/kg-day	2.28E-01
				IRON	2.74E+04	mg/kg	1.29E-02	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.50E-01	mg/kg-day	7.00E-01	mg/kg-day	2.15E-01
				MANGANESE	8.02E+02	mg/kg	3.77E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.40E-03	mg/kg-day	2.40E-02	mg/kg-day	1.83E-01
				THALLIUM	1.09E-01	mg/kg	5.12E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.97E-07	mg/kg-day	1.00E-05	mg/kg-day	5.97E-02
				VANADIUM	3.88E+01	mg/kg	1.82E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.12E-04	mg/kg-day	5.04E-03	mg/kg-day	4.22E-02
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	3.90E-08	mg/kg-day	1.40E+00	kg-day/mg	N/A	5.46E-08	4.55E-07	mg/kg-day	3.00E-03	mg/kg-day	1.52E-04
			Exp. Route Total									4.18E-06					9.23E-01
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	3.27E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.90E-07	3.81E-06	mg/kg-day	3.00E-04	mg/kg-day	1.27E-02
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									4.90E-07					1.27E-02
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	8.76E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.02E-02	ug/m^3	5.00E+00	ug/m^3	2.04E-03
				ARSENIC	9.77E+00	mg/kg	5.32E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	2.29E-09	6.21E-06	ug/m^3	1.50E-02	ug/m^3	4.14E-04
				COBALT	1.25E+01	mg/kg	6.78E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	6.11E-09	7.91E-06	ug/m^3	6.00E-03	ug/m^3	1.32E-03
				IRON	2.74E+04	mg/kg	1.49E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.74E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	4.37E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.10E-04	ug/m^3	5.00E-02	ug/m^3	1.02E-02
				THALLIUM	1.09E-01	mg/kg	5.93E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.92E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	2.11E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-05	ug/m^3	1.00E-01	ug/m^3	2.46E-04
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	4.52E-09	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	3.98E-14	5.27E-08	ug/m^3	1.00E+02	ug/m^3	5.27E-10
			Exp. Route Total									8.39E-09					1.42E-02
Subsurface Soil Exposure Area 1 Total												**4.68E-06**					**9.50E-01**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	7.45E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.69E-02	mg/kg-day	1.00E+00	mg/kg-day	8.69E-02
				ARSENIC	1.21E+01	mg/kg	3.41E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.11E-06	3.98E-05	mg/kg-day	3.00E-04	mg/kg-day	1.33E-01
				COBALT	1.29E+01	mg/kg	6.05E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.06E-05	mg/kg-day	3.00E-04	mg/kg-day	2.35E-01
				IRON	2.75E+04	mg/kg	1.29E-02	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.50E-01	mg/kg-day	7.00E-01	mg/kg-day	2.15E-01
				MANGANESE	6.54E+02	mg/kg	3.07E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.58E-03	mg/kg-day	2.40E-02	mg/kg-day	1.49E-01
				THALLIUM	1.16E-01	mg/kg	5.45E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.36E-07	mg/kg-day	1.00E-05	mg/kg-day	6.36E-02
				VANADIUM	3.90E+01	mg/kg	1.83E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.13E-04	mg/kg-day	5.04E-03	mg/kg-day	4.23E-02
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	3.12E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	6.24E-06	3.64E-05	mg/kg-day	2.00E-05	mg/kg-day	1.82E+00
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	4.70E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	2.49E-07	5.48E-07	mg/kg-day	3.00E-04	mg/kg-day	1.83E-03
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	9.86E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	5.23E-08	1.15E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.17E-05					2.75E+00
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	4.05E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.07E-07	4.72E-06	mg/kg-day	3.00E-04	mg/kg-day	1.57E-02
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.04E-06	mg/kg-day	2.00E+00	kg-day/mg	N/A	2.07E-06	1.21E-05	mg/kg-day	2.00E-05	mg/kg-day	6.05E-01
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	1.45E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	7.68E-08	1.69E-07	mg/kg-day	3.00E-04	mg/kg-day	5.63E-04
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	3.04E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.61E-08	3.55E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.77E-06					6.21E-01
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	8.64E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.01E-02	ug/m^3	5.00E+00	ug/m^3	2.02E-03
				ARSENIC	1.21E+01	mg/kg	6.59E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	2.83E-09	7.69E-06	ug/m^3	1.50E-02	ug/m^3	5.12E-04
				COBALT	1.29E+01	mg/kg	7.01E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	6.31E-09	8.18E-06	ug/m^3	6.00E-03	ug/m^3	1.36E-03
				IRON	2.75E+04	mg/kg	1.49E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.74E-02	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	3.56E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.15E-04	ug/m^3	5.00E-02	ug/m^3	8.30E-03
				THALLIUM	1.16E-01	mg/kg	6.32E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.37E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	2.12E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.47E-05	ug/m^3	1.00E-01	ug/m^3	2.47E-04
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	3.62E-07	ug/m^3	5.70E-04	(ug/m^3)$^{-1}$	N/A	2.06E-10	4.22E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	1.00E-01	mg/kg	5.44E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	1.73E-11	6.35E-08	ug/m^3	2.00E-03	ug/m^3	3.18E-05
				DIBENZ[A,H]ANTHRACENE	2.10E-02	mg/kg	1.14E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	3.64E-12	1.33E-08	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									9.37E-09					1.25E-02
Subsurface Soil Exposure Area 2 Total												**1.44E-05**					**3.38E+00**

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Groundwater	Fire Training Area	Ingestion														
				Metals													
				ALUMINUM	4.26E+02	ug/L	1.82E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.12E-02	mg/kg-day	1.00E+00	mg/kg-day	2.12E-02
				ARSENIC	5.77E+00	ug/L	2.47E-05	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.70E-05	2.88E-04	mg/kg-day	3.00E-04	mg/kg-day	9.59E-01
				CADMIUM	4.87E-01	ug/L	2.08E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.43E-05	mg/kg-day	5.00E-04	mg/kg-day	4.86E-02
				COBALT	3.00E+00	ug/L	1.28E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.50E-04	mg/kg-day	3.00E-04	mg/kg-day	4.99E-01
				IRON	1.79E+03	ug/L	7.65E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.92E-02	mg/kg-day	7.00E-01	mg/kg-day	1.27E-01
				MANGANESE	1.54E+03	ug/L	6.58E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.67E-02	mg/kg-day	2.40E-02	mg/kg-day	3.20E+00
				THALLIUM	1.40E-01	ug/L	5.98E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.98E-06	mg/kg-day	1.00E-05	mg/kg-day	6.98E-01
				PFAS													
				PFOS	1.24E-01	ug/L	5.30E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.18E-06	mg/kg-day	2.00E-05	mg/kg-day	3.09E-01
				PFOA	2.47E-01	ug/L	1.06E-06	mg/kg-day	7.00E-02	kg-day/mg	N/A	7.39E-08	1.23E-05	mg/kg-day	2.00E-05	mg/kg-day	6.16E-01
				SVOCs													
				1,1-BIPHENYL	2.10E-01	ug/L	8.98E-07	mg/kg-day	8.00E-03	kg-day/mg	N/A	7.18E-09	1.05E-05	mg/kg-day	5.00E-01	mg/kg-day	2.09E-05
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	4.70E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.48E-06	mg/kg-day	6.00E-03	mg/kg-day	9.14E-04
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	3.98E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.64E-04	mg/kg-day	2.00E-03	mg/kg-day	2.32E-01
				TRICHLOROETHENE	1.00E+01	ug/L	4.27E-05	mg/kg-day	4.60E-02	kg-day/mg	5.3	1.04E-05	4.99E-04	mg/kg-day	5.00E-04	mg/kg-day	9.97E-01
				VINYL CHLORIDE	3.47E-01	ug/L	1.48E-06	mg/kg-day	1.40E+00	kg-day/mg	N/A	2.08E-06	1.73E-05	mg/kg-day	3.00E-03	mg/kg-day	5.77E-03
			Exp. Route Total									4.96E-05					7.71E+00
			Dermal														
				Metals													
				ALUMINUM	4.26E+02	ug/L	8.02E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.36E-05	mg/kg-day	1.00E+00	mg/kg-day	9.36E-05
				ARSENIC	5.77E+00	ug/L	1.09E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.63E-07	1.27E-06	mg/kg-day	3.00E-04	mg/kg-day	4.23E-03
				CADMIUM	4.87E-01	ug/L	9.17E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.07E-07	mg/kg-day	2.50E-05	mg/kg-day	4.28E-03
				COBALT	3.00E+00	ug/L	2.26E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.64E-07	mg/kg-day	3.00E-04	mg/kg-day	8.79E-04
				IRON	1.79E+03	ug/L	3.37E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.93E-04	mg/kg-day	7.00E-01	mg/kg-day	5.62E-04
				MANGANESE	1.54E+03	ug/L	2.90E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.38E-04	mg/kg-day	9.60E-04	mg/kg-day	3.52E-01
				THALLIUM	1.40E-01	ug/L	2.64E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.08E-08	mg/kg-day	1.00E-05	mg/kg-day	3.08E-03
				PFAS													
				PFOS	1.24E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				PFOA	2.47E-01	ug/L	N/A	mg/kg-day	7.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,1-BIPHENYL	2.10E-01	ug/L	6.50E-07	mg/kg-day	8.00E-03	kg-day/mg	N/A	5.20E-09	7.58E-06	mg/kg-day	5.00E-01	mg/kg-day	1.52E-05
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	7.63E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.90E-06	mg/kg-day	6.00E-03	mg/kg-day	1.48E-03
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	3.10E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.62E-05	mg/kg-day	2.00E-03	mg/kg-day	1.81E-02
				TRICHLOROETHENE	1.00E+01	ug/L	6.28E-06	mg/kg-day	4.60E-02	kg-day/mg	5.3	1.53E-06	7.33E-05	mg/kg-day	5.00E-04	mg/kg-day	1.47E-01
				VINYL CHLORIDE	3.47E-01	ug/L	6.72E-08	mg/kg-day	1.40E+00	kg-day/mg	N/A	9.41E-08	7.84E-07	mg/kg-day	3.00E-03	mg/kg-day	2.61E-04
			Exp. Route Total									1.79E-06					5.32E-01

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Shower Air	Fire Training Area	Inhalation														
				SVOCs													
				1,1-BIPHENYL	1.6E+00	ug/m^3	2.95E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.45E-02	ug/m^3	4.00E-01	ug/m^3	8.61E-02
				HEXACHLOROCYCLOPENTADIENE	1.1E+00	ug/m^3	2.00E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.33E-02	ug/m^3	2.00E-01	ug/m^3	1.17E-01
				VOCs													
				TRICHLOROETHENE	1.3E+02	ug/m^3	2.40E-01	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	5.3	5.23E-06	2.81E+00	ug/m^3	2.00E+00	ug/m^3	1.40E+00
				VINYL CHLORIDE	6.0E+00	ug/m^3	1.10E-02	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	9.71E-08	1.29E-01	ug/m^3	1.00E+02	ug/m^3	1.29E-03
			Exp. Route Total									5.32E-06					1.61E+00
Groundwater	Indoor Air	Fire Training Area	Inhalation														
				SVOCs													
				HEXACHLOROCYCLOPENTADIENE	3.6E-03	ug/m^3	2.95E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.44E-03	ug/m^3	2.00E-01	ug/m^3	1.72E-02
				VOCs													
				TRICHLOROETHENE	9.7E-01	ug/m^3	7.97E-02	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	5.3	1.73E-06	9.30E-01	ug/m^3	2.00E+00	ug/m^3	4.65E-01
				VINYL CHLORIDE	1.6E-01	ug/m^3	1.34E-02	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	1.18E-07	1.57E-01	ug/m^3	1.00E+02	ug/m^3	1.57E-03
			Exp. Route Total									1.85E-06					4.84E-01
Groundwater Total												**5.85E-05**					**1.03E+01**

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	5.20E+00	ug/L	1.06E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.59E-08	1.23E-07	mg/kg-day	3.00E-04	mg/kg-day	4.11E-04
				MANGANESE	8.48E+02	ug/L	1.73E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.01E-05	mg/kg-day	2.40E-02	mg/kg-day	8.39E-04
				THALLIUM	3.20E-01	ug/L	6.51E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.60E-09	mg/kg-day	1.00E-05	mg/kg-day	7.60E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	7.73E-10	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.55E-09	9.02E-09	mg/kg-day	2.00E-05	mg/kg-day	4.51E-04
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	2.24E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.61E-09	mg/kg-day	3.00E-04	mg/kg-day	8.71E-06
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	1.32E-10	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.01E-11	1.54E-09	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	1.55E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.55E-10	1.80E-09	mg/kg-day	3.00E-04	mg/kg-day	6.02E-06
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	1.06E-10	mg/kg-day	1.00E-02	kg-day/mg	5.3	5.61E-12	1.23E-09	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	8.95E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	9.85E-11	1.04E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	3.26E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.26E-11	3.80E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.78E-08					2.48E-03
			Dermal	**Metals**													
				ARSENIC	5.20E+00	ug/L	1.30E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.96E-08	1.52E-07	mg/kg-day	3.00E-04	mg/kg-day	5.07E-04
				MANGANESE	8.48E+02	ug/L	2.13E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.49E-05	mg/kg-day	9.60E-04	mg/kg-day	2.59E-02
				THALLIUM	3.20E-01	ug/L	8.04E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.38E-09	mg/kg-day	1.00E-05	mg/kg-day	9.38E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	2.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	3.63E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.24E-07	mg/kg-day	3.00E-04	mg/kg-day	1.41E-03
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	5.3	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	1.49E-10	mg/kg-day	1.10E+00	kg-day/mg	N/A	1.64E-10	1.74E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.97E-08					2.87E-02
Surface Water Total												**3.75E-08**					**3.12E-02**

TABLE 7.5.RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
REASONABLE MAXIMUM EXPOSURE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	8.34E+00	mg/kg	4.08E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.11E-07	4.75E-06	mg/kg-day	3.00E-04	mg/kg-day	1.58E-02
				COBALT	9.36E+00	mg/kg	7.62E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.89E-06	mg/kg-day	3.00E-04	mg/kg-day	2.96E-02
				IRON	1.74E+04	mg/kg	1.42E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.65E-02	mg/kg-day	7.00E-01	mg/kg-day	2.36E-02
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	7.16E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	1.43E-07	8.36E-07	mg/kg-day	2.00E-05	mg/kg-day	4.18E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.39E-07	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.36E-08	1.62E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	9.31E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.93E-07	1.09E-06	mg/kg-day	3.00E-04	mg/kg-day	3.62E-03
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	9.57E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	5.07E-08	1.12E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	2.02E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.07E-07	2.36E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	7.08E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.75E-08	8.26E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.52E-06					1.14E-01
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	4.84E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	7.25E-08	5.64E-07	mg/kg-day	3.00E-04	mg/kg-day	1.88E-03
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	2.38E-08	mg/kg-day	2.00E+00	kg-day/mg	N/A	4.76E-08	2.78E-07	mg/kg-day	2.00E-05	mg/kg-day	1.39E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	4.28E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.27E-08	5.00E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	2.87E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.52E-07	3.35E-07	mg/kg-day	3.00E-04	mg/kg-day	1.12E-03
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	2.95E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.57E-08	3.45E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	6.23E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	3.30E-08	7.27E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	2.18E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.16E-08	2.55E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.55E-07					1.69E-02
Sediment Total												**1.87E-06**					**1.31E-01**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOA = Perfluorooctanoic Acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR. Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	7.49E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.05E-02	mg/kg-day	1.00E+00	mg/kg-day	1.05E-02
				ARSENIC	8.11E+00	mg/kg	2.45E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.68E-08	3.44E-06	mg/kg-day	3.00E-04	mg/kg-day	1.15E-02
				COBALT	1.50E+01	mg/kg	7.56E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.06E-05	mg/kg-day	3.00E-03	mg/kg-day	3.53E-03
				IRON	2.21E+04	mg/kg	1.11E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.56E-02	mg/kg-day	7.00E-01	mg/kg-day	2.23E-02
				MANGANESE	5.23E+03	mg/kg	2.64E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.69E-03	mg/kg-day	2.40E-02	mg/kg-day	1.54E-01
				THALLIUM	8.61E-02	mg/kg	4.34E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.08E-08	mg/kg-day	4.00E-05	mg/kg-day	1.52E-03
				VANADIUM	3.47E+01	mg/kg	1.75E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.45E-05	mg/kg-day	5.04E-03	mg/kg-day	4.87E-03
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	3.87E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.87E-09	5.42E-07	mg/kg-day	6.00E-05	mg/kg-day	9.03E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	1.16E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.16E-10	1.62E-08	mg/kg-day	3.00E-04	mg/kg-day	5.42E-05
			Exp. Route Total									4.08E-08					2.17E-01
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	3.15E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.72E-09	4.41E-07	mg/kg-day	3.00E-04	mg/kg-day	1.47E-03
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.39E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.39E-09	1.95E-07	mg/kg-day	6.00E-05	mg/kg-day	3.24E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	3.87E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.87E-11	5.42E-09	mg/kg-day	3.00E-04	mg/kg-day	1.81E-05
			Exp. Route Total									6.15E-09					4.73E-03
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	1.29E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.80E+00	ug/m^3	5.00E+00	ug/m^3	3.60E-01
				ARSENIC	8.11E+00	mg/kg	7.03E-06	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.02E-08	9.85E-04	ug/m^3	1.50E-02	ug/m^3	6.56E-02
				COBALT	1.50E+01	mg/kg	1.30E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.17E-07	1.82E-03	ug/m^3	2.00E-02	ug/m^3	9.10E-02
				IRON	2.21E+04	mg/kg	1.91E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.68E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	4.54E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.35E-01	ug/m^3	5.00E-02	ug/m^3	1.27E+01
				THALLIUM	8.61E-02	mg/kg	7.47E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.05E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	3.01E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.22E-03	ug/m^3	1.00E-01	ug/m^3	4.22E-02
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	6.65E-07	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	1.90E-10	9.31E-05	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	2.00E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	1.20E-11	2.79E-06	ug/m^3	2.00E-03	ug/m^3	1.40E-03
			Exp. Route Total									1.47E-07					1.33E+01
Surface Soil Area 1 Total												**1.94E-07**					**1.35E+01**

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Ingestion	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	7.34E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.03E-02	mg/kg-day	1.00E+00	mg/kg-day	1.03E-02
				ARSENIC	8.50E+00	mg/kg	2.57E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.86E-08	3.60E-06	mg/kg-day	3.00E-04	mg/kg-day	1.20E-02
				COBALT	1.17E+01	mg/kg	5.89E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.24E-06	mg/kg-day	3.00E-03	mg/kg-day	2.75E-03
				IRON	2.43E+04	mg/kg	1.22E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.71E-02	mg/kg-day	7.00E-01	mg/kg-day	2.45E-02
				MANGANESE	5.29E+02	mg/kg	2.67E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.74E-04	mg/kg-day	2.40E-02	mg/kg-day	1.56E-02
				THALLIUM	8.88E-02	mg/kg	4.48E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.27E-08	mg/kg-day	4.00E-05	mg/kg-day	1.57E-03
				VANADIUM	3.66E+01	mg/kg	1.85E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.59E-05	mg/kg-day	5.04E-03	mg/kg-day	5.13E-03
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	5.95E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	9.53E-09	8.33E-08	mg/kg-day	5.00E-05	mg/kg-day	1.67E-03
				ENDRIN KETONE	7.74E-01	mg/kg	3.91E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.47E-07	mg/kg-day	2.00E-03	mg/kg-day	2.73E-04
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	1.59E-10	mg/kg-day	9.10E+00	kg-day/mg	N/A	1.45E-09	2.22E-08	mg/kg-day	1.30E-05	mg/kg-day	1.71E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	2.62E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.62E-07	3.66E-05	mg/kg-day	6.00E-05	mg/kg-day	6.11E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	9.12E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	9.12E-10	1.28E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	4.47E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	4.47E-09	6.26E-07	mg/kg-day	3.00E-04	mg/kg-day	2.09E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	8.50E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	8.50E-10	1.19E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	4.17E-09	mg/kg-day	1.00E-02	kg-day/mg	N/A	4.17E-11	5.84E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.02E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.02E-09	1.43E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	4.86E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	4.86E-10	6.81E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.19E-07					6.88E-01
			Dermal	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	3.30E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.95E-09	4.62E-07	mg/kg-day	3.00E-04	mg/kg-day	1.54E-03
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.53E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	2.44E-09	2.14E-08	mg/kg-day	5.00E-05	mg/kg-day	4.28E-04
				ENDRIN KETONE	7.74E-01	mg/kg	1.00E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.40E-07	mg/kg-day	2.00E-03	mg/kg-day	7.01E-05
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	4.08E-11	mg/kg-day	9.10E+00	kg-day/mg	N/A	3.71E-10	5.71E-09	mg/kg-day	1.30E-05	mg/kg-day	4.39E-04
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	9.40E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	9.40E-08	1.32E-05	mg/kg-day	6.00E-05	mg/kg-day	2.19E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	3.04E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.04E-10	4.26E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.49E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.49E-09	2.09E-07	mg/kg-day	3.00E-04	mg/kg-day	6.96E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	2.83E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	2.83E-10	3.97E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	1.39E-09	mg/kg-day	1.00E-02	kg-day/mg	N/A	1.39E-11	1.95E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	3.40E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.40E-10	4.76E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.62E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.62E-10	2.27E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.04E-07					2.22E-01

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Soil	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	1.26E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.77E+00	ug/m^3	5.00E+00	ug/m^3	3.53E-01
				ARSENIC	8.50E+00	mg/kg	7.37E-06	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.17E-08	1.03E-03	ug/m^3	1.50E-02	ug/m^3	6.88E-02
				COBALT	1.17E+01	mg/kg	1.01E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	9.11E-08	1.42E-03	ug/m^3	2.00E-02	ug/m^3	7.09E-02
				IRON	2.43E+04	mg/kg	2.11E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.95E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	4.59E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.43E-02	ug/m^3	5.00E-02	ug/m^3	1.29E+00
				THALLIUM	8.88E-02	mg/kg	7.70E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.08E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	3.18E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.45E-03	ug/m^3	1.00E-01	ug/m^3	4.45E-02
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.02E-07	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	4.71E-10	1.43E-05	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	6.71E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.40E-05	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	2.73E-08	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	7.10E-11	3.83E-06	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.50E-05	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	1.29E-08	6.30E-03	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.57E-06	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	9.41E-11	2.20E-04	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	7.69E-07	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	4.61E-10	1.08E-04	ug/m^3	2.00E-03	ug/m^3	5.38E-02
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.46E-06	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	8.76E-11	2.05E-04	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	7.17E-07	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	N/A	4.30E-12	1.00E-04	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.75E-07	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	1.05E-10	2.45E-05	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	8.36E-07	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	5.02E-11	1.17E-04	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									1.37E-07					1.88E+00
Surface Soil Area 2 Total												**5.60E-07**					**2.79E+00**

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	8.12E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.14E-02	mg/kg-day	1.00E+00	mg/kg-day	1.14E-02
				ARSENIC	9.77E+00	mg/kg	2.96E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.44E-08	4.14E-06	mg/kg-day	3.00E-04	mg/kg-day	1.38E-02
				COBALT	1.25E+01	mg/kg	6.29E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.80E-06	mg/kg-day	3.00E-03	mg/kg-day	2.93E-03
				IRON	2.74E+04	mg/kg	1.38E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.94E-02	mg/kg-day	7.00E-01	mg/kg-day	2.77E-02
				MANGANESE	8.02E+02	mg/kg	4.05E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.67E-04	mg/kg-day	2.40E-02	mg/kg-day	2.36E-02
				THALLIUM	1.09E-01	mg/kg	5.50E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.70E-08	mg/kg-day	4.00E-05	mg/kg-day	1.92E-03
				VANADIUM	3.88E+01	mg/kg	1.96E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.74E-05	mg/kg-day	5.04E-03	mg/kg-day	5.43E-03
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	4.19E-10	mg/kg-day	7.20E-01	kg-day/mg	N/A	3.02E-10	5.86E-08	mg/kg-day	3.00E-03	mg/kg-day	1.95E-05
			Exp. Route Total									4.47E-08					8.68E-02
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	3.79E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.69E-09	5.31E-07	mg/kg-day	3.00E-04	mg/kg-day	1.77E-03
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	7.20E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									5.69E-09					1.77E-03
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	1.40E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.95E+00	ug/m^3	5.00E+00	ug/m^3	3.91E-01
				ARSENIC	9.77E+00	mg/kg	8.47E-06	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.64E-08	1.19E-03	ug/m^3	1.50E-02	ug/m^3	7.91E-02
				COBALT	1.25E+01	mg/kg	1.08E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	9.73E-08	1.51E-03	ug/m^3	2.00E-02	ug/m^3	7.57E-02
				IRON	2.74E+04	mg/kg	2.38E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.33E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	6.96E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	9.74E-02	ug/m^3	5.00E-02	ug/m^3	1.95E+00
				THALLIUM	1.09E-01	mg/kg	9.46E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.32E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	3.36E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.71E-03	ug/m^3	1.00E-01	ug/m^3	4.71E-02
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	7.20E-08	ug/m^3	4.40E-06	(ug/m^3)$^{-1}$	N/A	3.17E-13	1.01E-05	ug/m^3	1.00E+02	ug/m^3	1.01E-07
			Exp. Route Total									1.34E-07					2.54E+00
Subsurface Soil Area 1 Total												**1.84E-07**					**2.63E+00**

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Soil	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	8.00E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.12E-02	mg/kg-day	1.00E+00	mg/kg-day	1.12E-02
				ARSENIC	1.21E+01	mg/kg	3.66E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.49E-08	5.13E-06	mg/kg-day	3.00E-04	mg/kg-day	1.71E-02
				COBALT	1.29E+01	mg/kg	6.50E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.10E-06	mg/kg-day	3.00E-03	mg/kg-day	3.03E-03
				IRON	2.75E+04	mg/kg	1.39E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.94E-02	mg/kg-day	7.00E-01	mg/kg-day	2.77E-02
				MANGANESE	6.54E+02	mg/kg	3.30E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.62E-04	mg/kg-day	2.40E-02	mg/kg-day	1.92E-02
				THALLIUM	1.16E-01	mg/kg	5.85E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.19E-08	mg/kg-day	4.00E-05	mg/kg-day	2.05E-03
				VANADIUM	3.90E+01	mg/kg	1.97E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.75E-05	mg/kg-day	5.04E-03	mg/kg-day	5.46E-03
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	3.35E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.35E-08	4.69E-06	mg/kg-day	6.00E-05	mg/kg-day	7.82E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.98E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.98E-10	2.78E-08	mg/kg-day	3.00E-04	mg/kg-day	9.25E-05
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	4.51E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	4.51E-11	6.31E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									8.87E-08					1.64E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	4.70E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	7.05E-09	6.58E-07	mg/kg-day	3.00E-04	mg/kg-day	2.19E-03
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.20E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.20E-08	1.69E-06	mg/kg-day	6.00E-05	mg/kg-day	2.81E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	6.61E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	6.61E-11	9.26E-09	mg/kg-day	3.00E-04	mg/kg-day	3.09E-05
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	1.50E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.50E-11	2.10E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.92E-08					3.03E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	1.38E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.93E+00	ug/m^3	5.00E+00	ug/m^3	3.85E-01
				ARSENIC	1.21E+01	mg/kg	1.05E-05	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	4.51E-08	1.47E-03	ug/m^3	1.50E-02	ug/m^3	9.80E-02
				COBALT	1.29E+01	mg/kg	1.12E-05	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.01E-07	1.56E-03	ug/m^3	2.00E-02	ug/m^3	7.82E-02
				IRON	2.75E+04	mg/kg	2.38E-02	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.33E+00	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	5.67E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.94E-02	ug/m^3	5.00E-02	ug/m^3	1.59E+00
				THALLIUM	1.16E-01	mg/kg	1.01E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.41E-05	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	3.38E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.73E-03	ug/m^3	1.00E-01	ug/m^3	4.73E-02
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	5.76E-06	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	1.65E-09	8.07E-04	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	3.41E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	2.05E-11	4.77E-06	ug/m^3	2.00E-03	ug/m^3	2.39E-03
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	7.75E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	4.65E-12	1.08E-06	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									1.47E-07					2.20E+00
Subsurface Soil Area 2 Total												**2.55E-07**					**2.39E+00**

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Groundwater	Fire Training Area	Ingestion														
				Metals													
				ALUMINUM	4.26E+02	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	5.77E+00	ug/L	N/A	mg/kg-day	1.50E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				CADMIUM	4.87E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	5.00E-04	mg/kg-day	N/A
				COBALT	3.00E+00	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	1.79E+03	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	1.54E+03	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.40E-02	mg/kg-day	N/A
				THALLIUM	8.50E-02	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				PFASs			N/A						N/A				
				PFOS	1.24E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				PFOA	2.47E-01	ug/L	N/A	mg/kg-day	7.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs			N/A						N/A				
				1,1-BIPHENYL	1.50E-01	ug/L	N/A	mg/kg-day	8.00E-03	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-01	mg/kg-day	N/A
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-01	mg/kg-day	N/A
				VOCs			N/A						N/A				
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-02	mg/kg-day	N/A
				TRICHLOROETHENE	8.20E+00	ug/L	N/A	mg/kg-day	4.60E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	5.00E-04	mg/kg-day	N/A
				VINYL CHLORIDE	3.47E-01	ug/L	N/A	mg/kg-day	7.20E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									N/A (2)					N/A (2)
			Dermal														
				Metals													
				ALUMINUM	4.26E+02	ug/L	9.56E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.34E-06	mg/kg-day	1.00E+00	mg/kg-day	1.34E-06
				ARSENIC	5.77E+00	ug/L	1.29E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.94E-10	1.81E-08	mg/kg-day	3.00E-04	mg/kg-day	6.04E-05
				CADMIUM	4.87E-01	ug/L	1.09E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.53E-09	mg/kg-day	2.50E-05	mg/kg-day	6.12E-05
				COBALT	3.00E+00	ug/L	2.69E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.77E-09	mg/kg-day	3.00E-03	mg/kg-day	1.26E-06
				IRON	1.79E+03	ug/L	4.01E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.62E-06	mg/kg-day	7.00E-01	mg/kg-day	8.03E-06
				MANGANESE	1.54E+03	ug/L	3.45E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.83E-06	mg/kg-day	9.60E-04	mg/kg-day	5.03E-03
				THALLIUM	8.50E-02	ug/L	1.91E-12	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.67E-10	mg/kg-day	4.00E-05	mg/kg-day	6.67E-06
				PFASs													
				PFOS	1.24E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				PFOA	2.47E-01	ug/L	N/A	mg/kg-day	7.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,1-BIPHENYL	1.50E-01	ug/L	2.98E-10	mg/kg-day	8.00E-03	kg-day/mg	N/A	2.38E-12	4.17E-08	mg/kg-day	1.00E-01	mg/kg-day	4.17E-07
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	4.72E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.61E-08	mg/kg-day	1.00E-01	mg/kg-day	6.61E-07
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	2.18E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.05E-07	mg/kg-day	2.00E-02	mg/kg-day	1.53E-05
				TRICHLOROETHENE	8.20E+00	ug/L	3.34E-09	mg/kg-day	4.60E-02	kg-day/mg	N/A	1.54E-10	4.68E-07	mg/kg-day	5.00E-04	mg/kg-day	9.36E-04
				VINYL CHLORIDE	3.47E-01	ug/L	5.34E-11	mg/kg-day	7.20E-01	kg-day/mg	N/A	3.85E-11	7.48E-09	mg/kg-day	3.00E-03	mg/kg-day	2.49E-06
			Exp. Route Total									3.89E-10					6.13E-03

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Trench Air	Fire Training Area	Inhalation														
				SVOCs													
				1,1-BIPHENYL	3.0E-03	ug/m^3	6.38E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.93E-06	ug/m^3	4.00E-03	ug/m^3	2.23E-03
				HEXACHLOROCYCLOPENTADIENE	1.6E-03	ug/m^3	3.40E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.76E-06	ug/m^3	1.12E-01	ug/m^3	4.25E-05
				VOCs													
				TRICHLOROETHENE	2.1E-01	ug/m^3	4.36E-06	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	N/A	1.79E-11	6.10E-04	ug/m^3	2.00E+00	ug/m^3	3.05E-04
				VINYL CHLORIDE	8.4E-03	ug/m^3	1.78E-07	ug/m^3	7.20E-01	(ug/m^3)$^{-1}$	N/A	1.28E-07	2.50E-05	ug/m^3	1.00E+02	ug/m^3	2.50E-07
			Exp. Route Total									1.28E-07					2.58E-03
Groundwater Total												**1.29E-07**					**8.71E-03**

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion														
				Metals													
				ARSENIC	5.20E+00	ug/L	N/A	mg/kg-day	1.50E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				MANGANESE	8.48E+02	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.40E-02	mg/kg-day	N/A
				THALLIUM	3.20E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	4.00E-05	mg/kg-day	N/A
				PCBs			N/A						N/A				
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	6.00E-05	mg/kg-day	N/A
				SVOCs			N/A						N/A				
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-05	mg/kg-day	N/A
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	N/A	mg/kg-day	1.10E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									N/A (2)					N/A (2)
			Dermal														
				Metals													
				ARSENIC	5.20E+00	ug/L	1.75E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.62E-10	2.45E-08	mg/kg-day	3.00E-04	mg/kg-day	8.16E-05
				MANGANESE	8.48E+02	ug/L	2.85E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.00E-06	mg/kg-day	9.60E-04	mg/kg-day	4.16E-03
				THALLIUM	3.20E-01	ug/L	1.08E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.51E-09	mg/kg-day	4.00E-05	mg/kg-day	3.77E-05
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	6.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	4.87E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.82E-08	mg/kg-day	3.00E-05	mg/kg-day	2.27E-03
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	1.99E-12	mg/kg-day	1.10E+00	kg-day/mg	N/A	2.19E-12	2.79E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.64E-10					6.55E-03
Surface Water Total												**2.64E-10**					**6.55E-03**

TABLE 7.1.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	8.34E+00	mg/kg	3.03E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.55E-09	4.24E-07	mg/kg-day	3.00E-04	mg/kg-day	1.41E-03
				COBALT	9.36E+00	mg/kg	5.67E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.93E-07	mg/kg-day	3.00E-03	mg/kg-day	2.64E-04
				IRON	1.74E+04	mg/kg	1.05E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.47E-03	mg/kg-day	7.00E-01	mg/kg-day	2.10E-03
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	5.33E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.33E-10	7.46E-08	mg/kg-day	6.00E-05	mg/kg-day	1.24E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.03E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.03E-10	1.45E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	6.92E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	6.92E-10	9.69E-08	mg/kg-day	3.00E-04	mg/kg-day	3.23E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	7.12E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	7.12E-11	9.97E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	1.50E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.50E-10	2.10E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	5.27E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	5.27E-11	7.37E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									6.15E-09					5.35E-03
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	3.24E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.86E-10	4.53E-08	mg/kg-day	3.00E-04	mg/kg-day	1.51E-04
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	1.59E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.59E-10	2.23E-08	mg/kg-day	6.00E-05	mg/kg-day	3.72E-04
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	2.87E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	2.87E-11	4.02E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	1.92E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.92E-10	2.69E-08	mg/kg-day	3.00E-04	mg/kg-day	8.97E-05
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	1.98E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.98E-11	2.77E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	4.17E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	4.17E-11	5.84E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	1.46E-10	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.46E-11	2.05E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									9.42E-10					6.13E-04
Sediment Total												**7.09E-09**					**5.96E-03**
Total Receptor Risk/Hazard												(3)					(3)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
CTE - Central Tendency Estimate.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOA = Perfluorooctanoic Acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
SVOCs - Semivolatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Not applicable to adult receptors.
(2) Assumes incidental ingestion of groundwater is trivial.
(3) Presented on corresponding summary of risk/hazard table.

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Risk	Value	Units	Value	Units	Quotient
Soil	Surface Soil	Fire Training Area Area 1	Ingestion	**Metals**													
				ALUMINUM	1.48E+04	mg/kg	1.14E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.14E-03	mg/kg-day	1.00E+00	mg/kg-day	1.14E-03
				ARSENIC	8.11E+00	mg/kg	3.75E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.62E-08	3.75E-07	mg/kg-day	3.00E-04	mg/kg-day	1.25E-03
				COBALT	1.50E+01	mg/kg	1.16E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.16E-06	mg/kg-day	3.00E-04	mg/kg-day	3.85E-03
				IRON	2.21E+04	mg/kg	1.70E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.70E-03	mg/kg-day	7.00E-01	mg/kg-day	2.43E-03
				MANGANESE	5.23E+03	mg/kg	4.03E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.03E-04	mg/kg-day	2.40E-02	mg/kg-day	1.68E-02
				THALLIUM	8.61E-02	mg/kg	6.63E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.63E-09	mg/kg-day	1.00E-05	mg/kg-day	6.63E-04
				VANADIUM	3.47E+01	mg/kg	2.68E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.68E-06	mg/kg-day	5.04E-03	mg/kg-day	5.31E-04
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	5.91E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.91E-09	5.91E-08	mg/kg-day	2.00E-05	mg/kg-day	2.96E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	1.77E-10	mg/kg-day	1.00E+00	kg-day/mg	1	1.77E-10	1.77E-09	mg/kg-day	3.00E-04	mg/kg-day	5.91E-06
			Exp. Route Total									6.23E-08					2.96E-02
			Dermal	**Metals**													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	2.26E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.39E-09	2.26E-08	mg/kg-day	3.00E-04	mg/kg-day	7.54E-05
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	9.98E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	9.98E-10	9.98E-09	mg/kg-day	2.00E-05	mg/kg-day	4.99E-04
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	2.78E-11	mg/kg-day	1.00E+00	kg-day/mg	1	2.78E-11	2.78E-10	mg/kg-day	3.00E-04	mg/kg-day	9.26E-07
			Exp. Route Total									4.42E-09					5.75E-04
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.48E+04	mg/kg	2.36E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.36E-04	ug/m^3	5.00E+00	ug/m^3	4.71E-05
				ARSENIC	8.11E+00	mg/kg	1.29E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	5.54E-11	1.29E-07	ug/m^3	1.50E-02	ug/m^3	8.58E-06
				COBALT	1.50E+01	mg/kg	2.38E-08	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.14E-10	2.38E-07	ug/m^3	6.00E-03	ug/m^3	3.97E-05
				IRON	2.21E+04	mg/kg	3.50E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.50E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	8.30E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.30E-05	ug/m^3	5.00E-02	ug/m^3	1.66E-03
				THALLIUM	8.61E-02	mg/kg	1.37E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.37E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	5.51E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.51E-07	ug/m^3	1.00E-01	ug/m^3	5.51E-06
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.22E-09	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	3.48E-13	1.22E-08	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	3.65E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	2.19E-14	3.65E-10	ug/m^3	2.00E-03	ug/m^3	1.83E-07
			Exp. Route Total									2.70E-10					1.76E-03
Surface Soil Area 1 Total												**6.70E-08**					**3.20E-02**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area	Ingestion														
		Area 2		**Metals**													
				ALUMINUM	1.45E+04	mg/kg	1.12E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.12E-03	mg/kg-day	1.00E+00	mg/kg-day	1.12E-03
				ARSENIC	8.50E+00	mg/kg	3.93E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.90E-08	3.93E-07	mg/kg-day	3.00E-04	mg/kg-day	1.31E-03
				COBALT	1.17E+01	mg/kg	8.99E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.99E-07	mg/kg-day	3.00E-04	mg/kg-day	3.00E-03
				IRON	2.43E+04	mg/kg	1.87E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.87E-03	mg/kg-day	7.00E-01	mg/kg-day	2.67E-03
				MANGANESE	5.29E+02	mg/kg	4.08E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.08E-05	mg/kg-day	2.40E-02	mg/kg-day	1.70E-03
				THALLIUM	8.88E-02	mg/kg	6.84E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.84E-09	mg/kg-day	1.00E-05	mg/kg-day	6.84E-04
				VANADIUM	3.66E+01	mg/kg	2.82E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.82E-06	mg/kg-day	5.04E-03	mg/kg-day	5.60E-04
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	9.09E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	1.45E-08	9.09E-09	mg/kg-day	5.00E-05	mg/kg-day	1.82E-04
				ENDRIN KETONE	7.74E-01	mg/kg	5.96E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.96E-08	mg/kg-day	3.00E-04	mg/kg-day	1.99E-04
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	2.43E-10	mg/kg-day	9.10E+00	kg-day/mg	N/A	2.21E-09	2.43E-09	mg/kg-day	1.30E-05	mg/kg-day	1.87E-04
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.00E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	4.00E-07	4.00E-06	mg/kg-day	2.00E-05	mg/kg-day	2.00E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.39E-08	mg/kg-day	1.00E-01	kg-day/mg	1	1.39E-09	1.39E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	6.83E-09	mg/kg-day	1.00E+00	kg-day/mg	1	6.83E-09	6.83E-08	mg/kg-day	3.00E-04	mg/kg-day	2.28E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.30E-08	mg/kg-day	1.00E-01	kg-day/mg	1	1.30E-09	1.30E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	6.37E-09	mg/kg-day	1.00E-02	kg-day/mg	1	6.37E-11	6.37E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.56E-09	mg/kg-day	1.00E+00	kg-day/mg	1	1.56E-09	1.56E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	7.43E-09	mg/kg-day	1.00E-01	kg-day/mg	1	7.43E-10	7.43E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									4.87E-07					2.12E-01
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	2.37E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.56E-09	2.37E-08	mg/kg-day	3.00E-04	mg/kg-day	7.90E-05
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.10E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	1.76E-09	1.10E-09	mg/kg-day	5.00E-05	mg/kg-day	2.19E-05
				ENDRIN KETONE	7.74E-01	mg/kg	7.20E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.20E-09	mg/kg-day	3.00E-04	mg/kg-day	2.40E-05
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	2.93E-11	mg/kg-day	9.10E+00	kg-day/mg	N/A	2.66E-10	2.93E-10	mg/kg-day	1.30E-05	mg/kg-day	2.25E-05
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	6.75E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	6.75E-08	6.75E-07	mg/kg-day	2.00E-05	mg/kg-day	3.38E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	2.18E-09	mg/kg-day	1.00E-01	kg-day/mg	1	2.18E-10	2.18E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.07E-09	mg/kg-day	1.00E+00	kg-day/mg	1	1.07E-09	1.07E-08	mg/kg-day	3.00E-04	mg/kg-day	3.57E-05
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	2.04E-09	mg/kg-day	1.00E-01	kg-day/mg	1	2.04E-10	2.04E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	9.99E-10	mg/kg-day	1.00E-02	kg-day/mg	1	9.99E-12	9.99E-09	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	2.44E-10	mg/kg-day	1.00E+00	kg-day/mg	1	2.44E-10	2.44E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.16E-09	mg/kg-day	1.00E-01	kg-day/mg	1	1.16E-10	1.16E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									7.49E-08					3.39E-02

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	2.31E-05	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	2.31E-04	ug/m^3	5.00E+00	ug/m^3	4.62E-05
				ARSENIC	8.50E+00	mg/kg	1.35E-08	ug/m^3	4.30E-03	$(ug/m^3)^{-1}$	N/A	5.81E-11	1.35E-07	ug/m^3	1.50E-02	ug/m^3	9.00E-06
				COBALT	1.17E+01	mg/kg	1.85E-08	ug/m^3	9.00E-03	$(ug/m^3)^{-1}$	N/A	1.67E-10	1.85E-07	ug/m^3	6.00E-03	ug/m^3	3.09E-05
				IRON	2.43E+04	mg/kg	3.85E-05	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	3.85E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	8.40E-07	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	8.40E-06	ug/m^3	5.00E-02	ug/m^3	1.68E-04
				THALLIUM	8.88E-02	mg/kg	1.41E-10	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	1.41E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	5.82E-08	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	5.82E-07	ug/m^3	1.00E-01	ug/m^3	5.82E-06
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.87E-10	ug/m^3	4.60E-03	$(ug/m^3)^{-1}$	N/A	8.62E-13	1.87E-09	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	1.23E-09	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	1.23E-08	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	5.00E-11	ug/m^3	2.60E-03	$(ug/m^3)^{-1}$	N/A	1.30E-13	5.00E-10	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	8.24E-08	ug/m^3	2.86E-04	$(ug/m^3)^{-1}$	N/A	2.36E-11	8.24E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	2.87E-09	ug/m^3	6.00E-05	$(ug/m^3)^{-1}$	1	1.72E-13	2.87E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.41E-09	ug/m^3	6.00E-04	$(ug/m^3)^{-1}$	1	8.44E-13	1.41E-08	ug/m^3	2.00E-03	ug/m^3	7.03E-06
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	2.67E-09	ug/m^3	6.00E-05	$(ug/m^3)^{-1}$	1	1.60E-13	2.67E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	1.31E-09	ug/m^3	6.00E-06	$(ug/m^3)^{-1}$	1	7.88E-15	1.31E-08	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	3.21E-10	ug/m^3	6.00E-04	$(ug/m^3)^{-1}$	1	1.92E-13	3.21E-09	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.53E-09	ug/m^3	6.00E-05	$(ug/m^3)^{-1}$	1	9.18E-14	1.53E-08	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									2.51E-10					2.67E-04
Surface Soil Area 2 Total												**5.62E-07**					**2.46E-01**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Risk	Value	Units	Value	Units	Quotient
Soil	Subsurface Soil	Fire Training Area Area 1	Ingestion														
				Metals													
				ALUMINUM	1.61E+04	mg/kg	1.24E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.24E-03	mg/kg-day	1.00E+00	mg/kg-day	1.24E-03
				ARSENIC	9.77E+00	mg/kg	4.52E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.78E-08	4.52E-07	mg/kg-day	3.00E-04	mg/kg-day	1.51E-03
				COBALT	1.25E+01	mg/kg	9.60E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.60E-07	mg/kg-day	3.00E-04	mg/kg-day	3.20E-03
				IRON	2.74E+04	mg/kg	2.11E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.11E-03	mg/kg-day	7.00E-01	mg/kg-day	3.02E-03
				MANGANESE	8.02E+02	mg/kg	6.18E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.18E-05	mg/kg-day	2.40E-02	mg/kg-day	2.58E-03
				THALLIUM	1.09E-01	mg/kg	8.40E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.40E-09	mg/kg-day	1.00E-05	mg/kg-day	8.40E-04
				VANADIUM	3.88E+01	mg/kg	2.99E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.99E-06	mg/kg-day	5.04E-03	mg/kg-day	5.93E-04
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	6.40E-10	mg/kg-day	1.40E+00	kg-day/mg	N/A	8.95E-10	6.40E-09	mg/kg-day	3.00E-03	mg/kg-day	2.13E-06
			Exp. Route Total									6.86E-08					1.30E-02
			Dermal														
				Metals													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	2.72E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.09E-09	2.72E-08	mg/kg-day	3.00E-04	mg/kg-day	9.08E-05
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									4.09E-09					9.08E-05
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.61E+04	mg/kg	2.56E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.56E-04	ug/m^3	5.00E+00	ug/m^3	5.11E-05
				ARSENIC	9.77E+00	mg/kg	1.55E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	6.67E-11	1.55E-07	ug/m^3	1.50E-02	ug/m^3	1.03E-05
				COBALT	1.25E+01	mg/kg	1.98E-08	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.78E-10	1.98E-07	ug/m^3	6.00E-03	ug/m^3	3.30E-05
				IRON	2.74E+04	mg/kg	4.36E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.36E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	1.27E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.27E-05	ug/m^3	5.00E-02	ug/m^3	2.55E-04
				THALLIUM	1.09E-01	mg/kg	1.73E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.73E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	6.16E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.16E-07	ug/m^3	1.00E-01	ug/m^3	6.16E-06
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.32E-10	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	1.16E-15	1.32E-09	ug/m^3	1.00E+02	ug/m^3	1.32E-11
			Exp. Route Total									2.45E-10					3.55E-04
Subsurface Soil Area 1 Total												**7.30E-08**					**1.34E-02**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Risk	Value	Units	Value	Units	Quotient
Soil	Subsurface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	1.22E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.22E-03	mg/kg-day	1.00E+00	mg/kg-day	1.22E-03
				ARSENIC	1.21E+01	mg/kg	5.59E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	8.39E-08	5.59E-07	mg/kg-day	3.00E-04	mg/kg-day	1.86E-03
				COBALT	1.29E+01	mg/kg	9.92E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.92E-07	mg/kg-day	3.00E-04	mg/kg-day	3.31E-03
				IRON	2.75E+04	mg/kg	2.12E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.12E-03	mg/kg-day	7.00E-01	mg/kg-day	3.02E-03
				MANGANESE	6.54E+02	mg/kg	5.04E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.04E-05	mg/kg-day	2.40E-02	mg/kg-day	2.10E-03
				THALLIUM	1.16E-01	mg/kg	8.94E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.94E-09	mg/kg-day	1.00E-05	mg/kg-day	8.94E-04
				VANADIUM	3.90E+01	mg/kg	3.00E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.00E-06	mg/kg-day	5.04E-03	mg/kg-day	5.95E-04
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	5.12E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.12E-08	5.12E-07	mg/kg-day	2.00E-05	mg/kg-day	2.56E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	3.03E-10	mg/kg-day	1.00E+00	kg-day/mg	1	3.03E-10	3.03E-09	mg/kg-day	3.00E-04	mg/kg-day	1.01E-05
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	6.88E-11	mg/kg-day	1.00E+00	kg-day/mg	1	6.88E-11	6.88E-10	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.35E-07					3.86E-02
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	3.37E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.06E-09	3.37E-08	mg/kg-day	3.00E-04	mg/kg-day	1.12E-04
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	8.65E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	8.65E-09	8.65E-08	mg/kg-day	2.00E-05	mg/kg-day	4.32E-03
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	4.75E-11	mg/kg-day	1.00E+00	kg-day/mg	1	4.75E-11	4.75E-10	mg/kg-day	3.00E-04	mg/kg-day	1.58E-06
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	1.08E-11	mg/kg-day	1.00E+00	kg-day/mg	1	1.08E-11	1.08E-10	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.38E-08					4.44E-03
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	2.52E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.52E-04	ug/m^3	5.00E+00	ug/m^3	5.04E-05
				ARSENIC	1.21E+01	mg/kg	1.92E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	8.26E-11	1.92E-07	ug/m^3	1.50E-02	ug/m^3	1.28E-05
				COBALT	1.29E+01	mg/kg	2.05E-08	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.84E-10	2.05E-07	ug/m^3	6.00E-03	ug/m^3	3.41E-05
				IRON	2.75E+04	mg/kg	4.36E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.36E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	1.04E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.04E-05	ug/m^3	5.00E-02	ug/m^3	2.08E-04
				THALLIUM	1.16E-01	mg/kg	1.84E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.84E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	6.19E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.19E-07	ug/m^3	1.00E-01	ug/m^3	6.19E-06
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.06E-08	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	3.02E-12	1.06E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	6.24E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	3.74E-14	6.24E-10	ug/m^3	2.00E-03	ug/m^3	3.12E-07
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	1.42E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	8.51E-15	1.42E-10	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									2.70E-10					3.11E-04
Subsurface Soil Area 2 Total												**1.50E-07**					**4.34E-02**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Risk	Value	Units	Value	Units	Quotient
Surface Water	Surface Water	Fire Training Area	Ingestion														
				Metals													
				ARSENIC	5.20E+00	ug/L	1.16E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.73E-09	1.16E-08	mg/kg-day	3.00E-04	mg/kg-day	3.86E-05
				MANGANESE	8.48E+02	ug/L	1.89E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.89E-06	mg/kg-day	2.40E-02	mg/kg-day	7.87E-05
				THALLIUM	3.20E-01	ug/L	7.12E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.12E-10	mg/kg-day	1.00E-05	mg/kg-day	7.12E-05
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	8.46E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	8.46E-11	8.46E-10	mg/kg-day	2.00E-05	mg/kg-day	4.23E-05
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	2.45E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.45E-10	mg/kg-day	3.00E-04	mg/kg-day	8.16E-07
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	1.45E-11	mg/kg-day	1.00E-01	kg-day/mg	1	1.45E-12	1.45E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	1.69E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.69E-11	1.69E-10	mg/kg-day	3.00E-04	mg/kg-day	5.64E-07
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	1.16E-11	mg/kg-day	1.00E-02	kg-day/mg	1	1.16E-13	1.16E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	9.79E-12	mg/kg-day	1.10E+00	kg-day/mg	N/A	1.08E-11	9.79E-11	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	3.56E-11	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.56E-12	3.56E-10	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.85E-09					2.32E-04
			Dermal														
				Metals													
				ARSENIC	5.20E+00	ug/L	3.63E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.44E-09	3.63E-08	mg/kg-day	3.00E-04	mg/kg-day	1.21E-04
				MANGANESE	8.48E+02	ug/L	5.92E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.92E-06	mg/kg-day	9.60E-04	mg/kg-day	6.17E-03
				THALLIUM	3.20E-01	ug/L	2.23E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.23E-09	mg/kg-day	1.00E-05	mg/kg-day	2.23E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	1.01E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.01E-07	mg/kg-day	3.00E-04	mg/kg-day	3.37E-04
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	1	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	4.14E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	4.55E-11	4.14E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									5.49E-09					6.85E-03
Surface Water Total												**7.34E-09**					**7.08E-03**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - ADULT (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC Value	EPC Units	Cancer Risk Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	CSF or IUR Value	CSF or IUR Units	ADAF (1)	Cancer Risk	Noncancer Hazard Calculations: Intake/Exposure Concentration Value	Intake/Exposure Concentration Units	RfD or RfC Value	RfD or RfC Units	Hazard Quotient
Sediment	Sediment	Fire Training Area	Ingestion	**Metals**													
				ARSENIC	8.34E+00	mg/kg	1.11E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.67E-08	1.11E-07	mg/kg-day	3.00E-04	mg/kg-day	3.71E-04
				COBALT	9.36E+00	mg/kg	2.08E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.08E-07	mg/kg-day	3.00E-04	mg/kg-day	6.94E-04
				IRON	1.74E+04	mg/kg	3.87E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.87E-04	mg/kg-day	7.00E-01	mg/kg-day	5.53E-04
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	1.96E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.96E-09	1.96E-08	mg/kg-day	2.00E-05	mg/kg-day	9.79E-04
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	3.80E-09	mg/kg-day	1.00E-01	kg-day/mg	1	3.80E-10	3.80E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	2.54E-09	mg/kg-day	1.00E+00	kg-day/mg	1	2.54E-09	2.54E-08	mg/kg-day	3.00E-04	mg/kg-day	8.48E-05
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	2.62E-09	mg/kg-day	1.00E-01	kg-day/mg	1	2.62E-10	2.62E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	5.52E-10	mg/kg-day	1.00E+00	kg-day/mg	1	5.52E-10	5.52E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	1.94E-09	mg/kg-day	1.00E-01	kg-day/mg	1	1.94E-10	1.94E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.26E-08					2.68E-03
			Dermal	**Metals**													
				ARSENIC	8.34E+00	mg/kg	6.72E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.01E-09	6.72E-09	mg/kg-day	3.00E-04	mg/kg-day	2.24E-05
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	3.31E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.31E-10	3.31E-09	mg/kg-day	2.00E-05	mg/kg-day	1.65E-04
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	5.96E-10	mg/kg-day	1.00E-01	kg-day/mg	1	5.96E-11	5.96E-09	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	3.99E-10	mg/kg-day	1.00E+00	kg-day/mg	1	3.99E-10	3.99E-09	mg/kg-day	3.00E-04	mg/kg-day	1.33E-05
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	4.11E-10	mg/kg-day	1.00E-01	kg-day/mg	1	4.11E-11	4.11E-09	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	8.66E-11	mg/kg-day	1.00E+00	kg-day/mg	1	8.66E-11	8.66E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	3.04E-10	mg/kg-day	1.00E-01	kg-day/mg	1	3.04E-11	3.04E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.96E-09					2.01E-04
Sediment Total												**2.46E-08**					**2.88E-03**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR.
Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENDY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	3.49E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.22E-02	mg/kg-day	1.00E+00	mg/kg-day	1.22E-02
				ARSENIC	8.11E+00	mg/kg	1.14E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.71E-07	4.00E-06	mg/kg-day	3.00E-04	mg/kg-day	1.33E-02
				COBALT	1.50E+01	mg/kg	3.52E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.23E-05	mg/kg-day	3.00E-04	mg/kg-day	4.11E-02
				IRON	2.21E+04	mg/kg	5.18E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.81E-02	mg/kg-day	7.00E-01	mg/kg-day	2.59E-02
				MANGANESE	5.23E+03	mg/kg	1.23E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.30E-03	mg/kg-day	2.40E-02	mg/kg-day	1.79E-01
				THALLIUM	8.61E-02	mg/kg	2.02E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.08E-08	mg/kg-day	1.00E-05	mg/kg-day	7.08E-03
				VANADIUM	3.47E+01	mg/kg	8.16E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.85E-05	mg/kg-day	5.04E-03	mg/kg-day	5.66E-03
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.80E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.80E-08	6.30E-07	mg/kg-day	2.00E-05	mg/kg-day	3.15E-02
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	5.40E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	2.86E-09	1.89E-08	mg/kg-day	3.00E-04	mg/kg-day	6.30E-05
			Exp. Route Total									1.92E-07					3.16E-01
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	5.42E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	8.13E-09	1.90E-07	mg/kg-day	3.00E-04	mg/kg-day	6.33E-04
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	2.39E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.39E-09	8.38E-08	mg/kg-day	2.00E-05	mg/kg-day	4.19E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	6.66E-11	mg/kg-day	1.00E+00	kg-day/mg	5.3	3.53E-10	2.33E-09	mg/kg-day	3.00E-04	mg/kg-day	7.78E-06
			Exp. Route Total									1.09E-08					4.83E-03
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	6.73E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.36E-04	ug/m^3	5.00E+00	ug/m^3	4.71E-05
				ARSENIC	8.11E+00	mg/kg	3.68E-09	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.58E-11	1.29E-07	ug/m^3	1.50E-02	ug/m^3	8.58E-06
				COBALT	1.50E+01	mg/kg	6.80E-09	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	6.12E-11	2.38E-07	ug/m^3	6.00E-03	ug/m^3	3.97E-05
				IRON	2.21E+04	mg/kg	1.00E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.50E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	2.37E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.30E-05	ug/m^3	5.00E-02	ug/m^3	1.66E-03
				THALLIUM	8.61E-02	mg/kg	3.91E-11	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.37E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	1.58E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.51E-07	ug/m^3	1.00E-01	ug/m^3	5.51E-06
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	3.48E-10	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	9.95E-14	1.22E-08	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	1.04E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	3.32E-14	3.65E-10	ug/m^3	2.00E-03	ug/m^3	1.83E-07
			Exp. Route Total									7.72E-11					1.76E-03
Surface Soil Area 1 Total												**2.03E-07**					**3.22E-01**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENDY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	3.41E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.20E-02	mg/kg-day	1.00E+00	mg/kg-day	1.20E-02
				ARSENIC	8.50E+00	mg/kg	1.20E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.80E-07	4.19E-06	mg/kg-day	3.00E-04	mg/kg-day	1.40E-02
				COBALT	1.17E+01	mg/kg	2.74E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.59E-06	mg/kg-day	3.00E-04	mg/kg-day	3.20E-02
				IRON	2.43E+04	mg/kg	5.70E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.00E-02	mg/kg-day	7.00E-01	mg/kg-day	2.85E-02
				MANGANESE	5.29E+02	mg/kg	1.24E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.35E-04	mg/kg-day	2.40E-02	mg/kg-day	1.81E-02
				THALLIUM	8.88E-02	mg/kg	2.09E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.30E-08	mg/kg-day	1.00E-05	mg/kg-day	7.30E-03
				VANADIUM	3.66E+01	mg/kg	8.60E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.01E-05	mg/kg-day	5.04E-03	mg/kg-day	5.97E-03
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	2.77E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	4.43E-08	9.70E-08	mg/kg-day	5.00E-05	mg/kg-day	1.94E-03
				ENDRIN KETONE	7.74E-01	mg/kg	1.82E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.36E-07	mg/kg-day	3.00E-04	mg/kg-day	2.12E-03
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	7.40E-10	mg/kg-day	9.10E+00	kg-day/mg	N/A	6.73E-09	2.59E-08	mg/kg-day	1.30E-05	mg/kg-day	1.99E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.22E-06	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.22E-06	4.26E-05	mg/kg-day	2.00E-05	mg/kg-day	2.13E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	4.25E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.25E-08	1.49E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	2.08E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.10E-07	7.28E-07	mg/kg-day	3.00E-04	mg/kg-day	2.43E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	3.95E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.10E-08	1.38E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	1.94E-08	mg/kg-day	1.00E-02	kg-day/mg	5.3	1.03E-09	6.80E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	4.74E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	2.51E-08	1.66E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	2.26E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.20E-08	7.92E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.64E-06					2.26E+00
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	5.69E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	8.53E-09	1.99E-07	mg/kg-day	3.00E-04	mg/kg-day	6.63E-04
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	2.63E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	4.21E-09	9.21E-09	mg/kg-day	5.00E-05	mg/kg-day	1.84E-04
				ENDRIN KETONE	7.74E-01	mg/kg	1.73E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.04E-08	mg/kg-day	3.00E-04	mg/kg-day	2.01E-04
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	7.02E-11	mg/kg-day	9.10E+00	kg-day/mg	N/A	6.39E-10	2.46E-09	mg/kg-day	1.30E-05	mg/kg-day	1.89E-04
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.62E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.62E-07	5.67E-06	mg/kg-day	2.00E-05	mg/kg-day	2.83E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	5.24E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.78E-09	1.83E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	2.57E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.36E-08	8.99E-08	mg/kg-day	3.00E-04	mg/kg-day	3.00E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	4.88E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.59E-09	1.71E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	2.40E-09	mg/kg-day	1.00E-02	kg-day/mg	5.3	1.27E-10	8.39E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	5.85E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	3.10E-09	2.05E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	2.79E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.48E-09	9.78E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.99E-07					2.85E-01

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENDY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	6.60E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.31E-04	ug/m^3	5.00E+00	ug/m^3	4.62E-05
				ARSENIC	8.50E+00	mg/kg	3.86E-09	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.66E-11	1.35E-07	ug/m^3	1.50E-02	ug/m^3	9.00E-06
				COBALT	1.17E+01	mg/kg	5.29E-09	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	4.77E-11	1.85E-07	ug/m^3	6.00E-03	ug/m^3	3.09E-05
				IRON	2.43E+04	mg/kg	1.10E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.85E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	2.40E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.40E-06	ug/m^3	5.00E-02	ug/m^3	1.68E-04
				THALLIUM	8.88E-02	mg/kg	4.03E-11	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.41E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	1.66E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.82E-07	ug/m^3	1.00E-01	ug/m^3	5.82E-06
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	5.35E-11	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	2.46E-13	1.87E-09	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	3.51E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.23E-08	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	1.43E-11	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	3.72E-14	5.00E-10	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	2.35E-08	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	6.73E-12	8.24E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	8.20E-10	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	2.61E-13	2.87E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	4.02E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	1.28E-12	1.41E-08	ug/m^3	2.00E-03	ug/m^3	7.03E-06
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	7.64E-10	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	2.43E-13	2.67E-08	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	3.75E-10	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	5.3	1.19E-14	1.31E-08	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	9.16E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	2.91E-13	3.21E-09	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	4.37E-10	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	1.39E-13	1.53E-08	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									7.35E-11					2.67E-04
Surface Soil Area 2 Total												**1.84E-06**					**2.54E+00**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENDY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	3.78E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.32E-02	mg/kg-day	1.00E+00	mg/kg-day	1.32E-02
				ARSENIC	9.77E+00	mg/kg	1.38E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.06E-07	4.82E-06	mg/kg-day	3.00E-04	mg/kg-day	1.61E-02
				COBALT	1.25E+01	mg/kg	2.93E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.02E-05	mg/kg-day	3.00E-04	mg/kg-day	3.41E-02
				IRON	2.74E+04	mg/kg	6.44E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.25E-02	mg/kg-day	7.00E-01	mg/kg-day	3.22E-02
				MANGANESE	8.02E+02	mg/kg	1.88E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.59E-04	mg/kg-day	2.40E-02	mg/kg-day	2.75E-02
				THALLIUM	1.09E-01	mg/kg	2.56E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.96E-08	mg/kg-day	1.00E-05	mg/kg-day	8.96E-03
				VANADIUM	3.88E+01	mg/kg	9.11E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.19E-05	mg/kg-day	5.04E-03	mg/kg-day	6.32E-03
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.95E-09	mg/kg-day	1.40E+00	kg-day/mg	N/A	2.73E-09	6.82E-08	mg/kg-day	3.00E-03	mg/kg-day	2.27E-05
			Exp. Route Total									2.09E-07					1.38E-01
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	6.53E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	9.80E-09	2.29E-07	mg/kg-day	3.00E-04	mg/kg-day	7.62E-04
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									9.80E-09					7.62E-04
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	7.30E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.56E-04	ug/m^3	5.00E+00	ug/m^3	5.11E-05
				ARSENIC	9.77E+00	mg/kg	4.43E-09	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.91E-11	1.55E-07	ug/m^3	1.50E-02	ug/m^3	1.03E-05
				COBALT	1.25E+01	mg/kg	5.65E-09	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	5.09E-11	1.98E-07	ug/m^3	6.00E-03	ug/m^3	3.30E-05
				IRON	2.74E+04	mg/kg	1.24E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.36E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	3.64E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.27E-05	ug/m^3	5.00E-02	ug/m^3	2.55E-04
				THALLIUM	1.09E-01	mg/kg	4.95E-11	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.73E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	1.76E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.16E-07	ug/m^3	1.00E-01	ug/m^3	6.16E-06
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	3.77E-11	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	3.31E-16	1.32E-09	ug/m^3	1.00E+02	ug/m^3	1.32E-11
			Exp. Route Total									6.99E-11					3.55E-04
Subsurface Soil Area 1 Total												**2.19E-07**					**1.40E-01**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENDY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	3.73E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.30E-02	mg/kg-day	1.00E+00	mg/kg-day	1.30E-02
				ARSENIC	1.21E+01	mg/kg	1.70E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.56E-07	5.97E-06	mg/kg-day	3.00E-04	mg/kg-day	1.99E-02
				COBALT	1.29E+01	mg/kg	3.02E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.06E-05	mg/kg-day	3.00E-04	mg/kg-day	3.53E-02
				IRON	2.75E+04	mg/kg	6.45E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.26E-02	mg/kg-day	7.00E-01	mg/kg-day	3.22E-02
				MANGANESE	6.54E+02	mg/kg	1.53E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.37E-04	mg/kg-day	2.40E-02	mg/kg-day	2.24E-02
				THALLIUM	1.16E-01	mg/kg	2.72E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.53E-08	mg/kg-day	1.00E-05	mg/kg-day	9.53E-03
				VANADIUM	3.90E+01	mg/kg	9.15E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.20E-05	mg/kg-day	5.04E-03	mg/kg-day	6.35E-03
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.56E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.56E-07	5.46E-06	mg/kg-day	2.00E-05	mg/kg-day	2.73E-01
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	9.23E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.89E-09	3.23E-08	mg/kg-day	3.00E-04	mg/kg-day	1.08E-04
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	2.10E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.11E-09	7.34E-09	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								4.18E-07					4.12E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	8.09E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.21E-08	2.83E-07	mg/kg-day	3.00E-04	mg/kg-day	9.44E-04
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	2.07E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.07E-08	7.26E-07	mg/kg-day	2.00E-05	mg/kg-day	3.63E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.14E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	6.04E-10	3.99E-09	mg/kg-day	3.00E-04	mg/kg-day	1.33E-05
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	2.59E-11	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.37E-10	9.06E-10	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								3.36E-08					3.72E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	7.20E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.52E-04	ug/m^3	5.00E+00	ug/m^3	5.04E-05
				ARSENIC	1.21E+01	mg/kg	5.49E-09	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	2.36E-11	1.92E-07	ug/m^3	1.50E-02	ug/m^3	1.28E-05
				COBALT	1.29E+01	mg/kg	5.84E-09	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	5.26E-11	2.05E-07	ug/m^3	6.00E-03	ug/m^3	3.41E-05
				IRON	2.75E+04	mg/kg	1.25E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.36E-04	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	2.97E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.04E-05	ug/m^3	5.00E-02	ug/m^3	2.08E-04
				THALLIUM	1.16E-01	mg/kg	5.26E-11	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.84E-09	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	1.77E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	6.19E-07	ug/m^3	1.00E-01	ug/m^3	6.19E-06
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	3.01E-09	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	8.62E-13	1.06E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.78E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	5.67E-14	6.24E-10	ug/m^3	2.00E-03	ug/m^3	3.12E-07
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	4.05E-12	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	1.29E-14	1.42E-10	ug/m^3	N/A	ug/m^3	N/A
				Exp. Route Total								7.71E-11					3.11E-04
Subsurface Soil Area 2 Total												**4.51E-07**					**4.49E-01**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENDY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area	Ingestion														
				Metals													
				ARSENIC	5.20E+00	ug/L	1.76E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.64E-09	6.17E-08	mg/kg-day	3.00E-04	mg/kg-day	2.06E-04
				MANGANESE	8.48E+02	ug/L	2.88E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.01E-05	mg/kg-day	2.40E-02	mg/kg-day	4.20E-04
				THALLIUM	3.20E-01	ug/L	1.09E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.80E-09	mg/kg-day	1.00E-05	mg/kg-day	3.80E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	1.29E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.29E-10	4.51E-09	mg/kg-day	2.00E-05	mg/kg-day	2.26E-04
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	3.73E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.31E-09	mg/kg-day	3.00E-04	mg/kg-day	4.35E-06
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	2.20E-11	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.17E-11	7.72E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	2.58E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.58E-11	9.02E-10	mg/kg-day	3.00E-04	mg/kg-day	3.01E-06
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	1.76E-11	mg/kg-day	1.00E-02	kg-day/mg	5.3	9.35E-13	6.17E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	1.49E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	1.64E-11	5.22E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	5.43E-11	mg/kg-day	1.00E-01	kg-day/mg	N/A	5.43E-12	1.90E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.83E-09					1.24E-03
			Dermal														
				Metals													
				ARSENIC	5.20E+00	ug/L	2.17E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.26E-09	7.61E-08	mg/kg-day	3.00E-04	mg/kg-day	2.54E-04
				MANGANESE	8.48E+02	ug/L	3.55E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.24E-05	mg/kg-day	9.60E-04	mg/kg-day	1.29E-02
				THALLIUM	3.20E-01	ug/L	1.34E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.69E-09	mg/kg-day	1.00E-05	mg/kg-day	4.69E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	6.06E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.12E-07	mg/kg-day	3.00E-04	mg/kg-day	7.07E-04
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	5.3	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	2.48E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	2.73E-11	8.68E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.29E-09					1.44E-02
Surface Water Total												**6.12E-09**					**1.56E-02**

TABLE 7.2.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)
CENTRAL TENDENDY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area	Ingestion														
				Metals													
				ARSENIC	8.34E+00	mg/kg	3.40E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.09E-08	1.19E-06	mg/kg-day	3.00E-04	mg/kg-day	3.96E-03
				COBALT	9.36E+00	mg/kg	6.35E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.22E-06	mg/kg-day	3.00E-04	mg/kg-day	7.41E-03
				IRON	1.74E+04	mg/kg	1.18E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.13E-03	mg/kg-day	7.00E-01	mg/kg-day	5.90E-03
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	5.97E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.97E-09	2.09E-07	mg/kg-day	2.00E-05	mg/kg-day	1.04E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.16E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	6.13E-09	4.05E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	7.75E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.11E-08	2.71E-07	mg/kg-day	3.00E-04	mg/kg-day	9.05E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	7.98E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	4.23E-09	2.79E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	1.68E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	8.92E-09	5.89E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	5.90E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.13E-09	2.07E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.20E-07					2.86E-02
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	1.61E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.42E-09	5.64E-08	mg/kg-day	3.00E-04	mg/kg-day	1.88E-04
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	7.93E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	7.93E-10	2.78E-08	mg/kg-day	2.00E-05	mg/kg-day	1.39E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.43E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.57E-10	5.00E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	9.57E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	5.07E-09	3.35E-08	mg/kg-day	3.00E-04	mg/kg-day	1.12E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	9.84E-10	mg/kg-day	1.00E-01	kg-day/mg	5.3	5.22E-10	3.45E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	2.08E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.10E-09	7.27E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	7.28E-10	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.86E-10	2.55E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.10E-08					1.69E-03
Sediment Total												**1.31E-07**					**3.03E-02**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
RME - Reasonable Maximum Exposure.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR.
Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.3.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	4.90E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.81E-03	mg/kg-day	1.00E+00	mg/kg-day	3.81E-03
				ARSENIC	8.11E+00	mg/kg	1.61E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.41E-07	1.25E-06	mg/kg-day	3.00E-04	mg/kg-day	4.17E-03
				COBALT	1.50E+01	mg/kg	4.95E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.85E-06	mg/kg-day	3.00E-04	mg/kg-day	1.28E-02
				IRON	2.21E+04	mg/kg	7.28E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.66E-03	mg/kg-day	7.00E-01	mg/kg-day	8.09E-03
				MANGANESE	5.23E+03	mg/kg	1.73E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.34E-03	mg/kg-day	2.40E-02	mg/kg-day	5.60E-02
				THALLIUM	8.61E-02	mg/kg	2.84E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.21E-08	mg/kg-day	1.00E-05	mg/kg-day	2.21E-03
				VANADIUM	3.47E+01	mg/kg	1.15E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.92E-06	mg/kg-day	5.04E-03	mg/kg-day	1.77E-03
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	2.53E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.53E-08	1.97E-07	mg/kg-day	2.00E-05	mg/kg-day	9.85E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	7.60E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	7.60E-10	5.91E-09	mg/kg-day	3.00E-04	mg/kg-day	1.97E-05
				Exp. Route Total								2.67E-07					9.87E-02
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	1.13E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.70E-08	8.81E-08	mg/kg-day	3.00E-04	mg/kg-day	2.94E-04
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	5.00E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.00E-09	3.89E-08	mg/kg-day	2.00E-05	mg/kg-day	1.95E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	1.39E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.39E-10	1.08E-09	mg/kg-day	3.00E-04	mg/kg-day	3.61E-06
				Exp. Route Total								2.21E-08					2.24E-03
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	4.04E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.14E-03	ug/m^3	5.00E+00	ug/m^3	6.28E-04
				ARSENIC	8.11E+00	mg/kg	2.21E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	9.49E-10	1.72E-06	ug/m^3	1.50E-02	ug/m^3	1.14E-04
				COBALT	1.50E+01	mg/kg	4.08E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.67E-09	3.17E-06	ug/m^3	6.00E-03	ug/m^3	5.29E-04
				IRON	2.21E+04	mg/kg	6.00E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.67E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	1.42E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.11E-03	ug/m^3	5.00E-02	ug/m^3	2.21E-02
				THALLIUM	8.61E-02	mg/kg	2.34E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.82E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	9.45E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.35E-06	ug/m^3	1.00E-01	ug/m^3	7.35E-05
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	2.09E-08	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	5.97E-12	1.62E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	6.26E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	3.76E-13	4.87E-09	ug/m^3	2.00E-03	ug/m^3	2.43E-06
				Exp. Route Total								4.63E-09					2.35E-02
Surface Soil Area 1 Total												**2.94E-07**					**1.24E-01**

TABLE 7.3.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	4.80E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.73E-03	mg/kg-day	1.00E+00	mg/kg-day	3.73E-03
				ARSENIC	8.50E+00	mg/kg	1.68E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.53E-07	1.31E-06	mg/kg-day	3.00E-04	mg/kg-day	4.37E-03
				COBALT	1.17E+01	mg/kg	3.85E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.00E-06	mg/kg-day	3.00E-04	mg/kg-day	9.99E-03
				IRON	2.43E+04	mg/kg	8.02E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.23E-03	mg/kg-day	7.00E-01	mg/kg-day	8.91E-03
				MANGANESE	5.29E+02	mg/kg	1.75E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.36E-04	mg/kg-day	2.40E-02	mg/kg-day	5.66E-03
				THALLIUM	8.88E-02	mg/kg	2.93E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.28E-08	mg/kg-day	1.00E-05	mg/kg-day	2.28E-03
				VANADIUM	3.66E+01	mg/kg	1.21E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.41E-06	mg/kg-day	5.04E-03	mg/kg-day	1.87E-03
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	3.90E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	6.23E-08	3.03E-08	mg/kg-day	5.00E-05	mg/kg-day	6.06E-04
				ENDRIN KETONE	7.74E-01	mg/kg	2.56E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.99E-07	mg/kg-day	3.00E-04	mg/kg-day	6.63E-04
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	1.04E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	9.47E-09	8.09E-09	mg/kg-day	1.30E-05	mg/kg-day	6.22E-04
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.71E-06	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.71E-06	1.33E-05	mg/kg-day	2.00E-05	mg/kg-day	6.66E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	5.97E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	5.97E-09	4.64E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	2.93E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.93E-08	2.28E-07	mg/kg-day	3.00E-04	mg/kg-day	7.59E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	5.56E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	5.56E-09	4.33E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	2.73E-08	mg/kg-day	1.00E-02	kg-day/mg	N/A	2.73E-10	2.12E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	6.67E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	6.67E-09	5.19E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	3.18E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.18E-09	2.48E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.09E-06					7.06E-01
			Dermal														
				Metals													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	1.19E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.78E-08	9.24E-08	mg/kg-day	3.00E-04	mg/kg-day	3.08E-04
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	5.50E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	8.80E-09	4.28E-09	mg/kg-day	5.00E-05	mg/kg-day	8.55E-05
				ENDRIN KETONE	7.74E-01	mg/kg	3.61E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.80E-08	mg/kg-day	3.00E-04	mg/kg-day	9.35E-05
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	1.47E-10	mg/kg-day	9.10E+00	kg-day/mg	N/A	1.34E-09	1.14E-09	mg/kg-day	1.30E-05	mg/kg-day	8.78E-05
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	3.38E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.38E-07	2.63E-06	mg/kg-day	2.00E-05	mg/kg-day	1.32E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.10E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.10E-09	8.52E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	5.37E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.37E-09	4.17E-08	mg/kg-day	3.00E-04	mg/kg-day	1.39E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.02E-08	mg/kg-day	1.00E-01	kg-day/mg	N/A	1.02E-09	7.93E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	5.01E-09	mg/kg-day	1.00E-02	kg-day/mg	N/A	5.01E-11	3.90E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.22E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.22E-09	9.52E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	5.84E-09	mg/kg-day	1.00E-01	kg-day/mg	N/A	5.84E-10	4.54E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.76E-07					1.32E-01

TABLE 7.3.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	3.96E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.08E-03	ug/m^3	5.00E+00	ug/m^3	6.16E-04
				ARSENIC	8.50E+00	mg/kg	2.31E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	9.95E-10	1.80E-06	ug/m^3	1.50E-02	ug/m^3	1.20E-04
				COBALT	1.17E+01	mg/kg	3.18E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	2.86E-09	2.47E-06	ug/m^3	6.00E-03	ug/m^3	4.12E-04
				IRON	2.43E+04	mg/kg	6.61E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.14E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	1.44E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.12E-04	ug/m^3	5.00E-02	ug/m^3	2.24E-03
				THALLIUM	8.88E-02	mg/kg	2.42E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.88E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	9.97E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.75E-06	ug/m^3	1.00E-01	ug/m^3	7.75E-05
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	3.21E-09	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	1.48E-11	2.50E-08	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	2.11E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.64E-07	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	8.57E-10	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	2.23E-12	6.67E-09	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.41E-06	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	4.04E-10	1.10E-05	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	4.92E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	2.95E-12	3.83E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	2.41E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	1.45E-11	1.88E-07	ug/m^3	2.00E-03	ug/m^3	9.38E-05
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	4.58E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	2.75E-12	3.57E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	2.25E-08	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	N/A	1.35E-13	1.75E-07	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	5.50E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	3.30E-12	4.28E-08	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	2.62E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	N/A	1.57E-12	2.04E-07	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									4.30E-09					3.56E-03
Surface Soil Area 2 Total												**2.47E-06**					**8.41E-01**

TABLE 7.3.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	5.31E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.13E-03	mg/kg-day	1.00E+00	mg/kg-day	4.13E-03
				ARSENIC	9.77E+00	mg/kg	1.94E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.90E-07	1.51E-06	mg/kg-day	3.00E-04	mg/kg-day	5.02E-03
				COBALT	1.25E+01	mg/kg	4.11E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.20E-06	mg/kg-day	3.00E-04	mg/kg-day	1.07E-02
				IRON	2.74E+04	mg/kg	9.06E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.04E-03	mg/kg-day	7.00E-01	mg/kg-day	1.01E-02
				MANGANESE	8.02E+02	mg/kg	2.65E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.06E-04	mg/kg-day	2.40E-02	mg/kg-day	8.59E-03
				THALLIUM	1.09E-01	mg/kg	3.60E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.80E-08	mg/kg-day	1.00E-05	mg/kg-day	2.80E-03
				VANADIUM	3.88E+01	mg/kg	1.28E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.96E-06	mg/kg-day	5.04E-03	mg/kg-day	1.98E-03
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	2.74E-09	mg/kg-day	7.20E-01	kg-day/mg	N/A	1.97E-09	2.13E-08	mg/kg-day	3.00E-03	mg/kg-day	7.11E-06
			Exp. Route Total									2.92E-07					4.33E-02
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	1.37E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.05E-08	1.06E-07	mg/kg-day	3.00E-04	mg/kg-day	3.54E-04
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	7.20E-01	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									2.05E-08					3.54E-04
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	4.38E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.41E-03	ug/m^3	5.00E+00	ug/m^3	6.82E-04
				ARSENIC	9.77E+00	mg/kg	2.66E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.14E-09	2.07E-06	ug/m^3	1.50E-02	ug/m^3	1.38E-04
				COBALT	1.25E+01	mg/kg	3.39E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.05E-09	2.64E-06	ug/m^3	6.00E-03	ug/m^3	4.40E-04
				IRON	2.74E+04	mg/kg	7.47E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.81E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	2.18E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.70E-04	ug/m^3	5.00E-02	ug/m^3	3.40E-03
				THALLIUM	1.09E-01	mg/kg	2.97E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.31E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	1.06E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.21E-06	ug/m^3	1.00E-01	ug/m^3	8.21E-05
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	2.26E-09	ug/m^3	4.40E-06	(ug/m^3)$^{-1}$	N/A	9.94E-15	1.76E-08	ug/m^3	1.00E+02	ug/m^3	1.76E-10
			Exp. Route Total									4.20E-09					4.74E-03
Subsurface Soil Area 1 Total												**3.17E-07**					**4.83E-02**

TABLE 7.3.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	5.24E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.07E-03	mg/kg-day	1.00E+00	mg/kg-day	4.07E-03
				ARSENIC	1.21E+01	mg/kg	2.40E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.60E-07	1.86E-06	mg/kg-day	3.00E-04	mg/kg-day	6.22E-03
				COBALT	1.29E+01	mg/kg	4.25E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.31E-06	mg/kg-day	3.00E-04	mg/kg-day	1.10E-02
				IRON	2.75E+04	mg/kg	9.07E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.05E-03	mg/kg-day	7.00E-01	mg/kg-day	1.01E-02
				MANGANESE	6.54E+02	mg/kg	2.16E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.68E-04	mg/kg-day	2.40E-02	mg/kg-day	6.99E-03
				THALLIUM	1.16E-01	mg/kg	3.83E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.98E-08	mg/kg-day	1.00E-05	mg/kg-day	2.98E-03
				VANADIUM	3.90E+01	mg/kg	1.29E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.00E-05	mg/kg-day	5.04E-03	mg/kg-day	1.98E-03
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	2.19E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.19E-07	1.71E-06	mg/kg-day	2.00E-05	mg/kg-day	8.53E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.30E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.30E-09	1.01E-08	mg/kg-day	3.00E-04	mg/kg-day	3.36E-05
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	2.95E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.95E-10	2.29E-09	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								5.81E-07					1.29E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	1.69E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.54E-08	1.32E-07	mg/kg-day	3.00E-04	mg/kg-day	4.38E-04
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	4.33E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	4.33E-08	3.37E-07	mg/kg-day	2.00E-05	mg/kg-day	1.69E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	2.38E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.38E-10	1.85E-09	mg/kg-day	3.00E-04	mg/kg-day	6.17E-06
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	5.41E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.41E-11	4.21E-10	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								6.90E-08					1.73E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	4.32E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.36E-03	ug/m^3	5.00E+00	ug/m^3	6.72E-04
				ARSENIC	1.21E+01	mg/kg	3.29E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.42E-09	2.56E-06	ug/m^3	1.50E-02	ug/m^3	1.71E-04
				COBALT	1.29E+01	mg/kg	3.51E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.16E-09	2.73E-06	ug/m^3	6.00E-03	ug/m^3	4.55E-04
				IRON	2.75E+04	mg/kg	7.47E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.81E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	1.78E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.38E-04	ug/m^3	5.00E-02	ug/m^3	2.77E-03
				THALLIUM	1.16E-01	mg/kg	3.16E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	1.06E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.25E-06	ug/m^3	1.00E-01	ug/m^3	8.25E-05
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.81E-07	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	5.17E-11	1.41E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.07E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	6.42E-13	8.32E-09	ug/m^3	2.00E-03	ug/m^3	4.16E-06
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	2.43E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	N/A	1.46E-13	1.89E-09	ug/m^3	N/A	ug/m^3	N/A
				Exp. Route Total								4.62E-09					4.15E-03
Subsurface Soil Area 2 Total												**6.54E-07**					**1.50E-01**
Total Receptor Risk/Hazard												(2)					(2)

TABLE 7.3.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
CTE - Central Tendency Estimate.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. Not applicable to adult receptors.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.4.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - FUTURE INDOOR INDUSTRIAL WORKER (GROUNDWATER TO INDOOR AIR)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Indoor Industrial Worker
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Indoor Air	Fire Training Area	Inhalation														
				SVOCs													
				HEXACHLOROCYCLOPENTADIENE	9.0E-04	ug/m^3	3.66E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.02E-04	ug/m^3	2.00E-01	ug/m^3	5.12E-04
				VOCs													
				TRICHLOROETHENE	2.4E-01	ug/m^3	9.88E-03	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	N/A	4.05E-08	2.77E-02	ug/m^3	2.00E+00	ug/m^3	1.38E-02
				VINYL CHLORIDE	4.1E-02	ug/m^3	1.67E-03	ug/m^3	4.40E-06	(ug/m^3)$^{-1}$	N/A	7.33E-09	4.67E-03	ug/m^3	1.00E+02	ug/m^3	4.67E-05
			Exp. Route Total									4.79E-08					1.44E-02
Groundwater Total												4.79E-08					1.44E-02
Total Receptor Risk/Hazard												**4.79E-08**					**1.44E-02**

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
CTE - Central Tendency Estimate.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
SVOCs - Semivolatile organic compounds.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to adult receptors.

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 1	Ingestion	**Metals**													
				ALUMINUM	1.48E+04	mg/kg	1.91E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.91E-03	mg/kg-day	1.00E+00	mg/kg-day	1.91E-03
				ARSENIC	8.11E+00	mg/kg	6.25E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	9.37E-08	6.25E-07	mg/kg-day	3.00E-04	mg/kg-day	2.08E-03
				COBALT	1.50E+01	mg/kg	1.93E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.93E-06	mg/kg-day	3.00E-04	mg/kg-day	6.42E-03
				IRON	2.21E+04	mg/kg	2.83E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.83E-03	mg/kg-day	7.00E-01	mg/kg-day	4.05E-03
				MANGANESE	5.23E+03	mg/kg	6.72E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.72E-04	mg/kg-day	2.40E-02	mg/kg-day	2.80E-02
				THALLIUM	8.61E-02	mg/kg	1.11E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.11E-08	mg/kg-day	1.00E-05	mg/kg-day	1.11E-03
				VANADIUM	3.47E+01	mg/kg	4.46E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.46E-06	mg/kg-day	5.04E-03	mg/kg-day	8.85E-04
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	9.85E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	9.85E-09	9.85E-08	mg/kg-day	2.00E-05	mg/kg-day	4.93E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	2.95E-10	mg/kg-day	1.00E+00	kg-day/mg	1	2.95E-10	2.95E-09	mg/kg-day	3.00E-04	mg/kg-day	9.85E-06
			Exp. Route Total									1.04E-07					4.94E-02
			Dermal	**Metals**													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	3.77E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.65E-09	3.77E-08	mg/kg-day	3.00E-04	mg/kg-day	1.26E-04
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	1.66E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.66E-09	1.66E-08	mg/kg-day	2.00E-05	mg/kg-day	8.32E-04
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	4.63E-11	mg/kg-day	1.00E+00	kg-day/mg	1	4.63E-11	4.63E-10	mg/kg-day	3.00E-04	mg/kg-day	1.54E-06
			Exp. Route Total									7.36E-09					9.59E-04
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.48E+04	mg/kg	4.71E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.71E-03	ug/m^3	5.00E+00	ug/m^3	9.43E-04
				ARSENIC	8.11E+00	mg/kg	2.58E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.11E-09	2.58E-06	ug/m^3	1.50E-02	ug/m^3	1.72E-04
				COBALT	1.50E+01	mg/kg	4.76E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	4.28E-09	4.76E-06	ug/m^3	6.00E-03	ug/m^3	7.93E-04
				IRON	2.21E+04	mg/kg	7.00E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.00E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	1.66E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.66E-03	ug/m^3	5.00E-02	ug/m^3	3.32E-02
				THALLIUM	8.61E-02	mg/kg	2.73E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.73E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	1.10E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.10E-05	ug/m^3	1.00E-01	ug/m^3	1.10E-04
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	2.44E-08	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	6.97E-12	2.44E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	7.30E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	4.38E-13	7.30E-09	ug/m^3	2.00E-03	ug/m^3	3.65E-06
			Exp. Route Total									5.40E-09					3.52E-02
Surface Soil Area 1 Total												**1.17E-07**					**8.56E-02**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Risk	Value	Units	Value	Units	Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Ingestion	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	1.87E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.87E-03	mg/kg-day	1.00E+00	mg/kg-day	1.87E-03
				ARSENIC	8.50E+00	mg/kg	6.55E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	9.83E-08	6.55E-07	mg/kg-day	3.00E-04	mg/kg-day	2.18E-03
				COBALT	1.17E+01	mg/kg	1.50E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.50E-06	mg/kg-day	3.00E-04	mg/kg-day	5.00E-03
				IRON	2.43E+04	mg/kg	3.12E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.12E-03	mg/kg-day	7.00E-01	mg/kg-day	4.45E-03
				MANGANESE	5.29E+02	mg/kg	6.79E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.79E-05	mg/kg-day	2.40E-02	mg/kg-day	2.83E-03
				THALLIUM	8.88E-02	mg/kg	1.14E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.14E-08	mg/kg-day	1.00E-05	mg/kg-day	1.14E-03
				VANADIUM	3.66E+01	mg/kg	4.70E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.70E-06	mg/kg-day	5.04E-03	mg/kg-day	9.33E-04
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.52E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	2.42E-08	1.52E-08	mg/kg-day	5.00E-05	mg/kg-day	3.03E-04
				ENDRIN KETONE	7.74E-01	mg/kg	9.94E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.94E-08	mg/kg-day	3.00E-04	mg/kg-day	3.31E-04
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	4.05E-10	mg/kg-day	9.10E+00	kg-day/mg	N/A	3.68E-09	4.05E-09	mg/kg-day	1.30E-05	mg/kg-day	3.11E-04
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	6.66E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	6.66E-07	6.66E-06	mg/kg-day	2.00E-05	mg/kg-day	3.33E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	2.32E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.32E-09	2.32E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.14E-08	mg/kg-day	1.00E+00	kg-day/mg	1	1.14E-08	1.14E-07	mg/kg-day	3.00E-04	mg/kg-day	3.79E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	2.16E-08	mg/kg-day	1.00E-01	kg-day/mg	1	2.16E-09	2.16E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	1.06E-08	mg/kg-day	1.00E-02	kg-day/mg	1	1.06E-10	1.06E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	2.59E-09	mg/kg-day	1.00E+00	kg-day/mg	1	2.59E-09	2.59E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.24E-08	mg/kg-day	1.00E-01	kg-day/mg	1	1.24E-09	1.24E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									8.12E-07					3.53E-01
			Dermal	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	3.95E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.93E-09	3.95E-08	mg/kg-day	3.00E-04	mg/kg-day	1.32E-04
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.83E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	2.93E-09	1.83E-09	mg/kg-day	5.00E-05	mg/kg-day	3.66E-05
				ENDRIN KETONE	7.74E-01	mg/kg	1.20E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.20E-08	mg/kg-day	3.00E-04	mg/kg-day	4.00E-05
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	4.88E-11	mg/kg-day	9.10E+00	kg-day/mg	N/A	4.44E-10	4.88E-10	mg/kg-day	1.30E-05	mg/kg-day	3.75E-05
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.13E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.13E-07	1.13E-06	mg/kg-day	2.00E-05	mg/kg-day	5.63E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	3.64E-09	mg/kg-day	1.00E-01	kg-day/mg	1	3.64E-10	3.64E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	1.78E-09	mg/kg-day	1.00E+00	kg-day/mg	1	1.78E-09	1.78E-08	mg/kg-day	3.00E-04	mg/kg-day	5.95E-05
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	3.39E-09	mg/kg-day	1.00E-01	kg-day/mg	1	3.39E-10	3.39E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	1.67E-09	mg/kg-day	1.00E-02	kg-day/mg	1	1.67E-11	1.67E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	4.07E-10	mg/kg-day	1.00E+00	kg-day/mg	1	4.07E-10	4.07E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	1.94E-09	mg/kg-day	1.00E-01	kg-day/mg	1	1.94E-10	1.94E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.25E-07					5.66E-02

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR			Cancer	Intake/Exposure Concentration		RfD or RfC		Hazard
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Risk	Value	Units	Value	Units	Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	4.62E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.62E-03	ug/m^3	5.00E+00	ug/m^3	9.24E-04
				ARSENIC	8.50E+00	mg/kg	2.70E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.16E-09	2.70E-06	ug/m^3	1.50E-02	ug/m^3	1.80E-04
				COBALT	1.17E+01	mg/kg	3.71E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.34E-09	3.71E-06	ug/m^3	6.00E-03	ug/m^3	6.18E-04
				IRON	2.43E+04	mg/kg	7.71E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.71E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	1.68E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.68E-04	ug/m^3	5.00E-02	ug/m^3	3.36E-03
				THALLIUM	8.88E-02	mg/kg	2.82E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.82E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	1.16E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.16E-05	ug/m^3	1.00E-01	ug/m^3	1.16E-04
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	3.75E-09	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	1.72E-11	3.75E-08	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	2.46E-08	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-07	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	1.00E-09	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	2.60E-12	1.00E-08	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	1.65E-06	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	4.71E-10	1.65E-05	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	5.74E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	3.45E-12	5.74E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	2.81E-08	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	1.69E-11	2.81E-07	ug/m^3	2.00E-03	ug/m^3	1.41E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	5.35E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	3.21E-12	5.35E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	2.63E-08	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	1	1.58E-13	2.63E-07	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	6.42E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	3.85E-12	6.42E-08	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	3.06E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	1	1.84E-12	3.06E-07	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									5.02E-09					5.34E-03
Surface Soil Area 2 Total												**9.42E-07**					**4.15E-01**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	2.07E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.07E-03	mg/kg-day	1.00E+00	mg/kg-day	2.07E-03
				ARSENIC	9.77E+00	mg/kg	7.53E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.13E-07	7.53E-07	mg/kg-day	3.00E-04	mg/kg-day	2.51E-03
				COBALT	1.25E+01	mg/kg	1.60E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.60E-06	mg/kg-day	3.00E-04	mg/kg-day	5.33E-03
				IRON	2.74E+04	mg/kg	3.52E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.52E-03	mg/kg-day	7.00E-01	mg/kg-day	5.03E-03
				MANGANESE	8.02E+02	mg/kg	1.03E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.03E-04	mg/kg-day	2.40E-02	mg/kg-day	4.29E-03
				THALLIUM	1.09E-01	mg/kg	1.40E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.40E-08	mg/kg-day	1.00E-05	mg/kg-day	1.40E-03
				VANADIUM	3.88E+01	mg/kg	4.98E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.98E-06	mg/kg-day	5.04E-03	mg/kg-day	9.88E-04
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	1.07E-09	mg/kg-day	1.40E+00	kg-day/mg	N/A	1.49E-09	1.07E-08	mg/kg-day	3.00E-03	mg/kg-day	3.55E-06
			Exp. Route Total									1.14E-07					2.16E-02
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	4.54E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.81E-09	4.54E-08	mg/kg-day	3.00E-04	mg/kg-day	1.51E-04
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									6.81E-09					1.51E-04
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	5.11E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.11E-03	ug/m^3	5.00E+00	ug/m^3	1.02E-03
				ARSENIC	9.77E+00	mg/kg	3.10E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.33E-09	3.10E-06	ug/m^3	1.50E-02	ug/m^3	2.07E-04
				COBALT	1.25E+01	mg/kg	3.96E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.56E-09	3.96E-06	ug/m^3	6.00E-03	ug/m^3	6.60E-04
				IRON	2.74E+04	mg/kg	8.71E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.71E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	2.55E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.55E-04	ug/m^3	5.00E-02	ug/m^3	5.10E-03
				THALLIUM	1.09E-01	mg/kg	3.46E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.46E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	1.23E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.23E-05	ug/m^3	1.00E-01	ug/m^3	1.23E-04
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	2.64E-09	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	2.32E-14	2.64E-08	ug/m^3	1.00E+02	ug/m^3	2.64E-10
			Exp. Route Total									4.90E-09					7.11E-03
Subsurface Soil Area 1 Total												**1.26E-07**					**2.89E-02**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	2.04E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.04E-03	mg/kg-day	1.00E+00	mg/kg-day	2.04E-03
				ARSENIC	1.21E+01	mg/kg	9.32E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.40E-07	9.32E-07	mg/kg-day	3.00E-04	mg/kg-day	3.11E-03
				COBALT	1.29E+01	mg/kg	1.65E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.65E-06	mg/kg-day	3.00E-04	mg/kg-day	5.51E-03
				IRON	2.75E+04	mg/kg	3.53E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.53E-03	mg/kg-day	7.00E-01	mg/kg-day	5.04E-03
				MANGANESE	6.54E+02	mg/kg	8.39E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.39E-05	mg/kg-day	2.40E-02	mg/kg-day	3.50E-03
				THALLIUM	1.16E-01	mg/kg	1.49E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.49E-08	mg/kg-day	1.00E-05	mg/kg-day	1.49E-03
				VANADIUM	3.90E+01	mg/kg	5.00E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.00E-06	mg/kg-day	5.04E-03	mg/kg-day	9.92E-04
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	8.53E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	8.53E-08	8.53E-07	mg/kg-day	2.00E-05	mg/kg-day	4.27E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	5.05E-10	mg/kg-day	1.00E+00	kg-day/mg	1	5.05E-10	5.05E-09	mg/kg-day	3.00E-04	mg/kg-day	1.68E-05
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	1.15E-10	mg/kg-day	1.00E+00	kg-day/mg	1	1.15E-10	1.15E-09	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								2.26E-07					6.44E-02
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	5.62E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	8.44E-09	5.62E-08	mg/kg-day	3.00E-04	mg/kg-day	1.87E-04
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	1.44E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.44E-08	1.44E-07	mg/kg-day	2.00E-05	mg/kg-day	7.21E-03
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	7.92E-11	mg/kg-day	1.00E+00	kg-day/mg	1	7.92E-11	7.92E-10	mg/kg-day	3.00E-04	mg/kg-day	2.64E-06
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	1.80E-11	mg/kg-day	1.00E+00	kg-day/mg	1	1.80E-11	1.80E-10	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								2.29E-08					7.40E-03
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	5.04E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.04E-03	ug/m^3	5.00E+00	ug/m^3	1.01E-03
				ARSENIC	1.21E+01	mg/kg	3.84E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	1.65E-09	3.84E-06	ug/m^3	1.50E-02	ug/m^3	2.56E-04
				COBALT	1.29E+01	mg/kg	4.09E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	3.68E-09	4.09E-06	ug/m^3	6.00E-03	ug/m^3	6.82E-04
				IRON	2.75E+04	mg/kg	8.72E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.72E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	2.08E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.08E-04	ug/m^3	5.00E-02	ug/m^3	4.15E-03
				THALLIUM	1.16E-01	mg/kg	3.68E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.68E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	1.24E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.24E-05	ug/m^3	1.00E-01	ug/m^3	1.24E-04
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	2.11E-07	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	6.03E-11	2.11E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.25E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	7.49E-13	1.25E-08	ug/m^3	2.00E-03	ug/m^3	6.24E-06
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	2.84E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	1	1.70E-13	2.84E-09	ug/m^3	N/A	ug/m^3	N/A
				Exp. Route Total								5.40E-09					6.23E-03
Subsurface Soil Area 2 Total												**2.54E-07**					**7.80E-02**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Groundwater	Fire Training Area	Ingestion														
				Metals													
				ALUMINUM	4.26E+02	ug/L	6.38E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	6.38E-03	mg/kg-day	1.00E+00	mg/kg-day	6.38E-03
				ARSENIC	5.77E+00	ug/L	8.64E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.30E-05	8.64E-05	mg/kg-day	3.00E-04	mg/kg-day	2.88E-01
				CADMIUM	4.87E-01	ug/L	7.30E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.30E-06	mg/kg-day	5.00E-04	mg/kg-day	1.46E-02
				COBALT	3.00E+00	ug/L	4.49E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.49E-05	mg/kg-day	3.00E-04	mg/kg-day	1.50E-01
				IRON	1.79E+03	ug/L	2.68E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.68E-02	mg/kg-day	7.00E-01	mg/kg-day	3.83E-02
				MANGANESE	1.54E+03	ug/L	2.31E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.31E-02	mg/kg-day	2.40E-02	mg/kg-day	9.61E-01
				THALLIUM	8.50E-02	ug/L	1.27E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.27E-06	mg/kg-day	1.00E-05	mg/kg-day	1.27E-01
				PFASs		ug/L											
				PFOS	1.24E-01	ug/L	1.86E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.86E-06	mg/kg-day	2.00E-05	mg/kg-day	9.29E-02
				PFOA	2.47E-01	ug/L	3.70E-07	mg/kg-day	7.00E-02	kg-day/mg	N/A	2.59E-08	3.70E-06	mg/kg-day	2.00E-05	mg/kg-day	1.85E-01
				SVOCs													
				1,1-BIPHENYL	1.50E-01	ug/L	2.25E-07	mg/kg-day	8.00E-03	kg-day/mg	N/A	1.80E-09	2.25E-06	mg/kg-day	5.00E-01	mg/kg-day	4.49E-06
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	1.65E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.65E-06	mg/kg-day	6.00E-03	mg/kg-day	2.75E-04
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	1.39E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.39E-04	mg/kg-day	2.00E-03	mg/kg-day	6.97E-02
				TRICHLOROETHENE	8.20E+00	ug/L	1.23E-05	mg/kg-day	4.60E-02	kg-day/mg	1	5.65E-07	1.23E-04	mg/kg-day	5.00E-04	mg/kg-day	2.46E-01
				VINYL CHLORIDE	3.47E-01	ug/L	5.20E-07	mg/kg-day	1.40E+00	kg-day/mg	N/A	7.28E-07	5.20E-06	mg/kg-day	3.00E-03	mg/kg-day	1.73E-03
			Exp. Route Total									1.43E-05					2.18E+00
			Dermal														
				Metals													
				ALUMINUM	4.26E+02	ug/L	3.79E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.79E-05	mg/kg-day	1.00E+00	mg/kg-day	3.79E-05
				ARSENIC	5.77E+00	ug/L	5.13E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	7.70E-08	5.13E-07	mg/kg-day	3.00E-04	mg/kg-day	1.71E-03
				CADMIUM	4.87E-01	ug/L	4.33E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.33E-08	mg/kg-day	2.50E-05	mg/kg-day	1.73E-03
				COBALT	3.00E+00	ug/L	1.07E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.07E-07	mg/kg-day	3.00E-04	mg/kg-day	3.56E-04
				IRON	1.79E+03	ug/L	1.59E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.59E-04	mg/kg-day	7.00E-01	mg/kg-day	2.27E-04
				MANGANESE	1.54E+03	ug/L	1.37E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.37E-04	mg/kg-day	9.60E-04	mg/kg-day	1.43E-01
				THALLIUM	8.50E-02	ug/L	7.56E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.56E-09	mg/kg-day	1.00E-05	mg/kg-day	7.56E-04
				PFASs													
				PFOS	1.24E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				PFOA	2.47E-01	ug/L	N/A	mg/kg-day	7.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,1-BIPHENYL	1.50E-01	ug/L	1.91E-07	mg/kg-day	8.00E-03	kg-day/mg	N/A	1.53E-09	1.91E-06	mg/kg-day	5.00E-01	mg/kg-day	3.82E-06
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	3.14E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.14E-06	mg/kg-day	6.00E-03	mg/kg-day	5.24E-04
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	1.28E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.28E-05	mg/kg-day	2.00E-03	mg/kg-day	6.39E-03
				TRICHLOROETHENE	8.20E+00	ug/L	2.12E-06	mg/kg-day	4.60E-02	kg-day/mg	1	9.76E-08	2.12E-05	mg/kg-day	5.00E-04	mg/kg-day	4.24E-02
				VINYL CHLORIDE	3.47E-01	ug/L	2.88E-08	mg/kg-day	1.40E+00	kg-day/mg	N/A	4.03E-08	2.88E-07	mg/kg-day	3.00E-03	mg/kg-day	9.60E-05
			Exp. Route Total									2.16E-07					1.97E-01

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Shower Air	Fire Training Area	Inhalation														
				SVOCs													
				1,1-BIPHENYL	1.1E+00	ug/m^3	1.62E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.62E-02	ug/m^3	4.00E-01	ug/m^3	4.05E-02
				HEXACHLOROCYCLOPENTADIENE	1.1E+00	ug/m^3	1.53E-03	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.53E-02	ug/m^3	2.00E-01	ug/m^3	7.67E-02
				VOCs													
				TRICHLOROETHENE	1.1E+02	ug/m^3	1.51E-01	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	1	6.20E-07	1.51E+00	ug/m^3	2.00E+00	ug/m^3	7.56E-01
				VINYL CHLORIDE	6.0E+00	ug/m^3	8.47E-03	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	7.45E-08	8.47E-02	ug/m^3	1.00E+02	ug/m^3	8.47E-04
			Exp. Route Total									6.95E-07					8.74E-01
Groundwater	Indoor Air	Fire Training Area	Inhalation														
				SVOCs													
				HEXACHLOROCYCLOPENTADIENE	3.6E-03	ug/m^3	1.72E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.72E-03	ug/m^3	2.00E-01	ug/m^3	8.60E-03
				VOCs													
				TRICHLOROETHENE	9.7E-01	ug/m^3	4.65E-02	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	1	1.91E-07	4.65E-01	ug/m^3	2.00E+00	ug/m^3	2.32E-01
				VINYL CHLORIDE	1.6E-01	ug/m^3	7.84E-03	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	6.90E-08	7.84E-02	ug/m^3	1.00E+02	ug/m^3	7.84E-04
			Exp. Route Total									2.60E-07					2.42E-01
Groundwater Total				Based on USEPA PFOA								**1.55E-05**					**3.49E+00**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion														
				Metals													
				ARSENIC	5.20E+00	ug/L	1.16E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.73E-09	1.16E-08	mg/kg-day	3.00E-04	mg/kg-day	3.86E-05
				MANGANESE	8.48E+02	ug/L	1.89E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.89E-06	mg/kg-day	2.40E-02	mg/kg-day	7.87E-05
				THALLIUM	3.20E-01	ug/L	7.12E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.12E-10	mg/kg-day	1.00E-05	mg/kg-day	7.12E-05
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	8.46E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	8.46E-11	8.46E-10	mg/kg-day	2.00E-05	mg/kg-day	4.23E-05
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	2.45E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.45E-10	mg/kg-day	3.00E-04	mg/kg-day	8.16E-07
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	1.45E-11	mg/kg-day	1.00E-01	kg-day/mg	1	1.45E-12	1.45E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	1.69E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.69E-11	1.69E-10	mg/kg-day	3.00E-04	mg/kg-day	5.64E-07
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	1.16E-11	mg/kg-day	1.00E-02	kg-day/mg	1	1.16E-13	1.16E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	9.79E-12	mg/kg-day	1.10E+00	kg-day/mg	N/A	1.08E-11	9.79E-11	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	3.56E-11	mg/kg-day	1.00E-01	kg-day/mg	N/A	3.56E-12	3.56E-10	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.85E-09					2.32E-04
			Dermal														
				Metals													
				ARSENIC	5.20E+00	ug/L	3.63E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.44E-09	3.63E-08	mg/kg-day	3.00E-04	mg/kg-day	1.21E-04
				MANGANESE	8.48E+02	ug/L	5.92E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.92E-06	mg/kg-day	9.60E-04	mg/kg-day	6.17E-03
				THALLIUM	3.20E-01	ug/L	2.23E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.23E-09	mg/kg-day	1.00E-05	mg/kg-day	2.23E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	1.01E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.01E-07	mg/kg-day	3.00E-04	mg/kg-day	3.37E-04
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	1	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	4.14E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	4.55E-11	4.14E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	1	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									5.49E-09					6.85E-03
Surface Water Total												**7.34E-09**					**7.08E-03**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT ADULT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Adult

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	8.34E+00	mg/kg	1.11E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.67E-08	1.11E-07	mg/kg-day	3.00E-04	mg/kg-day	3.71E-04
				COBALT	9.36E+00	mg/kg	2.08E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.08E-07	mg/kg-day	3.00E-04	mg/kg-day	6.94E-04
				IRON	1.74E+04	mg/kg	3.87E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.87E-04	mg/kg-day	7.00E-01	mg/kg-day	5.53E-04
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	1.96E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.96E-09	1.96E-08	mg/kg-day	2.00E-05	mg/kg-day	9.79E-04
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	3.80E-09	mg/kg-day	1.00E-01	kg-day/mg	1	3.80E-10	3.80E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	2.54E-09	mg/kg-day	1.00E+00	kg-day/mg	1	2.54E-09	2.54E-08	mg/kg-day	3.00E-04	mg/kg-day	8.48E-05
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	2.62E-09	mg/kg-day	1.00E-01	kg-day/mg	1	2.62E-10	2.62E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	5.52E-10	mg/kg-day	1.00E+00	kg-day/mg	1	5.52E-10	5.52E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	1.94E-09	mg/kg-day	1.00E-01	kg-day/mg	1	1.94E-10	1.94E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.26E-08					2.68E-03
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	6.72E-10	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.01E-09	6.72E-09	mg/kg-day	3.00E-04	mg/kg-day	2.24E-05
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	3.31E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.31E-10	3.31E-09	mg/kg-day	2.00E-05	mg/kg-day	1.65E-04
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	5.96E-10	mg/kg-day	1.00E-01	kg-day/mg	1	5.96E-11	5.96E-09	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	3.99E-10	mg/kg-day	1.00E+00	kg-day/mg	1	3.99E-10	3.99E-09	mg/kg-day	3.00E-04	mg/kg-day	1.33E-05
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	4.11E-10	mg/kg-day	1.00E-01	kg-day/mg	1	4.11E-11	4.11E-09	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	8.66E-11	mg/kg-day	1.00E+00	kg-day/mg	1	8.66E-11	8.66E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	3.04E-10	mg/kg-day	1.00E-01	kg-day/mg	1	3.04E-11	3.04E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.96E-09					2.01E-04
Sediment Total												**2.46E-08**					**2.88E-03**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
CTE - Central Tendency Estimate.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOA = Perfluorooctanoic Acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
SVOCs - Semivolatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR.
Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 1	Ingestion														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	5.81E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.03E-02	mg/kg-day	1.00E+00	mg/kg-day	2.03E-02
				ARSENIC	8.11E+00	mg/kg	1.90E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.86E-07	6.66E-06	mg/kg-day	3.00E-04	mg/kg-day	2.22E-02
				COBALT	1.50E+01	mg/kg	5.87E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.05E-05	mg/kg-day	3.00E-04	mg/kg-day	6.84E-02
				IRON	2.21E+04	mg/kg	8.63E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.02E-02	mg/kg-day	7.00E-01	mg/kg-day	4.32E-02
				MANGANESE	5.23E+03	mg/kg	2.05E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.16E-03	mg/kg-day	2.40E-02	mg/kg-day	2.98E-01
				THALLIUM	8.61E-02	mg/kg	3.37E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.18E-07	mg/kg-day	1.00E-05	mg/kg-day	1.18E-02
				VANADIUM	3.47E+01	mg/kg	1.36E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.76E-05	mg/kg-day	5.04E-03	mg/kg-day	9.44E-03
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	3.00E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.00E-08	1.05E-06	mg/kg-day	2.00E-05	mg/kg-day	5.25E-02
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	9.00E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.77E-09	3.15E-08	mg/kg-day	3.00E-04	mg/kg-day	1.05E-04
			Exp. Route Total									3.20E-07					5.26E-01
			Dermal														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.11E+00	mg/kg	9.04E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.36E-08	3.16E-07	mg/kg-day	3.00E-04	mg/kg-day	1.05E-03
				COBALT	1.50E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.21E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.23E+03	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.61E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.47E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	3.99E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.99E-09	1.40E-07	mg/kg-day	2.00E-05	mg/kg-day	6.98E-03
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	1.11E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	5.89E-10	3.89E-09	mg/kg-day	3.00E-04	mg/kg-day	1.30E-05
			Exp. Route Total									1.81E-08					8.05E-03
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.48E+04	mg/kg	1.35E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.71E-03	ug/m^3	5.00E+00	ug/m^3	9.43E-04
				ARSENIC	8.11E+00	mg/kg	7.36E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.16E-10	2.58E-06	ug/m^3	1.50E-02	ug/m^3	1.72E-04
				COBALT	1.50E+01	mg/kg	1.36E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.22E-09	4.76E-06	ug/m^3	6.00E-03	ug/m^3	7.93E-04
				IRON	2.21E+04	mg/kg	2.00E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.00E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.23E+03	mg/kg	4.74E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.66E-03	ug/m^3	5.00E-02	ug/m^3	3.32E-02
				THALLIUM	8.61E-02	mg/kg	7.81E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.73E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.47E+01	mg/kg	3.15E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.10E-05	ug/m^3	1.00E-01	ug/m^3	1.10E-04
				PCBs													
				TOTAL PCBs	7.67E-01	mg/kg	6.96E-09	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	1.99E-12	2.44E-07	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	2.30E-02	mg/kg	2.09E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	6.64E-13	7.30E-09	ug/m^3	2.00E-03	ug/m^3	3.65E-06
			Exp. Route Total									1.54E-09					3.52E-02
Surface Soil Area 1 Total												**3.40E-07**					**5.70E-01**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Ingestion	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	5.69E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.99E-02	mg/kg-day	1.00E+00	mg/kg-day	1.99E-02
				ARSENIC	8.50E+00	mg/kg	2.00E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.99E-07	6.99E-06	mg/kg-day	3.00E-04	mg/kg-day	2.33E-02
				COBALT	1.17E+01	mg/kg	4.57E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.60E-05	mg/kg-day	3.00E-04	mg/kg-day	5.33E-02
				IRON	2.43E+04	mg/kg	9.50E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.33E-02	mg/kg-day	7.00E-01	mg/kg-day	4.75E-02
				MANGANESE	5.29E+02	mg/kg	2.07E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.25E-04	mg/kg-day	2.40E-02	mg/kg-day	3.02E-02
				THALLIUM	8.88E-02	mg/kg	3.48E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.22E-07	mg/kg-day	1.00E-05	mg/kg-day	1.22E-02
				VANADIUM	3.66E+01	mg/kg	1.43E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.02E-05	mg/kg-day	5.04E-03	mg/kg-day	9.95E-03
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	4.62E-09	mg/kg-day	1.60E+01	kg-day/mg	N/A	7.39E-08	1.62E-07	mg/kg-day	5.00E-05	mg/kg-day	3.23E-03
				ENDRIN KETONE	7.74E-01	mg/kg	3.03E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.06E-06	mg/kg-day	3.00E-04	mg/kg-day	3.53E-03
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	1.23E-09	mg/kg-day	9.10E+00	kg-day/mg	N/A	1.12E-08	4.32E-08	mg/kg-day	1.30E-05	mg/kg-day	3.32E-03
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	2.03E-06	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.03E-06	7.11E-05	mg/kg-day	2.00E-05	mg/kg-day	3.55E+00
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	7.08E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.75E-08	2.48E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	3.47E-08	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.84E-07	1.21E-06	mg/kg-day	3.00E-04	mg/kg-day	4.05E-03
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	6.59E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.49E-08	2.31E-06	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	3.24E-08	mg/kg-day	1.00E-02	kg-day/mg	5.3	1.72E-09	1.13E-06	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	7.91E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.19E-08	2.77E-07	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	3.77E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.00E-08	1.32E-06	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.73E-06					3.76E+00
			Dermal	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	8.50E+00	mg/kg	9.48E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.42E-08	3.32E-07	mg/kg-day	3.00E-04	mg/kg-day	1.11E-03
				COBALT	1.17E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.43E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	5.29E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	8.88E-02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.66E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	4.38E-10	mg/kg-day	1.60E+01	kg-day/mg	N/A	7.01E-09	1.53E-08	mg/kg-day	5.00E-05	mg/kg-day	3.07E-04
				ENDRIN KETONE	7.74E-01	mg/kg	2.88E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.01E-07	mg/kg-day	3.00E-04	mg/kg-day	3.35E-04
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	1.17E-10	mg/kg-day	9.10E+00	kg-day/mg	N/A	1.06E-09	4.10E-09	mg/kg-day	1.30E-05	mg/kg-day	3.15E-04
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	2.70E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.70E-07	9.44E-06	mg/kg-day	2.00E-05	mg/kg-day	4.72E-01
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	8.73E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	4.63E-09	3.06E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	4.28E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	2.27E-08	1.50E-07	mg/kg-day	3.00E-04	mg/kg-day	4.99E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	8.13E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	4.31E-09	2.85E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	3.99E-09	mg/kg-day	1.00E-02	kg-day/mg	5.3	2.12E-10	1.40E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	9.76E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	5.17E-09	3.41E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	4.66E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	2.47E-09	1.63E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.32E-07					4.75E-01

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.45E+04	mg/kg	1.32E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	4.62E-03	ug/m^3	5.00E+00	ug/m^3	9.24E-04
				ARSENIC	8.50E+00	mg/kg	7.71E-08	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	3.32E-10	2.70E-06	ug/m^3	1.50E-02	ug/m^3	1.80E-04
				COBALT	1.17E+01	mg/kg	1.06E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	9.53E-10	3.71E-06	ug/m^3	6.00E-03	ug/m^3	6.18E-04
				IRON	2.43E+04	mg/kg	2.20E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	7.71E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	5.29E+02	mg/kg	4.80E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.68E-04	ug/m^3	5.00E-02	ug/m^3	3.36E-03
				THALLIUM	8.88E-02	mg/kg	8.06E-10	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.82E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.66E+01	mg/kg	3.32E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.16E-05	ug/m^3	1.00E-01	ug/m^3	1.16E-04
				Pesticides													
				DIELDRIN	1.18E-01	mg/kg	1.07E-09	ug/m^3	4.60E-03	(ug/m^3)$^{-1}$	N/A	4.93E-12	3.75E-08	ug/m^3	N/A	ug/m^3	N/A
				ENDRIN KETONE	7.74E-01	mg/kg	7.02E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.46E-07	ug/m^3	N/A	ug/m^3	N/A
				HEPTACHLOR EPOXIDE	3.15E-02	mg/kg	2.86E-10	ug/m^3	2.60E-03	(ug/m^3)$^{-1}$	N/A	7.43E-13	1.00E-08	ug/m^3	N/A	ug/m^3	N/A
				PCBs													
				TOTAL PCBs	5.19E+01	mg/kg	4.71E-07	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	1.35E-10	1.65E-05	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]ANTHRACENE	1.81E+00	mg/kg	1.64E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	5.22E-12	5.74E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[A]PYRENE	8.86E-01	mg/kg	8.04E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	2.56E-11	2.81E-07	ug/m^3	2.00E-03	ug/m^3	1.41E-04
				BENZO[B]FLUORANTHENE	1.68E+00	mg/kg	1.53E-08	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	4.86E-12	5.35E-07	ug/m^3	N/A	ug/m^3	N/A
				BENZO[K]FLUORANTHENE	8.27E-01	mg/kg	7.50E-09	ug/m^3	6.00E-06	(ug/m^3)$^{-1}$	5.3	2.39E-13	2.63E-07	ug/m^3	N/A	ug/m^3	N/A
				DIBENZ[A,H]ANTHRACENE	2.02E-01	mg/kg	1.83E-09	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	5.83E-12	6.42E-08	ug/m^3	N/A	ug/m^3	N/A
				INDENO[1,2,3-CD]PYRENE	9.64E-01	mg/kg	8.75E-09	ug/m^3	6.00E-05	(ug/m^3)$^{-1}$	5.3	2.78E-12	3.06E-07	ug/m^3	N/A	ug/m^3	N/A
			Exp. Route Total									1.47E-09					5.34E-03
Surface Soil Area 2 Total												**3.07E-06**					**4.24E+00**

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CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 1	Ingestion	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	6.30E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.20E-02	mg/kg-day	1.00E+00	mg/kg-day	2.20E-02
				ARSENIC	9.77E+00	mg/kg	2.29E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.44E-07	8.03E-06	mg/kg-day	3.00E-04	mg/kg-day	2.68E-02
				COBALT	1.25E+01	mg/kg	4.88E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.71E-05	mg/kg-day	3.00E-04	mg/kg-day	5.69E-02
				IRON	2.74E+04	mg/kg	1.07E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.76E-02	mg/kg-day	7.00E-01	mg/kg-day	5.37E-02
				MANGANESE	8.02E+02	mg/kg	3.14E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.10E-03	mg/kg-day	2.40E-02	mg/kg-day	4.58E-02
				THALLIUM	1.09E-01	mg/kg	4.27E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.49E-07	mg/kg-day	1.00E-05	mg/kg-day	1.49E-02
				VANADIUM	3.88E+01	mg/kg	1.52E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.31E-05	mg/kg-day	5.04E-03	mg/kg-day	1.05E-02
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	3.25E-09	mg/kg-day	1.40E+00	kg-day/mg	N/A	4.55E-09	1.14E-07	mg/kg-day	3.00E-03	mg/kg-day	3.79E-05
			Exp. Route Total									3.49E-07					2.31E-01
			Dermal	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	9.77E+00	mg/kg	1.09E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	1.63E-08	3.81E-07	mg/kg-day	3.00E-04	mg/kg-day	1.27E-03
				COBALT	1.25E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	8.02E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.09E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.88E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	N/A	mg/kg-day	1.40E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-03	mg/kg-day	N/A
			Exp. Route Total									1.63E-08					1.27E-03
			Inhalation of Fugitive Dust	**Metals**													
				ALUMINUM	1.61E+04	mg/kg	1.46E-04	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	5.11E-03	ug/m^3	5.00E+00	ug/m^3	1.02E-03
				ARSENIC	9.77E+00	mg/kg	8.87E-08	ug/m^3	4.30E-03	$(ug/m^3)^{-1}$	N/A	3.81E-10	3.10E-06	ug/m^3	1.50E-02	ug/m^3	2.07E-04
				COBALT	1.25E+01	mg/kg	1.13E-07	ug/m^3	9.00E-03	$(ug/m^3)^{-1}$	N/A	1.02E-09	3.96E-06	ug/m^3	6.00E-03	ug/m^3	6.60E-04
				IRON	2.74E+04	mg/kg	2.49E-04	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	8.71E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	8.02E+02	mg/kg	7.28E-06	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	2.55E-04	ug/m^3	5.00E-02	ug/m^3	5.10E-03
				THALLIUM	1.09E-01	mg/kg	9.89E-10	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	3.46E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.88E+01	mg/kg	3.52E-07	ug/m^3	N/A	$(ug/m^3)^{-1}$	N/A	N/A	1.23E-05	ug/m^3	1.00E-01	ug/m^3	1.23E-04
				VOCs													
				VINYL CHLORIDE	8.30E-02	mg/kg	7.53E-10	ug/m^3	8.80E-06	$(ug/m^3)^{-1}$	N/A	6.63E-15	2.64E-08	ug/m^3	1.00E+02	ug/m^3	2.64E-10
			Exp. Route Total									1.40E-09					7.11E-03
Subsurface Soil Area 1 Total												**3.66E-07**					**2.39E-01**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
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FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
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Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Soil	Subsurface Soil	Fire Training Area Soil Exposure Area 2	Ingestion														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	6.21E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.17E-02	mg/kg-day	1.00E+00	mg/kg-day	2.17E-02
				ARSENIC	1.21E+01	mg/kg	2.84E-07	mg/kg-day	1.50E+00	kg-day/mg	N/A	4.26E-07	9.95E-06	mg/kg-day	3.00E-04	mg/kg-day	3.32E-02
				COBALT	1.29E+01	mg/kg	5.04E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.76E-05	mg/kg-day	3.00E-04	mg/kg-day	5.88E-02
				IRON	2.75E+04	mg/kg	1.07E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.76E-02	mg/kg-day	7.00E-01	mg/kg-day	5.37E-02
				MANGANESE	6.54E+02	mg/kg	2.56E-05	mg/kg-day	N/A	kg-day/mg	N/A	N/A	8.95E-04	mg/kg-day	2.40E-02	mg/kg-day	3.73E-02
				THALLIUM	1.16E-01	mg/kg	4.54E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.59E-07	mg/kg-day	1.00E-05	mg/kg-day	1.59E-02
				VANADIUM	3.90E+01	mg/kg	1.52E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.34E-05	mg/kg-day	5.04E-03	mg/kg-day	1.06E-02
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	2.60E-07	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.60E-07	9.10E-06	mg/kg-day	2.00E-05	mg/kg-day	4.55E-01
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.54E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	8.15E-09	5.38E-08	mg/kg-day	3.00E-04	mg/kg-day	1.79E-04
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	3.50E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.85E-09	1.22E-08	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								6.96E-07					6.86E-01
			Dermal														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E+00	mg/kg-day	N/A
				ARSENIC	1.21E+01	mg/kg	1.35E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.02E-08	4.72E-07	mg/kg-day	3.00E-04	mg/kg-day	1.57E-03
				COBALT	1.29E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	2.75E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				MANGANESE	6.54E+02	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	9.60E-04	mg/kg-day	N/A
				THALLIUM	1.16E-01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.00E-05	mg/kg-day	N/A
				VANADIUM	3.90E+01	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	1.31E-04	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	3.46E-08	mg/kg-day	1.00E+00	kg-day/mg	N/A	3.46E-08	1.21E-06	mg/kg-day	2.00E-05	mg/kg-day	6.05E-02
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	1.90E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.01E-09	6.64E-09	mg/kg-day	3.00E-04	mg/kg-day	2.21E-05
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	4.31E-11	mg/kg-day	1.00E+00	kg-day/mg	5.3	2.29E-10	1.51E-09	mg/kg-day	N/A	mg/kg-day	N/A
				Exp. Route Total								5.60E-08					6.21E-02
			Inhalation of Fugitive Dust														
				Metals													
				ALUMINUM	1.59E+04	mg/kg	1.44E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	5.04E-03	ug/m^3	5.00E+00	ug/m^3	1.01E-03
				ARSENIC	1.21E+01	mg/kg	1.10E-07	ug/m^3	4.30E-03	(ug/m^3)$^{-1}$	N/A	4.72E-10	3.84E-06	ug/m^3	1.50E-02	ug/m^3	2.56E-04
				COBALT	1.29E+01	mg/kg	1.17E-07	ug/m^3	9.00E-03	(ug/m^3)$^{-1}$	N/A	1.05E-09	4.09E-06	ug/m^3	6.00E-03	ug/m^3	6.82E-04
				IRON	2.75E+04	mg/kg	2.49E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	8.72E-03	ug/m^3	N/A	ug/m^3	N/A
				MANGANESE	6.54E+02	mg/kg	5.93E-06	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	2.08E-04	ug/m^3	5.00E-02	ug/m^3	4.15E-03
				THALLIUM	1.16E-01	mg/kg	1.05E-09	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	3.68E-08	ug/m^3	N/A	ug/m^3	N/A
				VANADIUM	3.90E+01	mg/kg	3.53E-07	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.24E-05	ug/m^3	1.00E-01	ug/m^3	1.24E-04
				PCBs													
				TOTAL PCBs	6.64E+00	mg/kg	6.03E-08	ug/m^3	2.86E-04	(ug/m^3)$^{-1}$	N/A	1.72E-11	2.11E-06	ug/m^3	N/A	ug/m^3	N/A
				SVOCs													
				BENZO[A]PYRENE	3.93E-02	mg/kg	3.57E-10	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	1.13E-12	1.25E-08	ug/m^3	2.00E-03	ug/m^3	6.24E-06
				DIBENZ[A,H]ANTHRACENE	8.93E-03	mg/kg	8.10E-11	ug/m^3	6.00E-04	(ug/m^3)$^{-1}$	5.3	2.58E-13	2.84E-09	ug/m^3	N/A	ug/m^3	N/A
				Exp. Route Total								1.54E-09					6.23E-03
Subsurface Soil Area 2 Total												**7.54E-07**					**7.55E-01**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Groundwater	Fire Training Area	Ingestion														
				Metals													
				ALUMINUM	4.26E+02	ug/L	3.04E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.06E-02	mg/kg-day	1.00E+00	mg/kg-day	1.06E-02
				ARSENIC	5.77E+00	ug/L	4.11E-06	mg/kg-day	1.50E+00	kg-day/mg	N/A	6.16E-06	1.44E-04	mg/kg-day	3.00E-04	mg/kg-day	4.79E-01
				CADMIUM	4.87E-01	ug/L	3.47E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.21E-05	mg/kg-day	5.00E-04	mg/kg-day	2.43E-02
				COBALT	3.00E+00	ug/L	2.14E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	7.48E-05	mg/kg-day	3.00E-04	mg/kg-day	2.49E-01
				IRON	1.79E+03	ug/L	1.27E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.46E-02	mg/kg-day	7.00E-01	mg/kg-day	6.37E-02
				MANGANESE	1.54E+03	ug/L	1.10E-03	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.84E-02	mg/kg-day	2.40E-02	mg/kg-day	1.60E+00
				THALLIUM	8.50E-02	ug/L	6.05E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.12E-06	mg/kg-day	1.00E-05	mg/kg-day	2.12E-01
				PFASs													
				PFOS	1.24E-01	ug/L	8.83E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.09E-06	mg/kg-day	2.00E-05	mg/kg-day	1.55E-01
				PFOA	2.47E-01	ug/L	1.76E-07	mg/kg-day	7.00E-02	kg-day/mg	N/A	1.23E-08	6.16E-06	mg/kg-day	2.00E-05	mg/kg-day	3.08E-01
				SVOCs													
				1,1-BIPHENYL	1.50E-01	ug/L	1.07E-07	mg/kg-day	8.00E-03	kg-day/mg	N/A	8.55E-10	3.74E-06	mg/kg-day	5.00E-01	mg/kg-day	7.48E-06
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	7.84E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.74E-06	mg/kg-day	6.00E-03	mg/kg-day	4.57E-04
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	6.63E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.32E-04	mg/kg-day	2.00E-03	mg/kg-day	1.16E-01
				TRICHLOROETHENE	8.20E+00	ug/L	5.84E-06	mg/kg-day	4.60E-02	kg-day/mg	5.3	1.42E-06	2.04E-04	mg/kg-day	5.00E-04	mg/kg-day	4.09E-01
				VINYL CHLORIDE	3.47E-01	ug/L	2.47E-07	mg/kg-day	1.40E+00	kg-day/mg	N/A	3.46E-07	8.65E-06	mg/kg-day	3.00E-03	mg/kg-day	2.88E-03
			Exp. Route Total									7.95E-06					3.63E+00
			Dermal														
				Metals													
				ALUMINUM	4.26E+02	ug/L	1.34E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.69E-05	mg/kg-day	1.00E+00	mg/kg-day	4.69E-05
				ARSENIC	5.77E+00	ug/L	1.81E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.72E-08	6.35E-07	mg/kg-day	3.00E-04	mg/kg-day	2.12E-03
				CADMIUM	4.87E-01	ug/L	1.53E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	5.36E-08	mg/kg-day	2.50E-05	mg/kg-day	2.14E-03
				COBALT	3.00E+00	ug/L	3.77E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.32E-07	mg/kg-day	3.00E-04	mg/kg-day	4.40E-04
				IRON	1.79E+03	ug/L	5.63E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.97E-04	mg/kg-day	7.00E-01	mg/kg-day	2.81E-04
				MANGANESE	1.54E+03	ug/L	4.84E-06	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.69E-04	mg/kg-day	9.60E-04	mg/kg-day	1.76E-01
				THALLIUM	8.50E-02	ug/L	2.67E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	9.36E-09	mg/kg-day	1.00E-05	mg/kg-day	9.36E-04
				PFASs													
				PFOS	1.24E-01	ug/L	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				PFOA	2.47E-01	ug/L	N/A	mg/kg-day	7.00E-02	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,1-BIPHENYL	1.50E-01	ug/L	7.75E-08	mg/kg-day	8.00E-03	kg-day/mg	N/A	6.20E-10	2.71E-06	mg/kg-day	5.00E-01	mg/kg-day	5.43E-06
				HEXACHLOROCYCLOPENTADIENE	1.10E-01	ug/L	1.27E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.46E-06	mg/kg-day	6.00E-03	mg/kg-day	7.43E-04
				VOCs													
				CIS-1,2-DICHLOROETHENE	9.31E+00	ug/L	5.18E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.81E-05	mg/kg-day	2.00E-03	mg/kg-day	9.07E-03
				TRICHLOROETHENE	8.20E+00	ug/L	8.61E-07	mg/kg-day	4.60E-02	kg-day/mg	5.3	2.10E-07	3.01E-05	mg/kg-day	5.00E-04	mg/kg-day	6.02E-02
				VINYL CHLORIDE	3.47E-01	ug/L	1.12E-08	mg/kg-day	1.40E+00	kg-day/mg	N/A	1.57E-08	3.93E-07	mg/kg-day	3.00E-03	mg/kg-day	1.31E-04
			Exp. Route Total									2.53E-07					2.53E-01

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Groundwater	Shower Air	Fire Training Area	Inhalation														
				SVOCs													
				1,1-BIPHENYL	1.1E+00	ug/m^3	3.52E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.23E-02	ug/m^3	4.00E-01	ug/m^3	3.08E-02
				HEXACHLOROCYCLOPENTADIENE	1.1E+00	ug/m^3	3.33E-04	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.17E-02	ug/m^3	2.00E-01	ug/m^3	5.83E-02
				VOCs													
				TRICHLOROETHENE	1.1E+02	ug/m^3	3.29E-02	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	5.3	7.14E-07	1.15E+00	ug/m^3	2.00E+00	ug/m^3	5.75E-01
				VINYL CHLORIDE	6.0E+00	ug/m^3	1.84E-03	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	1.62E-08	6.44E-02	ug/m^3	1.00E+02	ug/m^3	6.44E-04
			Exp. Route Total									7.30E-07					6.65E-01
Groundwater	Indoor Air	Fire Training Area	Inhalation														
				SVOCs													
				HEXACHLOROCYCLOPENTADIENE	3.6E-03	ug/m^3	4.91E-05	ug/m^3	N/A	(ug/m^3)$^{-1}$	N/A	N/A	1.72E-03	ug/m^3	2.00E-01	ug/m^3	8.60E-03
				VOCs													
				TRICHLOROETHENE	9.7E-01	ug/m^3	1.33E-02	ug/m^3	4.10E-06	(ug/m^3)$^{-1}$	5.3	2.89E-07	4.65E-01	ug/m^3	2.00E+00	ug/m^3	2.32E-01
				VINYL CHLORIDE	1.6E-01	ug/m^3	2.24E-03	ug/m^3	8.80E-06	(ug/m^3)$^{-1}$	N/A	1.97E-08	7.84E-02	ug/m^3	1.00E+02	ug/m^3	7.84E-04
			Exp. Route Total									3.08E-07					2.42E-01
Groundwater Total												**9.24E-06**					**4.79E+00**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF [1]	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Surface Water	Surface Water	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	5.20E+00	ug/L	1.76E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.64E-09	6.17E-08	mg/kg-day	3.00E-04	mg/kg-day	2.06E-04
				MANGANESE	8.48E+02	ug/L	2.88E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.01E-05	mg/kg-day	2.40E-02	mg/kg-day	4.20E-04
				THALLIUM	3.20E-01	ug/L	1.09E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	3.80E-09	mg/kg-day	1.00E-05	mg/kg-day	3.80E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	1.29E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	1.29E-10	4.51E-09	mg/kg-day	2.00E-05	mg/kg-day	2.26E-04
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	3.73E-11	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.31E-09	mg/kg-day	3.00E-04	mg/kg-day	4.35E-06
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	2.20E-11	mg/kg-day	1.00E-01	kg-day/mg	5.3	1.17E-11	7.72E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	2.58E-11	mg/kg-day	1.00E+00	kg-day/mg	N/A	2.58E-11	9.02E-10	mg/kg-day	3.00E-04	mg/kg-day	3.01E-06
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	1.76E-11	mg/kg-day	1.00E-02	kg-day/mg	5.3	9.35E-13	6.17E-10	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	1.49E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	1.64E-11	5.22E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	5.43E-11	mg/kg-day	1.00E-01	kg-day/mg	N/A	5.43E-12	1.90E-09	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									2.83E-09					1.24E-03
			Dermal	**Metals**													
				ARSENIC	5.20E+00	ug/L	2.17E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	3.26E-09	7.61E-08	mg/kg-day	3.00E-04	mg/kg-day	2.54E-04
				MANGANESE	8.48E+02	ug/L	3.55E-07	mg/kg-day	N/A	kg-day/mg	N/A	N/A	1.24E-05	mg/kg-day	9.60E-04	mg/kg-day	1.29E-02
				THALLIUM	3.20E-01	ug/L	1.34E-10	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.69E-09	mg/kg-day	1.00E-05	mg/kg-day	4.69E-04
				PCBs													
				TOTAL PCBs	3.80E-01	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	N/A	N/A	N/A	mg/kg-day	2.00E-05	mg/kg-day	N/A
				SVOCs													
				1,2,4,5-TETRACHLOROBENZENE	1.10E-01	ug/L	6.06E-09	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.12E-07	mg/kg-day	3.00E-04	mg/kg-day	7.07E-04
				BENZO[A]ANTHRACENE	6.50E-02	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	7.60E-02	ug/L	N/A	mg/kg-day	1.00E+00	kg-day/mg	5.3	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				BENZO[K]FLUORANTHENE	5.20E-02	ug/L	N/A	mg/kg-day	1.00E-02	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
				BIS(2-CHLOROETHYL)ETHER	4.40E-02	ug/L	2.48E-11	mg/kg-day	1.10E+00	kg-day/mg	N/A	2.73E-11	8.68E-10	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	1.60E-01	ug/L	N/A	mg/kg-day	1.00E-01	kg-day/mg	5.3	N/A	N/A	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									3.29E-09					1.44E-02
Surface Water Total												**6.12E-09**					**1.56E-02**

TABLE 7.5.CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS - HYPOTHETICAL FUTURE ON-SITE RESIDENT CHILD (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)
CENTRAL TENDENCY ESTIMATE
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-site Resident
Receptor Age: Child

							Cancer Risk Calculations						Noncancer Hazard Calculations				
					EPC		Intake/Exposure Concentration		CSF or IUR				Intake/Exposure Concentration		RfD or RfC		
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	Value	Units	Value	Units	Value	Units	ADAF (1)	Cancer Risk	Value	Units	Value	Units	Hazard Quotient
Sediment	Sediment	Fire Training Area Wetland	Ingestion	**Metals**													
				ARSENIC	8.34E+00	mg/kg	3.40E-08	mg/kg-day	1.50E+00	kg-day/mg	N/A	5.09E-08	1.19E-06	mg/kg-day	3.00E-04	mg/kg-day	3.96E-03
				COBALT	9.36E+00	mg/kg	6.35E-08	mg/kg-day	N/A	kg-day/mg	N/A	N/A	2.22E-06	mg/kg-day	3.00E-04	mg/kg-day	7.41E-03
				IRON	1.74E+04	mg/kg	1.18E-04	mg/kg-day	N/A	kg-day/mg	N/A	N/A	4.13E-03	mg/kg-day	7.00E-01	mg/kg-day	5.90E-03
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	5.97E-09	mg/kg-day	1.00E+00	kg-day/mg	N/A	5.97E-09	2.09E-07	mg/kg-day	2.00E-05	mg/kg-day	1.04E-02
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.16E-08	mg/kg-day	1.00E-01	kg-day/mg	5.3	6.13E-09	4.05E-07	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	7.75E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	4.11E-08	2.71E-07	mg/kg-day	3.00E-04	mg/kg-day	9.05E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	7.98E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	4.23E-09	2.79E-07	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	1.68E-09	mg/kg-day	1.00E+00	kg-day/mg	5.3	8.92E-09	5.89E-08	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	5.90E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.13E-09	2.07E-07	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.20E-07					2.86E-02
			Dermal														
				Metals													
				ARSENIC	8.34E+00	mg/kg	1.61E-09	mg/kg-day	1.50E+00	kg-day/mg	N/A	2.42E-09	5.64E-08	mg/kg-day	3.00E-04	mg/kg-day	1.88E-04
				COBALT	9.36E+00	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	3.00E-04	mg/kg-day	N/A
				IRON	1.74E+04	mg/kg	N/A	mg/kg-day	N/A	kg-day/mg	N/A	N/A	N/A	mg/kg-day	7.00E-01	mg/kg-day	N/A
				PCBs													
				TOTAL PCBs	8.80E-01	mg/kg	7.93E-10	mg/kg-day	1.00E+00	kg-day/mg	N/A	7.93E-10	2.78E-08	mg/kg-day	2.00E-05	mg/kg-day	1.39E-03
				SVOCs													
				BENZO[A]ANTHRACENE	1.71E+00	mg/kg	1.43E-09	mg/kg-day	1.00E-01	kg-day/mg	5.3	7.57E-10	5.00E-08	mg/kg-day	N/A	mg/kg-day	N/A
				BENZO[A]PYRENE	1.14E+00	mg/kg	9.57E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	5.07E-09	3.35E-08	mg/kg-day	3.00E-04	mg/kg-day	1.12E-04
				BENZO[B]FLUORANTHENE	1.18E+00	mg/kg	9.84E-10	mg/kg-day	1.00E-01	kg-day/mg	5.3	5.22E-10	3.45E-08	mg/kg-day	N/A	mg/kg-day	N/A
				DIBENZ[A,H]ANTHRACENE	2.48E-01	mg/kg	2.08E-10	mg/kg-day	1.00E+00	kg-day/mg	5.3	1.10E-09	7.27E-09	mg/kg-day	N/A	mg/kg-day	N/A
				INDENO[1,2,3-CD]PYRENE	8.70E-01	mg/kg	7.28E-10	mg/kg-day	1.00E-01	kg-day/mg	5.3	3.86E-10	2.55E-08	mg/kg-day	N/A	mg/kg-day	N/A
			Exp. Route Total									1.10E-08					1.69E-03
Sediment Total												**1.31E-07**					**3.03E-02**
Total Receptor Risk/Hazard												(2)					(2)

Notes:
ADAF - Age-Dependent Adjustment Factor.
CSF - Cancer Slope Factor.
CTE - Central Tendency Estimate.
EPC - Exposure Point Concentration.
IUR - Inhalation Unit Risk Factor.
N/A - Not applicable.
PCBs - Polychlorinated biphenyls.
PFASs = Poly- and Perfluoroalkyl Substances.
PFOA = Perfluorooctanoic Acid.
PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).
RfC - Inhalation Reference Concentration.
RfD - Oral Reference Dose.
SVOCs - Semivolatile organic compounds.
USEPA - United States Environmental Protection Agency.
VOCs - Volatile organic compounds.
(1) ADAF is used for chemicals with a mutagenic mode of action for carcinogenesis. The cancer risk is adjusted by multiplying the calculated risk by the ADAF. Does not apply to vinyl chloride; addressed based on CSF/IUR. Value for continuous exposure from birth used to evaluate the combined child/adult cancer risk. See Text for explanation.
(2) Presented on corresponding summary of risk/hazard table.

ATTACHMENT F

RAGS PART D TABLES 9S,
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCS

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TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	4E-02	N/A	N/A	4E-02
		Soil	ARSENIC	1E-07	N/A	2E-08	2E-07	Skin, Vascular	5E-02	N/A	7E-03	5E-02
		Exposure	COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-02	N/A	N/A	1E-02
		Area 1	IRON	N/A	N/A	N/A	N/A	Gastrointestinal	9E-02	N/A	N/A	9E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	6E-01	N/A	N/A	6E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-02	N/A	N/A	2E-02
			PCBs									
			TOTAL PCBs	3E-08	N/A	1E-08	4E-08	Eye, Nails, Immune	4E-02	N/A	2E-02	5E-02
			SVOCs									
			BENZO[A]PYRENE	7E-10	N/A	3E-10	1E-09	Developmental	3E-04	N/A	1E-04	5E-04
			Chemical Total	2E-07	N/A	4E-08	2E-07		9E-01	N/A	2E-02	9E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	7E-01	N/A	7E-01
		Soil	ARSENIC	N/A	6E-08	N/A	6E-08	Developmental	N/A	1E-01	N/A	1E-01
		Exposure	COBALT	N/A	2E-07	N/A	2E-07	Respiratory	N/A	2E-01	N/A	2E-01
		Area 1	IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E+01	N/A	3E+01
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	8E-02	N/A	8E-02
			PCBs									
			TOTAL PCBs	N/A	8E-10	N/A	8E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	4E-11	N/A	4E-11	N/A	N/A	4E-03	N/A	4E-03
			Chemical Total	N/A	3E-07	N/A	3E-07		N/A	3E+01	N/A	3E+01
		Exposure Point Total					**5E-07**					**3E+01**

TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Soil Exposure Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	4E-02	N/A	N/A	4E-02
			ARSENIC	2E-07	N/A	2E-08	2E-07	Skin, Vascular	5E-02	N/A	8E-03	6E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-02	N/A	N/A	1E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-01	N/A	N/A	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	6E-02	N/A	N/A	6E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-02	N/A	N/A	2E-02
			Pesticides									
			DIELDRIN	4E-08	N/A	1E-08	5E-08	Liver	7E-03	N/A	2E-03	9E-03
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	1E-03	N/A	4E-04	1E-03
			HEPTACHLOR EPOXIDE	2E-08	N/A	5E-09	2E-08	Liver	2E-02	N/A	6E-03	2E-02
			PCBs									
			TOTAL PCBs	2E-06	N/A	9E-07	3E-06	Eye, Nails, Immune	2E+00	N/A	1E+00	4E+00
			SVOCs									
			BENZO[A]ANTHRACENE	4E-09	N/A	2E-09	5E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	2E-08	N/A	7E-09	3E-08	Developmental	8E-03	N/A	3E-03	1E-02
			BENZO[B]FLUORANTHENE	3E-09	N/A	1E-09	5E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	5E-10	N/A	2E-10	7E-10	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	4E-09	N/A	2E-09	6E-09	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	2E-09	N/A	8E-10	3E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	2E-06	N/A	1E-06	3E-06		3E+00	N/A	1E+00	4E+00

TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Soil Exposure Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	7E-01	N/A	7E-01
			ARSENIC	N/A	6E-08	N/A	6E-08	Developmental	N/A	1E-01	N/A	1E-01
			COBALT	N/A	2E-07	N/A	2E-07	Respiratory	N/A	1E-01	N/A	1E-01
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E+00	N/A	3E+00
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	9E-02	N/A	9E-02
			Pesticides									
			DIELDRIN	N/A	9E-10	N/A	9E-10	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	4E-10	N/A	4E-10	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	5E-08	N/A	5E-08	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	2E-10	N/A	2E-10	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	9E-10	N/A	9E-10	Developmental	N/A	1E-01	N/A	1E-01
			BENZO[B]FLUORANTHENE	N/A	2E-10	N/A	2E-10	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	2E-11	N/A	2E-11	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	2E-10	N/A	2E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	1E-10	N/A	1E-10	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	3E-07	N/A	3E-07		N/A	4E+00	N/A	4E+00
		Exposure Point Total					**4E-06**					**8E+00**

TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	5E-02	N/A	N/A	5E-02
		Soil	ARSENIC	2E-07	N/A	3E-08	2E-07	Skin, Vascular	6E-02	N/A	9E-03	6E-02
		Exposure	COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-02	N/A	N/A	1E-02
		Area 1	IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-01	N/A	N/A	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	9E-02	N/A	N/A	9E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	8E-03	N/A	N/A	8E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-02	N/A	N/A	2E-02
			VOCs									
			VINYL CHLORIDE	1E-09	N/A	N/A	1E-09	Liver	8E-05	N/A	N/A	8E-05
			Chemical Total	2E-07	N/A	3E-08	2E-07		3E-01	N/A	9E-03	4E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	8E-01	N/A	8E-01
		Soil	ARSENIC	N/A	7E-08	N/A	7E-08	Developmental	N/A	2E-01	N/A	2E-01
		Exposure	COBALT	N/A	2E-07	N/A	2E-07	Respiratory	N/A	2E-01	N/A	2E-01
		Area 1	IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	4E+00	N/A	4E+00
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	9E-02	N/A	9E-02
			VOCs									
			VINYL CHLORIDE	N/A	6E-13	N/A	6E-13	Liver	N/A	2E-07	N/A	2E-07
			Chemical Total	N/A	3E-07	N/A	3E-07		N/A	5E+00	N/A	5E+00
		Exposure Point Total					**5E-07**					**5E+00**

TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	4E-02	N/A	N/A	4E-02
		Soil	ARSENIC	2E-07	N/A	4E-08	3E-07	Skin, Vascular	7E-02	N/A	1E-02	8E-02
		Exposure	COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-02	N/A	N/A	1E-02
		Area 2	IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-01	N/A	N/A	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	8E-02	N/A	N/A	8E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	8E-03	N/A	N/A	8E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-02	N/A	N/A	2E-02
			PCBs									
			TOTAL PCBS	3E-07	N/A	1E-07	4E-07	Eye, Nails, Immune	3E-01	N/A	1E-01	5E-01
			SVOCs									
			BENZO[A]PYRENE	2E-09	N/A	8E-10	3E-09	Developmental	9E-04	N/A	4E-04	1E-03
			DIBENZ[A,H]ANTHRACENE	4E-10	N/A	2E-10	6E-10	N/A	N/A	N/A	N/A	N/A
			Chemical Total	5E-07	N/A	2E-07	6E-07		7E-01	N/A	2E-01	8E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	8E-01	N/A	8E-01
		Soil	ARSENIC	N/A	9E-08	N/A	9E-08	Developmental	N/A	2E-01	N/A	2E-01
		Exposure	COBALT	N/A	2E-07	N/A	2E-07	Respiratory	N/A	2E-01	N/A	2E-01
		Area 2	IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E+00	N/A	3E+00
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	9E-02	N/A	9E-02
			PCBs									
			TOTAL PCBs	N/A	7E-09	N/A	7E-09	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	1E-10	N/A	1E-10	Developmental	N/A	1E-02	N/A	1E-02
			DIBENZ[A,H]ANTHRACENE	N/A	2E-11	N/A	2E-11	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	3E-07	N/A	3E-07		N/A	4E+00	N/A	4E+00
		Exposure Point Total					**9E-07**					**5E+00**

TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Fire Training Area	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	2E-06	N/A	5E-06	7E-06
			ARSENIC	3E-10	N/A	8E-10	1E-09	Skin, Vascular	9E-05	N/A	2E-04	3E-04
			CADMIUM	N/A	N/A	N/A	N/A	Kidney	4E-06	N/A	2E-04	2E-04
			COBALT	N/A	N/A	N/A	N/A	Thyroid	4E-06	N/A	5E-06	9E-06
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-05	N/A	3E-05	4E-05
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	3E-04	N/A	2E-02	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2E-05	N/A	4E-05	6E-05
			PFASs									
			PFOS	N/A	N/A	N/A	N/A	Developmental	3E-05	N/A	N/A	3E-05
			PFOA	5E-13	N/A	N/A	5E-13	Developmental	5E-05	N/A	N/A	5E-05
			SVOCs									
			1,1-BIPHENYL	5E-14	N/A	9E-12	9E-12	Kidney	9E-09	N/A	2E-06	2E-06
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	None reported	5E-09	N/A	2E-06	2E-06
			VOCs									
			CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	Increased relative kidney weights	2E-06	N/A	5E-05	5E-05
			TRICHLOROETHENE	1E-11	N/A	6E-10	6E-10	Thyroid, Developmental, Vascular	9E-05	N/A	4E-03	4E-03
			VINYL CHLORIDE	8E-12	N/A	1E-10	1E-10	Liver	5E-07	N/A	9E-06	9E-06
			Chemical Total	3E-10	N/A	2E-09	2E-09		6E-04	N/A	2E-02	3E-02
Groundwater	Trench Air	Fire Training Area	**SVOCs**									
			1,1-BIPHENYL	N/A	N/A	N/A	N/A	Liver, Kidney	N/A	9E-03	N/A	9E-03
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	2E-04	N/A	2E-04
			VOCs									
			TRICHLOROETHENE	N/A	7E-11	N/A	7E-11	Thyroid, Vascular	N/A	1E-03	N/A	1E-03
			VINYL CHLORIDE	N/A	5E-07	N/A	5E-07	Liver	N/A	1E-06	N/A	1E-06
			Chemical Total	N/A	5E-07	N/A	5E-07		N/A	1E-02	N/A	1E-02
		Exposure Point Total					**5E-07**					**4E-02**

TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Fire Training	**Metals**									
		Area	ARSENIC	3E-10	N/A	5E-10	8E-10	Skin, Vascular	9E-05	N/A	2E-04	3E-04
		Wetland	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-04	N/A	8E-03	9E-03
			THALLIUM	N/A	N/A	N/A	N/A	Hair	4E-05	N/A	8E-05	1E-04
			PCBs									
			TOTAL PCBs	3E-11	N/A	N/A	3E-11	Eye, Nails, Immune	3E-05	N/A	N/A	3E-05
			SVOCs									
			1,2,4,5-TETRACHLOROBENZENE	N/A	N/A	N/A	N/A	Kidney	2E-05	N/A	5E-03	5E-03
			BENZO[A]ANTHRACENE	2E-13	N/A	N/A	2E-13	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	3E-12	N/A	N/A	3E-12	Developmental	1E-06	N/A	N/A	1E-06
			BENZO[K]FLUORANTHENE	2E-14	N/A	N/A	2E-14	N/A	N/A	N/A	N/A	N/A
			BIS(2-CHLOROETHYL)ETHER	2E-12	N/A	4E-12	6E-12	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	6E-13	N/A	N/A	6E-13	N/A	N/A	N/A	N/A	N/A
			Chemical Total	3E-10	N/A	5E-10	8E-10		4E-04	N/A	1E-02	1E-02
		Exposure Point Total					**8E-10**					**1E-02**
Sediment	Sediment	Fire Training	**Metals**									
		Area	ARSENIC	2E-08	N/A	3E-09	2E-08	Skin, Vascular	6E-03	N/A	9E-04	7E-03
		Wetland	COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-03	N/A	N/A	1E-03
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	8E-03	N/A	N/A	8E-03
			PCBs									
			TOTAL PCBs	4E-09	N/A	2E-09	6E-09	Eye, Nails, Immune	5E-03	N/A	2E-03	7E-03
			SVOCs									
			BENZO[A]ANTHRACENE	4E-10	N/A	2E-10	6E-10	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	3E-09	N/A	1E-09	4E-09	Developmental	1E-03	N/A	5E-04	2E-03
			BENZO[B]FLUORANTHENE	3E-10	N/A	1E-10	4E-10	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	6E-10	N/A	3E-10	9E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	2E-10	N/A	9E-11	3E-10	N/A	N/A	N/A	N/A	N/A
			Chemical Total	3E-08	N/A	7E-09	3E-08		2E-02	N/A	4E-03	**3E-02**
		Exposure Point Total					**3E-08**					**3E-02**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Soil Exposure Area 1							**Surface soil (a), Groundwater, surface water, sediment**					**Surface soil (a), Groundwater, surface water, sediment**
							1E-06					**3E+01**
							Subsurface soil (b), Groundwater, surface water, sediment					**Subsurface soil (b), Groundwater, surface water, sediment**
							1E-06					**6E+00**
Soil Exposure Area 2							**Surface soil (a), Groundwater, surface water, sediment**					**Surface soil (a), Groundwater, surface water, sediment**
							4E-06					**8E+00**
							Subsurface soil (b), Groundwater, surface water, sediment					**Subsurface soil (b), Groundwater, surface water, sediment**
							1E-06					**5E+00**

Notes:

COPC - Chemical of potential concern.

HI - Hazard Index.

N/A - Not applicable.

TABLE 9.1.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

PCBs - Polychlorinated biphenyls.

PFASs = Poly- and Perfluoroalkyl Substances.

PFOA = Perfluorooctanoic Acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area, groundwater, and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area, groundwater, and sediment and surface water within the wetland.

TABLE 9.1.TE.RME

RGET ENDPOINT EVALUATION - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMEN

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future

Receptor Population: Construction Worker

Receptor Age: Adult

Total HI by Target Endpoint - Soil Exposure Area 1

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Weltand Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	1E-01	2E-01	4E-03	1E-06	2E-03	1E-01	2E-01
Gastrointestinal	9E-02	1E-01	4E-05	--	8E-03	1E-01	1E-01
Hair	3E-02	3E-02	6E-05	1E-04	--	3E-02	3E-02
Immune	5E-02	--	--	3E-05	7E-03	6E-02	7E-03
Kidney	--	--	9E-03	5E-03	--	1E-02	1E-02
Liver	--	8E-05	9E-03	--	--	9E-03	9E-03
Nasal	--	--	2E-04	--	--	2E-04	2E-04
Nervous System	3E+01	5E+00	2E-02	9E-03	--	3E+01	5E+00
None reported	--	--	2E-06	--	--	2E-06	2E-06
Respiratory	3E-01	2E-01	--	--	--	3E-01	2E-01
Thyroid	1E-02	1E-02	5E-03	--	1E-03	2E-02	2E-02
Eye	5E-02	--	--	3E-05	7E-03	6E-02	7E-03
Nails	5E-02	--	--	3E-05	7E-03	6E-02	7E-03
Skin	5E-02	6E-02	3E-04	3E-04	7E-03	6E-02	7E-02
Vascular	5E-02	6E-02	5E-03	3E-04	7E-03	7E-02	8E-02
Minimum:	1E-02	8E-05	2E-06	1E-06	1E-03	2E-06	2E-06
Maximum:	**3E+01**	**5E+00**	**2E-02**	**9E-03**	**8E-03**	**3E+01**	**5E+00**

Total HI by Target Endpoint - Soil Exposure Area 2

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Weltand Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	3E-01	2E-01	4E-03	1E-06	2E-03	3E-01	2E-01
Gastrointestinal	1E-01	1E-01	4E-05	--	8E-03	1E-01	1E-01
Hair	3E-02	3E-02	6E-05	1E-04	--	3E-02	3E-02
Immune	4E+00	5E-01	--	3E-05	7E-03	4E+00	5E-01
Kidney	--	--	9E-03	5E-03	--	1E-02	1E-02
Liver	4E-02	--	9E-03	--	--	4E-02	9E-03
Nasal	--	--	2E-04	--	--	2E-04	2E-04
Nervous System	3E+00	4E+00	2E-02	9E-03	--	3E+00	4E+00
None reported	--	--	2E-06	--	--	2E-06	2E-06
Respiratory	2E-01	3E-01	--	--	--	2E-01	3E-01
Thyroid	1E-02	1E-02	5E-03	--	1E-03	2E-02	2E-02
Eye	4E+00	5E-01	--	3E-05	7E-03	4E+00	5E-01
Nails	4E+00	5E-01	--	3E-05	7E-03	4E+00	5E-01
Skin	6E-02	8E-02	3E-04	3E-04	7E-03	6E-02	9E-02
Vascular	6E-02	8E-02	5E-03	3E-04	7E-03	7E-02	9E-02
Minimum:	1E-02	1E-02	2E-06	1E-06	1E-03	2E-06	2E-06
Maximum:	**4E+00**	**4E+00**	**2E-02**	**9E-03**	**8E-03**	**4E+00**	**4E+00**

TABLE 9.1.TE.RME

RGET ENDPOINT EVALUATION - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMEN

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future

Receptor Population: Construction Worker

Receptor Age: Adult

Notes:

-- Not applicable.

HI - Hazard Index.

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area, groundwater, and sediment and surface water within the w

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area, groundwater, and sediment and surface water within th

TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	5E-02	N/A	N/A	5E-02
		Area 1	ARSENIC	3E-06	N/A	4E-07	3E-06	Skin, Vascular	5E-02	N/A	6E-03	6E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	2E-01	N/A	N/A	2E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-01	N/A	N/A	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	7E-01	N/A	N/A	7E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	3E-02	N/A	N/A	3E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-02	N/A	N/A	2E-02
			PCBs									
			TOTAL PCBs	6E-07	N/A	2E-07	8E-07	Eye, Nails, Immune	1E-01	N/A	4E-02	2E-01
			SVOCs									
			BENZO[A]PYRENE	6E-08	N/A	2E-08	8E-08	Developmental	4E-04	N/A	1E-04	5E-04
			Chemical Total	3E-06	N/A	6E-07	4E-06		1E+00	N/A	5E-02	1E+00
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	9E-05	N/A	9E-05
		Area 1	ARSENIC	N/A	4E-10	N/A	4E-10	Developmental	N/A	2E-05	N/A	2E-05
			COBALT	N/A	2E-09	N/A	2E-09	Respiratory	N/A	8E-05	N/A	8E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E-03	N/A	3E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1E-05	N/A	1E-05
			PCBs									
			TOTAL PCBs	N/A	5E-12	N/A	5E-12	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	5E-13	N/A	5E-13	N/A	N/A	6E-07	N/A	6E-07
			Chemical Total	N/A	2E-09	N/A	2E-09		N/A	4E-03	N/A	4E-03
		Exposure Point Total					**4E-06**					**1E+00**

TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	5E-02	N/A	N/A	5E-02
			ARSENIC	3E-06	N/A	4E-07	3E-06	Skin, Vascular	6E-02	N/A	7E-03	6E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-01	N/A	N/A	1E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-01	N/A	N/A	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	7E-02	N/A	N/A	7E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	3E-02	N/A	N/A	3E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-02	N/A	N/A	2E-02
			Pesticides									
			DIELDRIN	7E-07	N/A	2E-07	9E-07	Liver	8E-03	N/A	2E-03	1E-02
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	8E-03	N/A	2E-03	1E-02
			HEPTACHLOR EPOXIDE	3E-07	N/A	8E-08	4E-07	Liver	2E-02	N/A	5E-03	3E-02
			PCBs									
			TOTAL PCBs	4E-05	N/A	2E-05	5E-05	Eye, Nails, Immune	9E+00	N/A	3E+00	1E+01
			SVOCs									
			BENZO[A]ANTHRACENE	3E-07	N/A	9E-08	4E-07	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	1E-06	N/A	5E-07	2E-06	Developmental	1E-02	N/A	3E-03	1E-02
			BENZO[B]FLUORANTHENE	3E-07	N/A	9E-08	4E-07	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	4E-08	N/A	1E-08	5E-08	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	3E-07	N/A	1E-07	4E-07	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	2E-07	N/A	5E-08	2E-07	N/A	N/A	N/A	N/A	N/A
			Chemical Total	4E-05	N/A	2E-05	6E-05		9E+00	N/A	3E+00	1E+01

TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	9E-05	N/A	9E-05
			ARSENIC	N/A	4E-10	N/A	4E-10	Developmental	N/A	2E-05	N/A	2E-05
			COBALT	N/A	1E-09	N/A	1E-09	Respiratory	N/A	6E-05	N/A	6E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E-04	N/A	3E-04
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1E-05	N/A	1E-05
			Pesticides									
			DIELDRIN	N/A	6E-12	N/A	6E-12	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	3E-12	N/A	3E-12	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	3E-10	N/A	3E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	3E-12	N/A	3E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	1E-11	N/A	1E-11	Developmental	N/A	1E-05	N/A	1E-05
			BENZO[B]FLUORANTHENE	N/A	2E-12	N/A	2E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	3E-13	N/A	3E-13	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	3E-12	N/A	3E-12	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	1E-12	N/A	1E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	2E-09	N/A	2E-09		N/A	5E-04	N/A	5E-04
		Exposure Point Total					**6E-05**					**1E+01**

TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	5E-02	N/A	N/A	5E-02
		Area 1	ARSENIC	3E-06	N/A	5E-07	4E-06	Skin, Vascular	6E-02	N/A	8E-03	7E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-01	N/A	N/A	1E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-01	N/A	N/A	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1E-01	N/A	N/A	1E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	4E-02	N/A	N/A	4E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	3E-02	N/A	N/A	3E-02
			VOCs									
			VINYL CHLORIDE	4E-08	N/A	N/A	4E-08	Liver	9E-05	N/A	N/A	9E-05
			Chemical Total	3E-06	N/A	5E-07	4E-06		6E-01	N/A	8E-03	6E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	1E-04	N/A	1E-04
		Area 1	ARSENIC	N/A	5E-10	N/A	5E-10	Developmental	N/A	2E-05	N/A	2E-05
			COBALT	N/A	1E-09	N/A	1E-09	Respiratory	N/A	7E-05	N/A	7E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	5E-04	N/A	5E-04
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1E-05	N/A	1E-05
			VOCs									
			VINYL CHLORIDE	N/A	9E-15	N/A	9E-15	Liver	N/A	3E-11	N/A	3E-11
			Chemical Total	N/A	2E-09	N/A	2E-09		N/A	7E-04	N/A	7E-04
		Exposure Point Total					**4E-06**					**6E-01**

TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	5E-02	N/A	N/A	5E-02
			ARSENIC	4E-06	N/A	6E-07	5E-06	Skin, Vascular	8E-02	N/A	9E-03	9E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-01	N/A	N/A	1E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-01	N/A	N/A	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	9E-02	N/A	N/A	9E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	4E-02	N/A	N/A	4E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	3E-02	N/A	N/A	3E-02
			PCBs									
			TOTAL PCBS	5E-06	N/A	2E-06	7E-06	Eye, Nails, Immune	1E+00	N/A	4E-01	1E+00
			SVOCs									
			BENZO[A]PYRENE	2E-07	N/A	5E-08	2E-07	Developmental	1E-03	N/A	3E-04	1E-03
			DIBENZ[A,H]ANTHRACENE	3E-08	N/A	1E-08	4E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	9E-06	N/A	3E-06	1E-05		2E+00	N/A	4E-01	2E+00
Soil	Fugitive Dust from Subsurface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	1E-04	N/A	1E-04
			ARSENIC	N/A	6E-10	N/A	6E-10	Developmental	N/A	3E-05	N/A	3E-05
			COBALT	N/A	1E-09	N/A	1E-09	Respiratory	N/A	7E-05	N/A	7E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	4E-04	N/A	4E-04
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1E-05	N/A	1E-05
			PCBs									
			TOTAL PCBs	N/A	4E-11	N/A	4E-11	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	1E-12	N/A	1E-12	Developmental	N/A	2E-06	N/A	2E-06
			DIBENZ[A,H]ANTHRACENE	N/A	3E-13	N/A	3E-13	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	2E-09	N/A	2E-09		N/A	6E-04	N/A	6E-04
		Exposure Point Total					**1E-05**					**2E+00**

TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Fire Training Area	**Metals**									
			ARSENIC	3E-08	N/A	5E-08	8E-08	Skin, Vascular	4E-04	N/A	5E-04	9E-04
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	8E-04	N/A	3E-02	3E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	8E-04	N/A	9E-04	2E-03
			PCBs						N/A		N/A	N/A
			TOTAL PCBs	3E-09	N/A	N/A	3E-09	Eye, Nails, Immune	5E-04	N/A	N/A	5E-04
			SVOCs									
			1,2,4,5-TETRACHLOROBENZENE	N/A	N/A	N/A	N/A	Kidney	9E-06	N/A	1E-03	1E-03
			BENZO[A]ANTHRACENE	8E-11	N/A	N/A	8E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	3E-10	N/A	N/A	3E-10	Developmental	6E-06	N/A	N/A	6E-06
			BENZO[K]FLUORANTHENE	6E-12	N/A	N/A	6E-12	N/A	N/A	N/A	N/A	N/A
			BIS(2-CHLOROETHYL)ETHER	2E-10	N/A	4E-10	6E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	5E-11	N/A	N/A	5E-11	N/A	N/A	N/A	N/A	N/A
			Chemical Total	3E-08	N/A	5E-08	8E-08		2E-03	N/A	3E-02	3E-02
		Exposure Point Total					**8E-08**					**3E-02**
Sediment	Sediment	Fire Training Area	**Metals**									
			ARSENIC	8E-07	N/A	1E-07	9E-07	Skin, Vascular	2E-02	N/A	2E-03	2E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	3E-02	N/A	N/A	3E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2E-02	N/A	N/A	2E-02
			PCBs									
			TOTAL PCBs	2E-07	N/A	7E-08	3E-07	Eye, Nails, Immune	4E-02	N/A	1E-02	6E-02
			SVOCs									
			BENZO[A]ANTHRACENE	8E-08	N/A	3E-08	1E-07	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	5E-07	N/A	2E-07	7E-07	Developmental	4E-03	N/A	1E-03	5E-03
			BENZO[B]FLUORANTHENE	5E-08	N/A	2E-08	7E-08	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	1E-07	N/A	4E-08	1E-07	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	4E-08	N/A	1E-08	5E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	2E-06	N/A	4E-07	2E-06		1E-01	N/A	2E-02	**1E-01**
		Exposure Point Total					**2E-06**					**1E-01**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Area 1							**Surface soil (a), surface water, sediment)**	**6E-06**				**Surface soil (a), surface water, sediment)**	**1E+00**
							Subsurface soil (b), surface water, sediment)	**6E-06**				**Subsurface soil (b), surface water, sediment)**	**7E-01**
Area 2							**Surface soil (a), surface water, sediment)**	**6E-05**				**Surface soil (a), surface water, sediment)**	**1E+01**
							Subsurface soil (b), surface water, sediment)	**1E-05**				**Subsurface soil (b), surface water, sediment)**	**2E+00**

TABLE 9.2.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

COPC - Chemical of potential concern.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 9.2.TE.RME

'ARGET ENDPOINT EVALUATION - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future

Receptor Population: Recreational User

Receptor Age: Child

Total HI by Target Endpoint - Soil Exposure Area 1

Target Endpoint	Media				Total HI	
	Surface Soil	Subsurface Soil	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	5E-04	2E-05	6E-06	5E-03	5E-03	5E-03
Gastrointestinal	1E-01	1E-01	--	2E-02	1E-01	2E-01
Hair	5E-02	6E-02	2E-03	--	5E-02	6E-02
Immune	2E-01	--	5E-04	6E-02	2E-01	6E-02
Kidney	--	--	1E-03	--	1E-03	1E-03
Liver	--	9E-05	--	--	--	9E-05
Nasal	--	--	--	--	--	--
Nervous System	8E-01	2E-01	3E-02	--	8E-01	2E-01
None reported	--	--	--	--	--	--
Respiratory	9E-05	8E-05	--	--	9E-05	8E-05
Thyroid	2E-01	1E-01	--	3E-02	2E-01	2E-01
Eye	2E-01	--	5E-04	6E-02	2E-01	6E-02
Nails	2E-01	--	5E-04	6E-02	2E-01	6E-02
Skin	6E-02	7E-02	9E-04	2E-02	8E-02	9E-02
Vascular	6E-02	7E-02	9E-04	2E-02	8E-02	9E-02
Minimum:	9E-05	2E-05	6E-06	5E-03	9E-05	8E-05
Maximum:	**8E-01**	**2E-01**	**3E-02**	**6E-02**	**8E-01**	**2E-01**

Total HI by Target Endpoint - Soil Exposure Area 2

Target Endpoint	Media				Total HI	
	Surface Soil	Subsurface Soil	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	1E-02	1E-03	6E-06	5E-03	2E-02	6E-03
Gastrointestinal	1E-01	1E-01	--	2E-02	1E-01	2E-01
Hair	5E-02	6E-02	2E-03	--	5E-02	7E-02
Immune	1E+01	1E+00	5E-04	6E-02	1E+01	2E+00
Kidney	--	--	1E-03	--	1E-03	1E-03
Liver	5E-02	--	--	--	5E-02	--
Nasal	--	--	--	--	--	--
Nervous System	1E-01	1E-01	3E-02	--	1E-01	2E-01
None reported	--	--	--	--	--	--
Respiratory	7E-05	8E-05	--	--	7E-05	8E-05
Thyroid	1E-01	1E-01	--	3E-02	2E-01	2E-01
Eye	1E+01	1E+00	5E-04	6E-02	1E+01	2E+00
Nails	1E+01	1E+00	5E-04	6E-02	1E+01	2E+00
Skin	6E-02	9E-02	9E-04	2E-02	8E-02	1E-01
Vascular	6E-02	9E-02	9E-04	2E-02	8E-02	1E-01
Minimum:	7E-05	8E-05	6E-06	5E-03	7E-05	8E-05
Maximum:	**1E+01**	**1E+00**	**3E-02**	**6E-02**	**1E+01**	**2E+00**

TABLE 9.2.TE.RME

'ARGET ENDPOINT EVALUATION - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, WETLAND SURFACE WATER, AND WETLAND SEDIMENT

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational User
Receptor Age: Child

Notes:

-- Not applicable.

HI - Hazard Index.

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetla

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the w

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	7.62E-03	N/A	N/A	8E-03
		Area 1	ARSENIC	1.34E-06	N/A	2.83E-07	2E-06	Skin, Vascular	8.33E-03	N/A	1.76E-03	1E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	2.57E-02	N/A	N/A	3E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1.62E-02	N/A	N/A	2E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1.12E-01	N/A	N/A	1E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	4.42E-03	N/A	N/A	4E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	3.54E-03	N/A	N/A	4E-03
			PCBs									
			TOTAL PCBs	2.81E-07	N/A	1.67E-07	4E-07	Eye, Nails, Immune	1.97E-02	N/A	1.17E-02	3E-02
			SVOCs									
			BENZO[A]PYRENE	6.79E-09	N/A	3.73E-09	1E-08	Developmental	6.34E-05	N/A	3.49E-05	1E-04
			Chemical Total	2E-06	N/A	5E-07	2E-06		2E-01	N/A	1E-02	2E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	6E-04	N/A	6E-04
		Area 1	ARSENIC	N/A	3E-09	N/A	3E-09	Developmental	N/A	1E-04	N/A	1E-04
			COBALT	N/A	1E-08	N/A	1E-08	Respiratory	N/A	5E-04	N/A	5E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E-02	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	7E-05	N/A	7E-05
			PCBs									
			TOTAL PCBs	N/A	3E-11	N/A	3E-11	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	2E-12	N/A	2E-12	N/A	N/A	4E-06	N/A	4E-06
			Chemical Total	N/A	1E-08	N/A	1E-08		N/A	2E-02	N/A	2E-02
		Exposure Point Total					**2E-06**					**2E-01**

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	7E-03	N/A	N/A	7E-03
			ARSENIC	1E-06	N/A	3E-07	2E-06	Skin, Vascular	9E-03	N/A	1.85E-03	1E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	2E-02	N/A	N/A	2E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2E-02	N/A	N/A	2E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	5E-03	N/A	N/A	5E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	4E-03	N/A	N/A	4E-03
			Pesticides									
			DIELDRIN	3E-07	N/A	1E-07	5E-07	Liver	1E-03	N/A	5.13E-04	2E-03
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	1E-03	N/A	5.61E-04	2E-03
			HEPTACHLOR EPOXIDE	1E-07	N/A	6E-08	2E-07	Liver	3E-03	N/A	1.46E-03	5E-03
			PCBs									
			TOTAL PCBs	2E-05	N/A	1E-05	3E-05	Eye, Nails, Immune	1E+00	N/A	7.89E-01	2E+00
			SVOCs									
			BENZO[A]ANTHRACENE	3E-08	N/A	2E-08	5E-08	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	2E-07	N/A	9E-08	3E-07	Developmental	2E-03	N/A	8.35E-04	2E-03
			BENZO[B]FLUORANTHENE	3E-08	N/A	2E-08	5E-08	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	4E-09	N/A	2E-09	7E-09	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	4E-08	N/A	2E-08	6E-08	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	2E-08	N/A	1E-08	3E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	2E-05	N/A	1E-05	3E-05		1E+00	N/A	8E-01	2E+00

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	6.16E-04	N/A	6E-04
			ARSENIC	N/A	3E-09	N/A	3E-09	Developmental	N/A	1.20E-04	N/A	1E-04
			COBALT	N/A	8E-09	N/A	8E-09	Respiratory	N/A	4.12E-04	N/A	4E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2.24E-03	N/A	2E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	7.75E-05	N/A	8E-05
			Pesticides									
			DIELDRIN	N/A	4E-11	N/A	4E-11	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	2E-11	N/A	2E-11	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	2E-09	N/A	2E-09	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	8E-12	N/A	8E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	4E-11	N/A	4E-11	Developmental	N/A	9.38E-05	N/A	9E-05
			BENZO[B]FLUORANTHENE	N/A	8E-12	N/A	8E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	1E-12	N/A	1E-12	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	9E-12	N/A	9E-12	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	4E-12	N/A	4E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	1E-08	N/A	1E-08		N/A	4E-03	N/A	4E-03
		Exposure Point Total					**3E-05**					**2E+00**

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	8E-03	N/A	N/A	8E-03
		Area 1	ARSENIC	2E-06	N/A	3E-07	2E-06	Skin, Vascular	1E-02	N/A	2E-03	1E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	2E-02	N/A	N/A	2E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2E-02	N/A	N/A	2E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	4E-03	N/A	N/A	4E-03
			VOCs									
			VINYL CHLORIDE	1E-08	N/A	N/A	1E-08	Liver	1E-05	N/A	N/A	1E-05
			Chemical Total	2E-06	N/A	3E-07	2E-06		9E-02	N/A	2E-03	9E-02
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	7E-04	N/A	7E-04
		Area 1	ARSENIC	N/A	3E-09	N/A	3E-09	Developmental	N/A	1E-04	N/A	1E-04
			COBALT	N/A	8E-09	N/A	8E-09	Respiratory	N/A	4E-04	N/A	4E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E-03	N/A	3E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	8E-05	N/A	8E-05
			VOCs									
			VINYL CHLORIDE	N/A	3E-14	N/A	3E-14	Liver	N/A	2E-10	N/A	2E-10
			Chemical Total	N/A	1E-08	N/A	1E-08		N/A	5E-03	N/A	5E-03
		Exposure Point Total					**2E-06**					**9E-02**

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	8E-03	N/A	N/A	8E-03
		Area 2	ARSENIC	2E-06	N/A	4E-07	2E-06	Skin, Vascular	1E-02	N/A	3E-03	2E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	2E-02	N/A	N/A	2E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2E-02	N/A	N/A	2E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	4E-03	N/A	N/A	4E-03
			PCBs									
			TOTAL PCBS	2E-06	N/A	1E-06	4E-06	Eye, Nails, Immune	2E-01	N/A	1E-01	3E-01
			SVOCs									
			BENZO[A]PYRENE	2E-08	N/A	1E-08	3E-08	Developmental	2E-04	N/A	9E-05	3E-04
			DIBENZ[A,H]ANTHRACENE	4E-09	N/A	2E-09	6E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	4E-06	N/A	2E-06	6E-06		3E-01	N/A	1E-01	4E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	7E-04	N/A	7E-04
		Area 2	ARSENIC	N/A	4E-09	N/A	4E-09	Developmental	N/A	2E-04	N/A	2E-04
			COBALT	N/A	9E-09	N/A	9E-09	Respiratory	N/A	5E-04	N/A	5E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E-03	N/A	3E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	8E-05	N/A	8E-05
			PCBs									
			TOTAL PCBs	N/A	3E-10	N/A	3E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	5E-12	N/A	5E-12	Developmental	N/A	1E-05	N/A	1E-05
			DIBENZ[A,H]ANTHRACENE	N/A	1E-12	N/A	1E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	1E-08	N/A	1E-08		N/A	4E-03	N/A	4E-03
		Exposure Point Total					**6E-06**					**4E-01**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Area 1							**Surface soil (a)**					**Surface soil (a)**
							2E-06					**2E-01**
							Subsurface soil (b)					**Subsurface soil (b)**
							2E-06					**9E-02**
Area 2							**Surface soil (a)**					**Surface soil (a)**
							3E-05					**2E+00**
							Subsurface soil (b)					**Subsurface soil (b)**
							6E-06					**4E-01**

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

COPC - Chemical of potential concern.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area.

TABLE 9.3.TE.RME

TARGET ENDPOINT EVALUATION - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Outdoor Industrial Worker

Receptor Age: Adult

Total HI by Target Endpoint - Area 1

Target Endpoint	Media		Total HI	
	Surface Soil	Subsurface Soil	Surface Soil (a)	Subsurface Soil (b)
Developmental	2E-04	1E-04	2E-04	1E-04
Gastrointestinal	2E-02	2E-02	2E-02	2E-02
Hair	8E-03	1E-02	8E-03	1E-02
Immune	3E-02	--	3E-02	--
Kidney	--	--	--	--
Liver	--	1E-05	--	1E-05
Nasal	--	--	--	--
Nervous System	1E-01	3E-02	1E-01	3E-02
None reported	--	--	--	--
Respiratory	6E-04	5E-04	6E-04	5E-04
Thyroid	3E-02	2E-02	3E-02	2E-02
Eye	3E-02	--	3E-02	--
Nails	3E-02	--	3E-02	--
Skin	1E-02	1E-02	1E-02	1E-02
Vascular	1E-02	1E-02	1E-02	1E-02
Minimum	2E-04	1E-05	2E-04	1E-05
Maximum	**1E-01**	**3E-02**	**1E-01**	**3E-02**

Total HI by Target Endpoint - Area 2

Target Endpoint	Media		Total HI	
	Surface Soil	Subsurface Soil	Surface Soil (a)	Subsurface Soil (b)
Developmental	3E-03	4E-04	3E-03	4E-04
Gastrointestinal	2E-02	2E-02	2E-02	2E-02
Hair	8E-03	1E-02	8E-03	1E-02
Immune	2E+00	3E-01	2E+00	3E-01
Kidney	--	--	--	--
Liver	9E-03	--	9E-03	--
Nasal	--	--	--	--
Nervous System	2E-02	3E-02	2E-02	3E-02
None reported	--	--	--	--
Respiratory	5E-04	5E-04	5E-04	5E-04
Thyroid	2E-02	2E-02	2E-02	2E-02
Eye	2E+00	3E-01	2E+00	3E-01
Nails	2E+00	3E-01	2E+00	3E-01
Skin	1E-02	2E-02	1E-02	2E-02
Vascular	1E-02	2E-02	1E-02	2E-02
Minimum	5E-04	4E-04	5E-04	4E-04
Maximum	**2E+00**	**3E-01**	**2E+00**	**3E-01**

TABLE 9.3.TE.RME

TARGET ENDPOINT EVALUATION - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Notes:

-- Not applicable.

HI - Hazard Index.

RME - Reasonable Maximum Exposure.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area.

TABLE 9.4.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE INDOOR INDUSTRIAL WORKER (GROUNDWATER TO INDOOR AIR)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Indoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Indoor Air	Fire Training Area	**SVOCs**									
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	1E-03	N/A	1E-03
			VOCs									
			TRICHLOROETHENE	N/A	8E-08	N/A	8E-08	Thyroid, Vascular	N/A	3E-02	N/A	3E-02
			VINYL CHLORIDE	N/A	1E-08	N/A	1E-08	Liver	N/A	9E-05	N/A	9E-05
			Chemical Total	N/A	1E-07	N/A	1E-07		N/A	3E-02	N/A	3E-02
		Exposure Point Total					**1E-07**	**Exposure Point Total**				**3E-02**
						Total of Receptor Risks:	**1E-07**	**Total of Receptor HI (see below for sum by target endpoint):**				**3E-02**

Notes:

COPC - Chemical of potential concern.

HI - Hazard Index.

N/A - Not applicable.

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

VOCs - Volatile organic compounds.

Total HI by Target Endpoint				
Liver	N/A	9E-05	N/A	9E-05
Nasal	N/A	1E-03	N/A	1E-03
Thyroid	N/A	3E-02	N/A	3E-02
Vascular	N/A	3E-02	N/A	3E-02

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	8.13E-02	N/A	N/A	8E-02
		Soil Exposure	ARSENIC	4E-06	N/A	6E-07	5E-06	Skin, Vascular	8.89E-02	N/A	1.05E-02	1E-01
		Area 1	COBALT	N/A	N/A	N/A	N/A	Thyroid	2.74E-01	N/A	N/A	3E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1.73E-01	N/A	N/A	2E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1.19E+00	N/A	N/A	1E+00
			THALLIUM	N/A	N/A	N/A	N/A	Hair	4.72E-02	N/A	N/A	5E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	3.78E-02	N/A	N/A	4E-02
			PCBs									
			TOTAL PCBs	9E-07	N/A	4E-07	1E-06	Eye, Nails, Immune	2.10E-01	N/A	6.98E-02	3E-01
			SVOCs									
			BENZO[A]PYRENE	1E-07	N/A	3E-08	1E-07	Developmental	6.76E-04	N/A	2.08E-04	9E-04
			Chemical Total	6E-06	N/A	1E-06	7E-06		2E+00	N/A	8E-02	2E+00
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	1.89E-03	N/A	2E-03
		Soil Exposure	ARSENIC	N/A	8E-09	N/A	8E-09	Developmental	N/A	3.43E-04	N/A	3E-04
		Area 1	COBALT	N/A	3E-08	N/A	3E-08	Respiratory	N/A	1.59E-03	N/A	2E-03
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	6.64E-02	N/A	7E-02
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	2.21E-04	N/A	2E-04
			PCBs									
			TOTAL PCBs	N/A	1E-10	N/A	1E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	1E-11	N/A	1E-11	N/A	N/A	1.18E-05	N/A	1E-05
			Chemical Total	N/A	4E-08	N/A	4E-08		N/A	7E-02	N/A	7E-02
		Exposure Point Total					**7E-06**					**2E+00**

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	7.97E-02	N/A	N/A	8E-02
		Soil Exposure	ARSENIC	5E-06	N/A	7E-07	5E-06	Skin, Vascular	9.32E-02	N/A	1.11E-02	1E-01
		Area 2	COBALT	N/A	N/A	N/A	N/A	Thyroid	2.13E-01	N/A	N/A	2E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1.90E-01	N/A	N/A	2E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1.21E-01	N/A	N/A	1E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	4.87E-02	N/A	N/A	5E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	3.98E-02	N/A	N/A	4E-02
			Pesticides									
			DIELDRIN	1E-06	N/A	3E-07	1E-06	Liver	1.29E-02	N/A	3.07E-03	2E-02
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	1.41E-02	N/A	3.35E-03	2E-02
			HEPTACHLOR EPOXIDE	5E-07	N/A	1E-07	6E-07	Liver	3.67E-02	N/A	8.70E-03	5E-02
			PCBs									
			TOTAL PCBs	6E-05	N/A	3E-05	9E-05	Eye, Nails, Immune	1.42E+01	N/A	4.72E+00	2E+01
			SVOCs									
			BENZO[A]ANTHRACENE	5E-07	N/A	2E-07	6E-07	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	2E-06	N/A	8E-07	3E-06	Developmental	1.62E-02	N/A	4.99E-03	2E-02
			BENZO[B]FLUORANTHENE	4E-07	N/A	1E-07	6E-07	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	6E-08	N/A	2E-08	8E-08	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	5E-07	N/A	2E-07	7E-07	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	3E-07	N/A	8E-08	3E-07	N/A	N/A	N/A	N/A	N/A
			Chemical Total	7E-05	N/A	3E-05	1E-04		2E+01	N/A	5E+00	2E+01

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Soil Exposure Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	1.85E-03	N/A	2E-03
			ARSENIC	N/A	9E-09	N/A	9E-09	Developmental	N/A	3.60E-04	N/A	4E-04
			COBALT	N/A	2E-08	N/A	2E-08	Respiratory	N/A	1.24E-03	N/A	1E-03
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	6.72E-03	N/A	7E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	2.33E-04	N/A	2E-04
			Pesticides									
			DIELDRIN	N/A	1E-10	N/A	1E-10	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	5E-11	N/A	5E-11	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	7E-09	N/A	7E-09	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	5E-11	N/A	5E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	2E-10	N/A	2E-10	Developmental	N/A	2.81E-04	N/A	3E-04
			BENZO[B]FLUORANTHENE	N/A	5E-11	N/A	5E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	6E-12	N/A	6E-12	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	6E-11	N/A	6E-11	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	3E-11	N/A	3E-11	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	4E-08	N/A	4E-08		N/A	1E-02	N/A	1E-02
		Exposure Point Total					**1E-04**					**2E+01**

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	8.82E-02	N/A	N/A	9E-02
		Soil Exposure	ARSENIC	5E-06	N/A	8E-07	6E-06	Skin, Vascular	1.07E-01	N/A	1.27E-02	1E-01
		Area 1	COBALT	N/A	N/A	N/A	N/A	Thyroid	2.28E-01	N/A	N/A	2E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2.15E-01	N/A	N/A	2E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1.83E-01	N/A	N/A	2E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	5.97E-02	N/A	N/A	6E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	4.22E-02	N/A	N/A	4E-02
			VOCs									
			VINYL CHLORIDE	7E-08	N/A	N/A	7E-08	Liver	1.52E-04	N/A	N/A	2E-04
			Chemical Total	5E-06	N/A	8E-07	6E-06		9E-01	N/A	1E-02	9E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	2.04E-03	N/A	2E-03
		Soil Exposure	ARSENIC	N/A	1E-08	N/A	1E-08	Developmental	N/A	4.14E-04	N/A	4E-04
		Area 1	COBALT	N/A	3E-08	N/A	3E-08	Respiratory	N/A	1.32E-03	N/A	1E-03
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	1.02E-02	N/A	1E-02
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	2.46E-04	N/A	2E-04
			VOCs									
			VINYL CHLORIDE	N/A	2E-13	N/A	2E-13	Liver	N/A	5.27E-10	N/A	5E-10
			Chemical Total	N/A	4E-08	N/A	4E-08		N/A	1E-02	N/A	1E-02
		Exposure Point Total					**6E-06**					**9E-01**

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	8.69E-02	N/A	N/A	9E-02
		Soil Exposure	ARSENIC	7E-06	N/A	9E-07	8E-06	Skin, Vascular	1.33E-01	N/A	1.57E-02	1E-01
		Area 2	COBALT	N/A	N/A	N/A	N/A	Thyroid	2.35E-01	N/A	N/A	2E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2.15E-01	N/A	N/A	2E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1.49E-01	N/A	N/A	1E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	6.36E-02	N/A	N/A	6E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	4.23E-02	N/A	N/A	4E-02
			PCBs									
			TOTAL PCBS	8E-06	N/A	3E-06	1E-05	Eye, Nails, Immune	1.82E+00	N/A	6.05E-01	2E+00
			SVOCs									
			BENZO[A]PYRENE	3E-07	N/A	8E-08	3E-07	Developmental	1.83E-03	N/A	5.63E-04	2E-03
			DIBENZ[A,H]ANTHRACENE	6E-08	N/A	2E-08	7E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	2E-05	N/A	4E-06	2E-05		3E+00	N/A	6E-01	3E+00
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	2.02E-03	N/A	2E-03
		Soil Exposure	ARSENIC	N/A	1E-08	N/A	1E-08	Developmental	N/A	5.12E-04	N/A	5E-04
		Area 2	COBALT	N/A	3E-08	N/A	3E-08	Respiratory	N/A	1.36E-03	N/A	1E-03
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	8.30E-03	N/A	8E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	2.47E-04	N/A	2E-04
			PCBs									
			TOTAL PCBs	N/A	9E-10	N/A	9E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	3E-11	N/A	3E-11	Developmental	N/A	3.18E-05	N/A	3E-05
			DIBENZ[A,H]ANTHRACENE	N/A	6E-12	N/A	6E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	4E-08	N/A	4E-08		N/A	1E-02	N/A	1E-02
		Exposure Point Total					**2E-05**					**3E+00**

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Fire Training Area	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	2.12E-02	N/A	9.36E-05	2E-02
			ARSENIC	1E-04	N/A	6E-07	1E-04	Skin, Vascular	9.59E-01	N/A	4.23E-03	1E+00
			CADMIUM	N/A	N/A	N/A	N/A	Kidney	4.86E-02	N/A	4.28E-03	5E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	4.99E-01	N/A	8.79E-04	5E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1.27E-01	N/A	5.62E-04	1E-01
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	3.20E+00	N/A	3.52E-01	4E+00
			THALLIUM	N/A	N/A	N/A	N/A	Hair	6.98E-01	N/A	3.08E-03	7E-01
			PFAS									
			PFOS	N/A	N/A	N/A	N/A	Developmental	3.09E-01	N/A	N/A	3E-01
			PFOA	2E-07	N/A	N/A	2E-07	Developmental	6.16E-01	N/A	N/A	6E-01
			SVOCs									
			1,1-BIPHENYL	2E-08	N/A	2E-08	4E-08	Kidney	2.09E-05	N/A	1.52E-05	4E-05
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	None reported	9.14E-04	N/A	1.48E-03	2E-03
			VOCs									
			CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	Increased relative kidney weights	2.32E-01	N/A	1.81E-02	3E-01
			TRICHLOROETHENE	1E-05	N/A	2E-06	2E-05	Thyroid, Developmental, Vascular	9.97E-01	N/A	1.47E-01	1E+00
			VINYL CHLORIDE	6E-06	N/A	3E-07	7E-06	Liver	5.77E-03	N/A	2.61E-04	6E-03
			Chemical Total	1E-04	N/A	3E-06	1E-04	Chemical Total	8E+00	N/A	5E-01	8E+00
Groundwater	Shower Air	Fire Training Area	**SVOCs**									
			1,1-BIPHENYL	N/A	N/A	N/A	N/A	Liver, Kidney	N/A	8.61E-02	N/A	9E-02
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	1.17E-01	N/A	1E-01
			VOCs									
			TRICHLOROETHENE	N/A	1E-05	N/A	1E-05	Thyroid, Vascular	N/A	1.40E+00	N/A	1E+00
			VINYL CHLORIDE	N/A	5E-07	N/A	5E-07	Liver	N/A	1.29E-03	N/A	1E-03
			Chemical Total	N/A	1E-05	N/A	1E-05		N/A	2E+00	N/A	2E+00
Groundwater	Indoor Air	Fire Training Area	**SVOCs**									
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	1.72E-02	N/A	2E-02
			VOCs									
			TRICHLOROETHENE	N/A	3E-06	N/A	3E-06	Thyroid, Vascular	N/A	4.65E-01	N/A	5E-01
			VINYL CHLORIDE	N/A	5E-07	N/A	5E-07	Liver	N/A	1.57E-03	N/A	2E-03
			Chemical Total	N/A	3E-06	N/A	3E-06		N/A	5E-01	N/A	5E-01
		Exposure Point Total					**1E-04**	Exposure Point Total				**1E+01**

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Fire Training	**Metals**									
		Area	ARSENIC	3E-08	N/A	5E-08	8E-08	Skin, Vascular	4.11E-04	N/A	5.07E-04	9E-04
		Wetland	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	8.39E-04	N/A	2.59E-02	3E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	7.60E-04	N/A	9.38E-04	2E-03
			PCBs						N/A		N/A	N/A
			TOTAL PCBs	3E-09	N/A	N/A	3E-09	Eye, Nails, Immune	4.51E-04	N/A	N/A	5E-04
			SVOCs									
			1,2,4,5-TETRACHLOROBENZENE	N/A	N/A	N/A	N/A	Kidney	8.71E-06	N/A	1.41E-03	1E-03
			BENZO[A]ANTHRACENE	8E-11	N/A	N/A	8E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	3E-10	N/A	N/A	3E-10	Developmental	6.02E-06	N/A	N/A	6E-06
			BENZO[K]FLUORANTHENE	6E-12	N/A	N/A	6E-12	N/A	N/A	N/A	N/A	N/A
			BIS(2-CHLOROETHYL)ETHER	2E-10	N/A	4E-10	6E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	5E-11	N/A	N/A	5E-11	N/A	N/A	N/A	N/A	N/A
			Chemical Total	3E-08	N/A	5E-08	8E-08		2E-03	N/A	3E-02	3E-02
		Exposure Point Total					**8E-08**					**3E-02**
Sediment	Sediment	Fire Training	**Metals**									
		Area	ARSENIC	8E-07	N/A	1E-07	9E-07	Skin, Vascular	1.58E-02	N/A	1.88E-03	2E-02
		Wetland	COBALT	N/A	N/A	N/A	N/A	Thyroid	2.96E-02	N/A	N/A	3E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2.36E-02	N/A	N/A	2E-02
			PCBs									
			TOTAL PCBs	2E-07	N/A	7E-08	3E-07	Eye, Nails, Immune	4.18E-02	N/A	1.39E-02	6E-02
			SVOCs									
			BENZO[A]ANTHRACENE	8E-08	N/A	3E-08	1E-07	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	5E-07	N/A	2E-07	7E-07	Developmental	3.62E-03	N/A	1.12E-03	5E-03
			BENZO[B]FLUORANTHENE	5E-08	N/A	2E-08	7E-08	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	1E-07	N/A	4E-08	1E-07	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	4E-08	N/A	1E-08	5E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	2E-06	N/A	4E-07	2E-06		1E-01	N/A	2E-02	**1E-01**
		Exposure Point Total					**2E-06**					**1E-01**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Soil Exposure Area 1			**Surface soil (a),Groundwater, surface water, sediment)**				**2E-04**	**Surface soil (a), Groundwater, surface water, sediment)**				**1E+01**
			Subsurface soil (a),Groundwater, surface water, sediment)				**2E-04**	**Suburface soil (a), Groundwater, surface water, sediment)**				**1E+01**
Soil Exposure Area 2			**Surface soil (a),Groundwater, surface water, sediment)**				**3E-04**	**Surface soil (a), Groundwater, surface water, sediment)**				**3E+01**
			Subsurface soil (a),Groundwater, surface water, sediment)				**2E-04**	**Subsurface soil (a), Groundwater, surface water, sediment)**				**1E+01**

TABLE 9.5.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

COPC - Chemical of potential concern.

EPHs - Extractable petroleum hydrocarbons.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

PFASs = Poly- and Perfluoroalkyl Substances.

PFOA = Perfluorooctanoic Acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

RME - Reasonable Maximum Exposure.

SVOCs - Semivolatile organic compounds.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 9.5.TE.RME

RGET ENDPOINT EVALUATION - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMEN

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Child

Total HI by Target Endpoint - Soil Exposure Area 1

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	1E-03	4E-04	2E+00	6E-06	5E-03	2E+00	2E+00
Gastrointestinal	2E-01	2E-01	1E-01	--	2E-02	3E-01	4E-01
Hair	8E-02	1E-01	7E-01	2E-03	--	8E-01	8E-01
Immune	3E-01	--	--	5E-04	6E-02	3E-01	6E-02
Kidney	--	--	4E-01	1E-03	--	4E-01	4E-01
Liver	--	2E-04	1E-01	--	--	1E-01	1E-01
Nasal	--	--	1E-01	--	--	1E-01	1E-01
Nervous System	1E+00	3E-01	4E+00	3E-02	--	5E+00	4E+00
None reported	--	--	2E-03	--	--	2E-03	2E-03
Respiratory	2E-03	2E-03	--	--	--	2E-03	2E-03
Thyroid	3E-01	2E-01	4E+00	--	3E-02	4E+00	4E+00
Eye	3E-01	--	--	5E-04	6E-02	3E-01	6E-02
Nails	3E-01	--	--	5E-04	6E-02	3E-01	6E-02
Skin	1E-01	1E-01	1E+00	9E-04	2E-02	1E+00	1E+00
Vascular	1E-01	1E-01	4E+00	9E-04	2E-02	4E+00	4E+00
Minimum:	1E-03	2E-04	2E-03	6E-06	5E-03	2E-03	2E-03
Maximum:	**1E+00**	**3E-01**	**4E+00**	**3E-02**	**6E-02**	**5E+00**	**4E+00**

Total HI by Target Endpoint - Soil Exposure Area 2

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	2E-02	3E-03	2E+00	6E-06	5E-03	2E+00	2E+00
Gastrointestinal	2E-01	2E-01	1E-01	--	2E-02	3E-01	4E-01
Hair	9E-02	1E-01	7E-01	2E-03	--	8E-01	8E-01
Immune	2E+01	2E+00	--	5E-04	6E-02	2E+01	2E+00
Kidney	--	--	4E-01	1E-03	--	4E-01	4E-01
Liver	8E-02	--	1E-01	--	--	2E-01	1E-01
Nasal	--	--	1E-01	--	--	1E-01	1E-01
Nervous System	2E-01	2E-01	4E+00	3E-02	--	4E+00	4E+00
None reported	--	--	2E-03	--	--	2E-03	2E-03
Respiratory	1E-03	2E-03	--	--	--	1E-03	2E-03
Thyroid	2E-01	2E-01	4E+00	--	3E-02	4E+00	4E+00
Eye	2E+01	2E+00	--	5E-04	6E-02	2E+01	2E+00
Nails	2E+01	2E+00	--	5E-04	6E-02	2E+01	2E+00
Skin	1E-01	1E-01	1E+00	9E-04	2E-02	1E+00	1E+00
Vascular	1E-01	1E-01	4E+00	9E-04	2E-02	4E+00	4E+00
Minimum:	1E-03	2E-03	2E-03	6E-06	5E-03	1E-03	2E-03
Maximum:	**2E+01**	**2E+00**	**4E+00**	**3E-02**	**6E-02**	**2E+01**	**4E+00**

TABLE 9.5.TE.RME

RGET ENDPOINT EVALUATION - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMEN

REASONABLE MAXIMUM EXPOSURE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Child

Notes:

-- Not applicable.

HI - Hazard Index.

RME - Reasonable Maximum Exposure.

USEPA - United States Environmental Protection Agency.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
		Soil Exposure	ARSENIC	4E-08	N/A	5E-09	4E-08	Skin, Vascular	1E-02	N/A	1E-03	1E-02
		Area 1	COBALT	N/A	N/A	N/A	N/A	Thyroid	4E-03	N/A	N/A	4E-03
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2E-02	N/A	N/A	2E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-01	N/A	N/A	2E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	5E-03	N/A	N/A	5E-03
			PCBs									
			TOTAL PCBs	4E-09	N/A	1E-09	5E-09	Eye, Nails, Immune	9E-03	N/A	3E-03	1E-02
			SVOCs									
			BENZO[A]PYRENE	1E-10	N/A	4E-11	2E-10	Developmental	5E-05	N/A	2E-05	7E-05
			Chemical Total	4E-08	N/A	6E-09	5E-08		2E-01	N/A	5E-03	2E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	4E-01	N/A	4E-01
		Soil Exposure	ARSENIC	N/A	3E-08	N/A	3E-08	Developmental	N/A	7E-02	N/A	7E-02
		Area 1	COBALT	N/A	1E-07	N/A	1E-07	Respiratory	N/A	9E-02	N/A	9E-02
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	1E+01	N/A	1E+01
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	4E-02	N/A	4E-02
			PCBs									
			TOTAL PCBs	N/A	2E-10	N/A	2E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	1E-11	N/A	1E-11	N/A	N/A	1E-03	N/A	1E-03
			Chemical Total	N/A	1E-07	N/A	1E-07		N/A	1E+01	N/A	1E+01
		Exposure Point Total					**2E-07**					**1E+01**

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area Soil Exposure Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
			ARSENIC	4E-08	N/A	5E-09	4E-08	Skin, Vascular	1E-02	N/A	2E-03	1E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	3E-03	N/A	N/A	3E-03
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2E-02	N/A	N/A	2E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	5E-03	N/A	N/A	5E-03
			Pesticides									
			DIELDRIN	1E-08	N/A	2E-09	1E-08	Liver	2E-03	N/A	4E-04	2E-03
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	3E-04	N/A	7E-05	3E-04
			HEPTACHLOR EPOXIDE	1E-09	N/A	4E-10	2E-09	Liver	2E-03	N/A	4E-04	2E-03
			PCBs									
			TOTAL PCBs	3E-07	N/A	9E-08	4E-07	Eye, Nails, Immune	6E-01	N/A	2E-01	8E-01
			SVOCs									
			BENZO[A]ANTHRACENE	9E-10	N/A	3E-10	1E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	4E-09	N/A	1E-09	6E-09	Developmental	2E-03	N/A	7E-04	3E-03
			BENZO[B]FLUORANTHENE	8E-10	N/A	3E-10	1E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	4E-11	N/A	1E-11	6E-11	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	1E-09	N/A	3E-10	1E-09	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	5E-10	N/A	2E-10	6E-10	N/A	N/A	N/A	N/A	N/A
			Chemical Total	3E-07	N/A	1E-07	4E-07		7E-01	N/A	2E-01	9E-01

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Soil Exposure Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	4E-01	N/A	4E-01
			ARSENIC	N/A	3E-08	N/A	3E-08	Developmental	N/A	7E-02	N/A	7E-02
			COBALT	N/A	9E-08	N/A	9E-08	Respiratory	N/A	7E-02	N/A	7E-02
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	1E+00	N/A	1E+00
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	4E-02	N/A	4E-02
			Pesticides									
			DIELDRIN	N/A	5E-10	N/A	5E-10	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	7E-11	N/A	7E-11	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	1E-08	N/A	1E-08	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	9E-11	N/A	9E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	5E-10	N/A	5E-10	Developmental	N/A	5E-02	N/A	5E-02
			BENZO[B]FLUORANTHENE	N/A	9E-11	N/A	9E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	4E-12	N/A	4E-12	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	1E-10	N/A	1E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	5E-11	N/A	5E-11	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	1E-07	N/A	1E-07		N/A	2E+00	N/A	2E+00
		Exposure Point Total					**6E-07**					**3E+00**

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
		Soil Exposure	ARSENIC	4E-08	N/A	6E-09	5E-08	Skin, Vascular	1E-02	N/A	2E-03	2E-02
		Area 1	COBALT	N/A	N/A	N/A	N/A	Thyroid	3E-03	N/A	N/A	3E-03
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	3E-02	N/A	N/A	3E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	5E-03	N/A	N/A	5E-03
			VOCs									
			VINYL CHLORIDE	3E-10	N/A	N/A	3E-10	Liver	2E-05	N/A	N/A	2E-05
			Chemical Total	4E-08	N/A	6E-09	5E-08		9E-02	N/A	2E-03	9E-02
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	4E-01	N/A	4E-01
		Soil Exposure	ARSENIC	N/A	4E-08	N/A	4E-08	Developmental	N/A	8E-02	N/A	8E-02
		Area 1	COBALT	N/A	1E-07	N/A	1E-07	Respiratory	N/A	8E-02	N/A	8E-02
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E+00	N/A	2E+00
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	5E-02	N/A	5E-02
			VOCs									
			VINYL CHLORIDE	N/A	3E-13	N/A	3E-13	Liver	N/A	1E-07	N/A	1E-07
			Chemical Total	N/A	1E-07	N/A	1E-07		N/A	3E+00	N/A	3E+00
		Exposure Point Total					**2E-07**					**3E+00**

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
		Soil Exposure	ARSENIC	5E-08	N/A	7E-09	6E-08	Skin, Vascular	2E-02	N/A	2E-03	2E-02
		Area 2	COBALT	N/A	N/A	N/A	N/A	Thyroid	3E-03	N/A	N/A	3E-03
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	3E-02	N/A	N/A	3E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	5E-03	N/A	N/A	5E-03
			PCBs									
			TOTAL PCBS	3E-08	N/A	1E-08	5E-08	Eye, Nails, Immune	8E-02	N/A	3E-02	1E-01
			SVOCs									
			BENZO[A]PYRENE	2E-10	N/A	7E-11	3E-10	Developmental	9E-05	N/A	3E-05	1E-04
			DIBENZ[A,H]ANTHRACENE	5E-11	N/A	2E-11	6E-11	N/A	N/A	N/A	N/A	N/A
			Chemical Total	9E-08	N/A	2E-08	1E-07		2E-01	N/A	3E-02	2E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	4E-01	N/A	4E-01
		Soil Exposure	ARSENIC	N/A	5E-08	N/A	5E-08	Developmental	N/A	1E-01	N/A	1E-01
		Area 2	COBALT	N/A	1E-07	N/A	1E-07	Respiratory	N/A	8E-02	N/A	8E-02
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E+00	N/A	2E+00
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	5E-02	N/A	5E-02
			PCBs									
			TOTAL PCBs	N/A	2E-09	N/A	2E-09	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	2E-11	N/A	2E-11	Developmental	N/A	2E-03	N/A	2E-03
			DIBENZ[A,H]ANTHRACENE	N/A	5E-12	N/A	5E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	1E-07	N/A	1E-07		N/A	2E+00	N/A	2E+00
		Exposure Point Total					**3E-07**					**2E+00**

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Fire Training Area	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	N/A	1E-06	1E-06
			ARSENIC	N/A	N/A	2E-10	2E-10	Skin, Vascular	N/A	N/A	6E-05	6E-05
			CADMIUM	N/A	N/A	N/A	N/A	Kidney	N/A	N/A	6E-05	6E-05
			COBALT	N/A	N/A	N/A	N/A	Thyroid	N/A	N/A	1E-06	1E-06
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	N/A	N/A	8E-06	8E-06
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	N/A	5E-03	5E-03
			THALLIUM	N/A	N/A	N/A	N/A	Hair	N/A	N/A	7E-06	7E-06
			PFASs									
			PFOS	N/A	N/A	N/A	N/A	Developmental	N/A	N/A	N/A	N/A
			PFOA	N/A	N/A	N/A	N/A	Developmental	N/A	N/A	N/A	N/A
			SVOCs									
			1,1-BIPHENYL	N/A	N/A	2E-12	2E-12	Kidney	N/A	N/A	4E-07	4E-07
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	None reported	N/A	N/A	7E-07	7E-07
			VOCs									
			CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	Increased relative kidney weights	N/A	N/A	2E-05	2E-05
			TRICHLOROETHENE	N/A	N/A	2E-10	2E-10	Thyroid, Developmental, Vascular	N/A	N/A	9E-04	9E-04
			VINYL CHLORIDE	N/A	N/A	4E-11	4E-11	Liver	N/A	N/A	2E-06	2E-06
			Chemical Total	N/A	N/A	4E-10	4E-10	Chemical Total	N/A	N/A	6E-03	6E-03
Groundwater	Trench Air	Fire Training Area	**SVOCs**									
			1,1-BIPHENYL	N/A	N/A	N/A	N/A	Liver, Kidney	N/A	2E-03	N/A	2E-03
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	4E-05	N/A	4E-05
			VOCs									
			TRICHLOROETHENE	N/A	2E-11	N/A	2E-11	Thyroid, Vascular	N/A	3E-04	N/A	3E-04
			VINYL CHLORIDE	N/A	1E-07	N/A	1E-07	Liver	N/A	2E-07	N/A	2E-07
			Chemical Total	N/A	1E-07	N/A	1E-07		N/A	3E-03	N/A	3E-03
		Exposure Point Total					**1E-07**	Exposure Point Total				**9E-03**

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Fire Training	**Metals**									
		Area	ARSENIC	N/A	N/A	3E-10	3E-10	Skin, Vascular	N/A	N/A	8E-05	8E-05
		Wetland	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	N/A	4E-03	4E-03
			THALLIUM	N/A	N/A	N/A	N/A	Hair	N/A	N/A	4E-05	4E-05
			PCBs									
			TOTAL PCBs	N/A	N/A	N/A	N/A	Eye, Nails, Immune	N/A	N/A	N/A	N/A
			SVOCs									
			1,2,4,5-TETRACHLOROBENZENE	N/A	N/A	N/A	N/A	Kidney	N/A	N/A	2E-03	2E-03
			BENZO[A]ANTHRACENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	N/A	N/A	N/A	Developmental	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			BIS(2-CHLOROETHYL)ETHER	N/A	N/A	2E-12	2E-12	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	N/A	3E-10	3E-10		N/A	N/A	7E-03	7E-03
		Exposure Point Total					**3E-10**					**7E-03**
Sediment	Sediment	Fire Training	**Metals**									
		Area	ARSENIC	5E-09	N/A	5E-10	5E-09	Skin, Vascular	1E-03	N/A	2E-04	2E-03
		Wetland	COBALT	N/A	N/A	N/A	N/A	Thyroid	3E-04	N/A	N/A	3E-04
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	2E-03	N/A	N/A	2E-03
			PCBs									
			TOTAL PCBs	5E-10	N/A	2E-10	7E-10	Eye, Nails, Immune	1E-03	N/A	4E-04	2E-03
			SVOCs									
			BENZO[A]ANTHRACENE	1E-10	N/A	3E-11	1E-10	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	7E-10	N/A	2E-10	9E-10	Developmental	3E-04	N/A	9E-05	4E-04
			BENZO[B]FLUORANTHENE	7E-11	N/A	2E-11	9E-11	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	2E-10	N/A	4E-11	2E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	5E-11	N/A	1E-11	7E-11	N/A	N/A	N/A	N/A	N/A
			Chemical Total	6E-09	N/A	9E-10	7E-09		5E-03	N/A	6E-04	**6E-03**
		Exposure Point Total					**7E-09**					**6E-03**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Area 1			**Surface soil (a), Groundwater, surface water, sediment**				**3E-07**	**Surface soil (a), Groundwater, surface water, sediment**				**1E+01**
			Subsurface soil (b), Groundwater, surface water, sediment				**3E-07**	**Subsurface soil (b), Groundwater, surface water, sediment**				**3E+00**
Area 2			**Surface soil (a), Groundwater, surface water, sediment**				**7E-07**	**Surface soil (a), Groundwater, surface water, sediment**				**3E+00**
			Subsurface soil (b), Groundwater, surface water, sediment				**4E-07**	**Subsurface soil (b), Groundwater, surface water, sediment**				**2E+00**

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

COPC - Chemical of potential concern.

CTE - Central Tendency Estimate.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

PFASs = Poly- and Perfluoroalkyl Substances.

PFOA = Perfluorooctanoic Acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

SVOCs - Semivolatile organic compounds.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area, groundwater, and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area, groundwater, and sediment and surface water within the wetland.

TABLE 9.1.TE CTE

TARGET ENDPOINT EVALUATION - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future

Receptor Population: Construction Worker

Receptor Age: Adult

Total HI by Target Endpoint - Soil Exposure Area 1

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	7E-02	8E-02	9E-04	--	4E-04	7E-02	8E-02
Gastrointestinal	2E-02	3E-02	8E-06	--	2E-03	2E-02	3E-02
Hair	6E-03	7E-03	7E-06	4E-05	--	6E-03	7E-03
Immune	1E-02	--	--	--	2E-03	1E-02	2E-03
Kidney	--	--	2E-03	2E-03	--	5E-03	5E-03
Liver	--	2E-05	2E-03	--	--	2E-03	2E-03
Nasal	--	--	4E-05	--	--	4E-05	4E-05
Nervous System	1E+01	2E+00	5E-03	4E-03	--	1E+01	2E+00
None reported	--	--	7E-07	--	--	7E-07	7E-07
Respiratory	1E-01	1E-01	--	--	--	1E-01	1E-01
Thyroid	4E-03	3E-03	1E-03	--	3E-04	5E-03	4E-03
Eye	1E-02	--	--	--	2E-03	1E-02	2E-03
Nails	1E-02	--	--	--	2E-03	1E-02	2E-03
Skin	1E-02	2E-02	6E-05	8E-05	2E-03	1E-02	2E-02
Vascular	1E-02	2E-02	1E-03	8E-05	2E-03	2E-02	2E-02
Minimum:	4E-03	2E-05	7E-07	4E-05	3E-04	7E-07	7E-07
Maximum:	**1E+01**	**2E+00**	**5E-03**	**4E-03**	**2E-03**	**1E+01**	**2E+00**

Total HI by Target Endpoint - Soil Exposure Area 2

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	1E-01	1E-01	9E-04	--	4E-04	1E-01	1E-01
Gastrointestinal	2E-02	3E-02	8E-06	--	2E-03	3E-02	3E-02
Hair	7E-03	8E-03	7E-06	4E-05	--	7E-03	8E-03
Immune	8E-01	1E-01	--	--	2E-03	8E-01	1E-01
Kidney	--	--	2E-03	2E-03	--	5E-03	5E-03
Liver	5E-03	--	2E-03	--	--	7E-03	2E-03
Nasal	--	--	4E-05	--	--	4E-05	4E-05
Nervous System	2E+00	2E+00	5E-03	4E-03	--	2E+00	2E+00
None reported	--	--	7E-07	--	--	7E-07	7E-07
Respiratory	1E-01	1E-01	--	--	--	1E-01	1E-01
Thyroid	3E-03	3E-03	1E-03	--	3E-04	4E-03	5E-03
Eye	8E-01	1E-01	--	--	2E-03	8E-01	1E-01
Nails	8E-01	1E-01	--	--	2E-03	8E-01	1E-01
Skin	1E-02	2E-02	6E-05	8E-05	2E-03	2E-02	2E-02
Vascular	1E-02	2E-02	1E-03	8E-05	2E-03	2E-02	2E-02
Minimum:	3E-03	3E-03	7E-07	4E-05	3E-04	7E-07	7E-07
Maximum:	**2E+00**	**2E+00**	**5E-03**	**4E-03**	**2E-03**	**2E+00**	**2E+00**

TABLE 9.1.TE CTE

TARGET ENDPOINT EVALUATION - CURRENT/FUTURE CONSTRUCTION WORKER (SOIL, GROUNDWATER, WETLAND SURFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Notes:

-- Not applicable.

CTE - Central Tendency Estimate.

HI - Hazard Index.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 9.2.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
		Area 1	ARSENIC	2E-07	N/A	1E-08	2E-07	Skin, Vascular	1E-02	N/A	6E-04	1E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	4E-02	N/A	N/A	4E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	3E-02	N/A	N/A	3E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-01	N/A	N/A	2E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	7E-03	N/A	N/A	7E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			PCBs									
			TOTAL PCBs	2E-08	N/A	3E-09	3E-08	Eye, Nails, Immune	3E-02	N/A	4E-03	4E-02
			SVOCs									
			BENZO[A]PYRENE	3E-09	N/A	4E-10	3E-09	Developmental	6E-05	N/A	8E-06	7E-05
			Chemical Total	3E-07	N/A	2E-08	3E-07		3E-01	N/A	5E-03	3E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	5E-05	N/A	5E-05
		Area 1	ARSENIC	N/A	7E-11	N/A	7E-11	Developmental	N/A	9E-06	N/A	9E-06
			COBALT	N/A	3E-10	N/A	3E-10	Respiratory	N/A	4E-05	N/A	4E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E-03	N/A	2E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	6E-06	N/A	6E-06
			PCBs									
			TOTAL PCBs	N/A	4E-13	N/A	4E-13	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	6E-14	N/A	6E-14	N/A	N/A	2E-07	N/A	2E-07
			Chemical Total	N/A	3E-10	N/A	3E-10		N/A	2E-03	N/A	2E-03
		Exposure Point Total					**3E-07**					**3E-01**

TABLE 9.2.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
			ARSENIC	2E-07	N/A	1E-08	3E-07	Skin, Vascular	1E-02	N/A	7E-04	1E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	3E-02	N/A	N/A	3E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	3E-02	N/A	N/A	3E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	7E-03	N/A	N/A	7E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			Pesticides									
			DIELDRIN	6E-08	N/A	6E-09	6E-08	Liver	2E-03	N/A	2E-04	2E-03
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	2E-03	N/A	2E-04	2E-03
			HEPTACHLOR EPOXIDE	9E-09	N/A	9E-10	1E-08	Liver	2E-03	N/A	2E-04	2E-03
			PCBs									
			TOTAL PCBs	2E-06	N/A	2E-07	2E-06	Eye, Nails, Immune	2E+00	N/A	3E-01	2E+00
			SVOCs									
			BENZO[A]ANTHRACENE	2E-08	N/A	3E-09	3E-08	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	1E-07	N/A	1E-08	1E-07	Developmental	2E-03	N/A	3E-04	3E-03
			BENZO[B]FLUORANTHENE	2E-08	N/A	3E-09	3E-08	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	1E-09	N/A	1E-10	1E-09	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	3E-08	N/A	3E-09	3E-08	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	1E-08	N/A	2E-09	1E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	2E-06	N/A	3E-07	2E-06		2E+00	N/A	3E-01	3E+00

TABLE 9.2.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	5E-05	N/A	5E-05
			ARSENIC	N/A	7E-11	N/A	7E-11	Developmental	N/A	9E-06	N/A	9E-06
			COBALT	N/A	2E-10	N/A	2E-10	Respiratory	N/A	3E-05	N/A	3E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E-04	N/A	2E-04
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	6E-06	N/A	6E-06
			Pesticides									
			DIELDRIN	N/A	1E-12	N/A	1E-12	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	2E-13	N/A	2E-13	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	3E-11	N/A	3E-11	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	4E-13	N/A	4E-13	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	2E-12	N/A	2E-12	Developmental	N/A	7E-06	N/A	7E-06
			BENZO[B]FLUORANTHENE	N/A	4E-13	N/A	4E-13	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	2E-14	N/A	2E-14	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	5E-13	N/A	5E-13	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	2E-13	N/A	2E-13	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	3E-10	N/A	3E-10		N/A	3E-04	N/A	3E-04
		Exposure Point Total					**2E-06**					**3E+00**

TABLE 9.2.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
		Area 1	ARSENIC	3E-07	N/A	1E-08	3E-07	Skin, Vascular	2E-02	N/A	8E-04	2E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	3E-02	N/A	N/A	3E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	3E-02	N/A	N/A	3E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	3E-02	N/A	N/A	3E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	9E-03	N/A	N/A	9E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			VOCs									
			VINYL CHLORIDE	4E-09	N/A	N/A	4E-09	Liver	2E-05	N/A	N/A	2E-05
			Chemical Total	3E-07	N/A	1E-08	3E-07		1E-01	N/A	8E-04	1E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	5E-05	N/A	5E-05
		Area 1	ARSENIC	N/A	9E-11	N/A	9E-11	Developmental	N/A	1E-05	N/A	1E-05
			COBALT	N/A	2E-10	N/A	2E-10	Respiratory	N/A	3E-05	N/A	3E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E-04	N/A	3E-04
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	6E-06	N/A	6E-06
			VOCs									
			VINYL CHLORIDE	N/A	1E-15	N/A	1E-15	Liver	N/A	1E-11	N/A	1E-11
			Chemical Total	N/A	3E-10	N/A	3E-10		N/A	4E-04	N/A	4E-04
		Exposure Point Total					**3E-07**					**1E-01**

TABLE 9.2.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1E-02	N/A	N/A	1E-02
		Area 2	ARSENIC	3E-07	N/A	2E-08	4E-07	Skin, Vascular	2E-02	N/A	9E-04	2E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	4E-02	N/A	N/A	4E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	3E-02	N/A	N/A	3E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2E-02	N/A	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	1E-02	N/A	N/A	1E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	6E-03	N/A	N/A	6E-03
			PCBs									
			TOTAL PCBS	2E-07	N/A	3E-08	2E-07	Eye, Nails, Immune	3E-01	N/A	4E-02	3E-01
			SVOCs									
			BENZO[A]PYRENE	5E-09	N/A	7E-10	6E-09	Developmental	1E-04	N/A	1E-05	1E-04
			DIBENZ[A,H]ANTHRACENE	1E-09	N/A	1E-10	1E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	6E-07	N/A	5E-08	6E-07		4E-01	N/A	4E-02	4E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	5E-05	N/A	5E-05
		Area 2	ARSENIC	N/A	1E-10	N/A	1E-10	Developmental	N/A	1E-05	N/A	1E-05
			COBALT	N/A	2E-10	N/A	2E-10	Respiratory	N/A	3E-05	N/A	3E-05
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E-04	N/A	2E-04
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	6E-06	N/A	6E-06
			PCBs									
			TOTAL PCBs	N/A	4E-12	N/A	4E-12	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	9E-14	N/A	9E-14	Developmental	N/A	3E-07	N/A	3E-07
			DIBENZ[A,H]ANTHRACENE	N/A	2E-14	N/A	2E-14	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	3E-10	N/A	3E-10		N/A	3E-04	N/A	3E-04
		Exposure Point Total					**6E-07**					**4E-01**

TABLE 9.2.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Fire Training Area	**Metals**									
			ARSENIC	4E-09	N/A	9E-09	1E-08	Skin, Vascular	2E-04	N/A	3E-04	5E-04
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	4E-04	N/A	1E-02	1E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	4E-04	N/A	5E-04	8E-04
			PCBs						N/A		N/A	N/A
			TOTAL PCBs	2E-10	N/A	N/A	2E-10	Eye, Nails, Immune	2E-04	N/A	N/A	2E-04
			SVOCs									
			1,2,4,5-TETRACHLOROBENZENE	N/A	N/A	N/A	N/A	Kidney	4E-06	N/A	7E-04	7E-04
			BENZO[A]ANTHRACENE	1E-11	N/A	N/A	1E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	4E-11	N/A	N/A	4E-11	Developmental	3E-06	N/A	N/A	3E-06
			BENZO[K]FLUORANTHENE	1E-12	N/A	N/A	1E-12	N/A	N/A	N/A	N/A	N/A
			BIS(2-CHLOROETHYL)ETHER	3E-11	N/A	7E-11	1E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	9E-12	N/A	N/A	9E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	5E-09	N/A	9E-09	1E-08		1E-03	N/A	1E-02	2E-02
		Exposure Point Total					**1E-08**					**2E-02**
Sediment	Sediment	Fire Training Area	**Metals**									
			ARSENIC	7E-08	N/A	3E-09	7E-08	Skin, Vascular	4E-03	N/A	2E-04	4E-03
			COBALT	N/A	N/A	N/A	N/A	Thyroid	7E-03	N/A	N/A	7E-03
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	6E-03	N/A	N/A	6E-03
			PCBs									
			TOTAL PCBs	8E-09	N/A	1E-09	9E-09	Eye, Nails, Immune	1E-02	N/A	1E-03	1E-02
			SVOCs									
			BENZO[A]ANTHRACENE	7E-09	N/A	8E-10	7E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	4E-08	N/A	5E-09	5E-08	Developmental	9E-04	N/A	1E-04	1E-03
			BENZO[B]FLUORANTHENE	4E-09	N/A	6E-10	5E-09	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	9E-09	N/A	1E-09	1E-08	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	3E-09	N/A	4E-10	4E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	1E-07	N/A	1E-08	2E-07		3E-02	N/A	2E-03	**3E-02**
		Exposure Point Total					**2E-07**					**3E-02**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Area 1							**Surface soil (a), surface water, sediment)**	**4E-07**			**Surface soil (a), surface water, sediment)**	**4E-01**
							Subsurface soil (b), surface water, sediment)	**5E-07**			**Subsurface soil (b), surface water, sediment)**	**2E-01**
Area 2							**Surface soil (a), surface water, sediment)**	**3E-06**			**Surface soil (a), surface water, sediment)**	**3E+00**
							Subsurface soil (b), surface water, sediment)	**8E-07**			**Subsurface soil (b), surface water, sediment)**	**5E-01**

TABLE 9.2.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - CURRENT/FUTURE RECREATIONAL USER - ADULT AND CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

COPC - Chemical of potential concern.

CTE - Central Tendency Estimate.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

SVOCs - Semivolatile organic compounds.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 9.2.TE.CTE

TARGET ENDPOINT EVALUATION - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future

Receptor Population: Recreational User

Receptor Age: Child

Total HI by Target Endpoint - Area 1

Target Endpoint	Media				Total HI	
	Surface Soil	Subsurface Soil	Surface Water	Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	8E-05	1E-05	3E-06	1E-03	1E-03	1E-03
Gastrointestinal	3E-02	3E-02	--	6E-03	3E-02	4E-02
Hair	1E-02	2E-02	8E-04	--	1E-02	2E-02
Immune	4E-02	--	2E-04	1E-02	5E-02	1E-02
Kidney	--	--	7E-04	--	7E-04	7E-04
Liver	--	2E-05	--	--	--	2E-05
Nervous System	2E-01	4E-02	1E-02	--	2E-01	5E-02
None reported	--	--	--	--	--	--
Respiratory	5E-05	4E-05	--	--	5E-05	4E-05
Thyroid	4E-02	3E-02	--	7E-03	5E-02	4E-02
Eye	4E-02	--	2E-04	1E-02	5E-02	1E-02
Nails	4E-02	--	2E-04	1E-02	5E-02	1E-02
Skin	1E-02	2E-02	5E-04	4E-03	2E-02	2E-02
Vascular	1E-02	2E-02	5E-04	4E-03	2E-02	2E-02
Minimum:	5E-05	1E-05	3E-06	1E-03	5E-05	2E-05
Maximum:	**2E-01**	**4E-02**	**1E-02**	**1E-02**	**2E-01**	**5E-02**

Total HI by Target Endpoint - Area 2

Target Endpoint	Media				Total HI	
	Surface Soil	Subsurface Soil	Surface Water	Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	3E-03	1E-04	3E-06	1E-03	4E-03	1E-03
Gastrointestinal	3E-02	3E-02	--	6E-03	3E-02	4E-02
Hair	1E-02	2E-02	8E-04	--	1E-02	2E-02
Immune	2E+00	3E-01	2E-04	1E-02	2E+00	3E-01
Kidney	--	--	7E-04	--	7E-04	7E-04
Liver	7E-03	--	--	--	7E-03	--
Nasal	--	--	--	--	--	--
Nervous System	3E-02	4E-02	1E-02	--	4E-02	5E-02
None reported	--	--	--	--	--	--
Respiratory	4E-05	4E-05	--	--	4E-05	4E-05
Thyroid	3E-02	4E-02	--	7E-03	4E-02	4E-02
Eye	2E+00	3E-01	2E-04	1E-02	2E+00	3E-01
Nails	2E+00	3E-01	2E-04	1E-02	2E+00	3E-01
Skin	1E-02	2E-02	5E-04	4E-03	2E-02	3E-02
Vascular	1E-02	2E-02	5E-04	4E-03	2E-02	3E-02
Minimum:	4E-05	4E-05	3E-06	1E-03	4E-05	4E-05
Maximum:	**2E+00**	**3E-01**	**1E-02**	**1E-02**	**2E+00**	**3E-01**

TABLE 9.2.TE.CTE

TARGET ENDPOINT EVALUATION - CURRENT/FUTURE RECREATIONAL USER - CHILD (SOIL, SEDIMENT, AND SURFACE WATER)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Current/Future
Receptor Population: Recreational User
Receptor Age: Child

Notes:

-- Not applicable.

CTE - Central Tendency Estimate.

HI - Hazard Index.

USEPA - United States Environmental Protection Agency.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	3.81E-03	N/A	N/A	4E-03
		Area 1	ARSENIC	2.41E-07	N/A	1.70E-08	3E-07	Skin, Vascular	4.17E-03	N/A	2.94E-04	4E-03
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1.28E-02	N/A	N/A	1E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	8.09E-03	N/A	N/A	8E-03
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	5.60E-02	N/A	N/A	6E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2.21E-03	N/A	N/A	2E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	1.77E-03	N/A	N/A	2E-03
			PCBs									
			TOTAL PCBs	2.53E-08	N/A	5.00E-09	3E-08	Eye, Nails, Immune	9.85E-03	N/A	1.95E-03	1E-02
			SVOCs									
			BENZO[A]PYRENE	7.60E-10	N/A	1.39E-10	9E-10	Developmental	1.97E-05	N/A	3.61E-06	2E-05
			Chemical Total	3E-07	N/A	2E-08	3E-07		1E-01	N/A	2E-03	1E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	6E-04	N/A	6E-04
		Area 1	ARSENIC	N/A	9E-10	N/A	9E-10	Developmental	N/A	1E-04	N/A	1E-04
			COBALT	N/A	4E-09	N/A	4E-09	Respiratory	N/A	5E-04	N/A	5E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2E-02	N/A	2E-02
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	7E-05	N/A	7E-05
			PCBs									
			TOTAL PCBs	N/A	6E-12	N/A	6E-12	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	4E-13	N/A	4E-13	N/A	N/A	2E-06	N/A	2E-06
			Chemical Total	N/A	5E-09	N/A	5E-09		N/A	2E-02	N/A	2E-02
		Exposure Point Total					**3E-07**					**1E-01**

TABLE 9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	4E-03	N/A	N/A	4E-03
			ARSENIC	3E-07	N/A	2E-08	3E-07	Skin, Vascular	4E-03	N/A	3.08E-04	5E-03
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-02	N/A	N/A	1E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	9E-03	N/A	N/A	9E-03
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	6E-03	N/A	N/A	6E-03
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			Pesticides									
			DIELDRIN	6E-08	N/A	9E-09	7E-08	Liver	6E-04	N/A	8.55E-05	7E-04
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	7E-04	N/A	9.35E-05	8E-04
			HEPTACHLOR EPOXIDE	9E-09	N/A	1E-09	1E-08	Liver	6E-04	N/A	8.78E-05	7E-04
			PCBs									
			TOTAL PCBs	2E-06	N/A	3E-07	2E-06	Eye, Nails, Immune	7E-01	N/A	1.32E-01	8E-01
			SVOCs	0E+00								
			BENZO[A]ANTHRACENE	6E-09	N/A	1E-09	7E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	3E-08	N/A	5E-09	3E-08	Developmental	8E-04	N/A	1.39E-04	9E-04
			BENZO[B]FLUORANTHENE	6E-09	N/A	1E-09	7E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	3E-10	N/A	5E-11	3E-10	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	7E-09	N/A	1E-09	8E-09	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	3E-09	N/A	6E-10	4E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	2E-06	N/A	4E-07	2E-06		7E-01	N/A	1E-01	8E-01

TABLE 9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	6.16E-04	N/A	6E-04
			ARSENIC	N/A	1E-09	N/A	1E-09	Developmental	N/A	1.20E-04	N/A	1E-04
			COBALT	N/A	3E-09	N/A	3E-09	Respiratory	N/A	4.12E-04	N/A	4E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	2.24E-03	N/A	2E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	7.75E-05	N/A	8E-05
			Pesticides									
			DIELDRIN	N/A	1E-11	N/A	1E-11	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	2E-12	N/A	2E-12	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	4E-10	N/A	4E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	3E-12	N/A	3E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	1E-11	N/A	1E-11	Developmental	N/A	9.38E-05	N/A	9E-05
			BENZO[B]FLUORANTHENE	N/A	3E-12	N/A	3E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	1E-13	N/A	1E-13	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	3E-12	N/A	3E-12	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	2E-12	N/A	2E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	4E-09	N/A	4E-09		N/A	4E-03	N/A	4E-03
		Exposure Point Total					**2E-06**					**8E-01**

TABLE 9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	4E-03	N/A	N/A	4E-03
		Area 1	ARSENIC	3E-07	N/A	2E-08	3E-07	Skin, Vascular	5E-03	N/A	4E-04	5E-03
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-02	N/A	N/A	1E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-02	N/A	N/A	1E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	9E-03	N/A	N/A	9E-03
			THALLIUM	N/A	N/A	N/A	N/A	Hair	3E-03	N/A	N/A	3E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			VOCs									
			VINYL CHLORIDE	2E-09	N/A	N/A	2E-09	Liver	7E-06	N/A	N/A	7E-06
			Chemical Total	3E-07	N/A	2E-08	3E-07		4E-02	N/A	4E-04	4E-02
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	7E-04	N/A	7E-04
		Area 1	ARSENIC	N/A	1E-09	N/A	1E-09	Developmental	N/A	1E-04	N/A	1E-04
			COBALT	N/A	3E-09	N/A	3E-09	Respiratory	N/A	4E-04	N/A	4E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E-03	N/A	3E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	8E-05	N/A	8E-05
			VOCs									
			VINYL CHLORIDE	N/A	1E-14	N/A	1E-14	Liver	N/A	2E-10	N/A	2E-10
			Chemical Total	N/A	4E-09	N/A	4E-09		N/A	5E-03	N/A	5E-03
		Exposure Point Total					**3E-07**					**5E-02**

TABLE 9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	4E-03	N/A	N/A	4E-03
		Area 2	ARSENIC	4E-07	N/A	3E-08	4E-07	Skin, Vascular	6E-03	N/A	4E-04	7E-03
			COBALT	N/A	N/A	N/A	N/A	Thyroid	1E-02	N/A	N/A	1E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	1E-02	N/A	N/A	1E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	7E-03	N/A	N/A	7E-03
			THALLIUM	N/A	N/A	N/A	N/A	Hair	3E-03	N/A	N/A	3E-03
			VANADIUM	N/A	N/A	N/A	N/A	Hair	2E-03	N/A	N/A	2E-03
			PCBs									
			TOTAL PCBS	2E-07	N/A	4E-08	3E-07	Eye, Nails, Immune	9E-02	N/A	2E-02	1E-01
			SVOCs									
			BENZO[A]PYRENE	1E-09	N/A	2E-10	2E-09	Developmental	3E-05	N/A	6E-06	4E-05
			DIBENZ[A,H]ANTHRACENE	3E-10	N/A	5E-11	3E-10	N/A	N/A	N/A	N/A	N/A
			Chemical Total	6E-07	N/A	7E-08	6E-07		1E-01	N/A	2E-02	1E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	7E-04	N/A	7E-04
		Area 2	ARSENIC	N/A	1E-09	N/A	1E-09	Developmental	N/A	2E-04	N/A	2E-04
			COBALT	N/A	3E-09	N/A	3E-09	Respiratory	N/A	5E-04	N/A	5E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3E-03	N/A	3E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	8E-05	N/A	8E-05
			PCBs									
			TOTAL PCBs	N/A	5E-11	N/A	5E-11	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	6E-13	N/A	6E-13	Developmental	N/A	4E-06	N/A	4E-06
			DIBENZ[A,H]ANTHRACENE	N/A	1E-13	N/A	1E-13	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	5E-09	N/A	5E-09		N/A	4E-03	N/A	4E-03
		Exposure Point Total					**7E-07**					**2E-01**
							Total of Receptor Risks:					**Total of Receptor HI (see following table for sum by target endpoint):**
Area 1							**Surface soil (a)**					**Surface soil (a)**
							3E-07					**1E-01**
							Subsurface soil (b)					**Subsurface soil (b)**
							3E-07					**5E-02**
Area 2							**Surface soil (a)**					**Surface soil (a)**
							2E-06					**8E-01**
							Subsurface soil (b)					**Subsurface soil (b)**
							7E-07					**2E-01**

TABLE 9.3.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

Notes:

COPC - Chemical of potential concern.

CTE - Central Tendency Estimate.

HI - Hazard Index.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

SVOCs - Semivolatile organic compounds.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area.

TABLE 9.3.TE.CTE

TARGET ENDPOINT EVALUATION - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Outdoor Industrial Worker

Receptor Age: Adult

Total HI by Target Endpoint - Area 1

Target Endpoint	Media		Total HI	
	Surface Soil	Subsurface Soil	Surface Soil (a)	Subsurface Soil (b)
Developmental	1E-04	1E-04	1E-04	1E-04
Gastrointestinal	8E-03	1E-02	8E-03	1E-02
Hair	4E-03	5E-03	4E-03	5E-03
Immune	1E-02	--	1E-02	--
Kidney	--	--	--	--
Liver	--	7E-06	--	7E-06
Nasal	--	--	--	--
Nervous System	8E-02	2E-02	8E-02	2E-02
None reported	--	--	--	--
Respiratory	6E-04	5E-04	6E-04	5E-04
Thyroid	1E-02	1E-02	1E-02	1E-02
Eye	1E-02	--	1E-02	--
Nails	1E-02	--	1E-02	--
Skin	4E-03	5E-03	4E-03	5E-03
Vascular	4E-03	5E-03	4E-03	5E-03
Minimum:	1E-04	7E-06	1E-04	7E-06
Maximum:	**8E-02**	**2E-02**	**8E-02**	**2E-02**

Total HI by Target Endpoint - Area 2

Target Endpoint	Media		Total HI	
	Surface Soil	Subsurface Soil	Surface Soil (a)	Subsurface Soil (b)
Developmental	1E-03	2E-04	1E-03	2E-04
Gastrointestinal	9E-03	1E-02	9E-03	1E-02
Hair	4E-03	5E-03	4E-03	5E-03
Immune	8E-01	1E-01	8E-01	1E-01
Kidney	--	--	--	--
Liver	2E-03	--	2E-03	--
Nasal	--	--	--	--
Nervous System	1E-02	1E-02	1E-02	1E-02
None reported	--	--	--	--
Respiratory	5E-04	5E-04	5E-04	5E-04
Thyroid	1E-02	1E-02	1E-02	1E-02
Eye	8E-01	1E-01	8E-01	1E-01
Nails	8E-01	1E-01	8E-01	1E-01
Skin	5E-03	7E-03	5E-03	7E-03
Vascular	5E-03	7E-03	5E-03	7E-03
Minimum:	5E-04	2E-04	5E-04	2E-04
Maximum:	**8E-01**	**1E-01**	**8E-01**	**1E-01**

TABLE 9.3.TE.CTE

TARGET ENDPOINT EVALUATION - FUTURE OUTDOOR INDUSTRIAL WORKER (SOIL)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Outdoor Industrial Worker
Receptor Age: Adult

Notes:

-- Not applicable.

CTE - Central Tendency Estimate.

HI - Hazard Index.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area.

TABLE 9.4.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - FUTURE INDOOR INDUSTRIAL WORKER (GROUNDWATER TO INDOOR AIR)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Indoor Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Adult				Non-Carcinogenic Hazard Quotient Adult				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Indoor Air	Fire Training Area	**SVOCs**									
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	5E-04	N/A	5E-04
			VOCs									
			TRICHLOROETHENE	N/A	4E-08	N/A	4E-08	Thyroid, Vascular	N/A	1E-02	N/A	1E-02
			VINYL CHLORIDE	N/A	7E-09	N/A	7E-09	Liver	N/A	5E-05	N/A	5E-05
			Chemical Total	N/A	5E-08	N/A	5E-08		N/A	1E-02	N/A	1E-02
		Exposure Point Total					**5E-08**	**Exposure Point Total**				**1E-02**
						Total of Receptor Risks:	**5E-08**	**Total of Receptor HI (see below for sum by target endpoint):**				**1E-02**

Notes:

COPC - Chemical of potential concern.

CTE - Central Tendency Estimate.

HI - Hazard Index.

N/A - Not applicable.

SVOCs - Semivolatile organic compounds.

VOCs - Volatile organic compounds.

Total HI by Target Endpoint				
Liver	N/A	5E-05	N/A	5E-05
Nasal	N/A	5E-04	N/A	5E-04
Thyroid	N/A	1E-02	N/A	1E-02
Vascular	N/A	1E-02	N/A	1E-02

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	2.03E-02	N/A	N/A	2E-02
		Soil Exposure	ARSENIC	4E-07	N/A	2E-08	4E-07	Skin, Vascular	2.22E-02	N/A	1.05E-03	2E-02
		Area 1	COBALT	N/A	N/A	N/A	N/A	Thyroid	6.84E-02	N/A	N/A	7E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	4.32E-02	N/A	N/A	4E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	2.98E-01	N/A	N/A	3E-01
			THALLIUM	N/A	N/A	N/A	N/A	Hair	1.18E-02	N/A	N/A	1E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	9.44E-03	N/A	N/A	9E-03
			PCBs									
			TOTAL PCBs	4E-08	N/A	6E-09	5E-08	Eye, Nails, Immune	5.25E-02	N/A	6.98E-03	6E-02
			SVOCs									
			BENZO[A]PYRENE	5E-09	N/A	6E-10	6E-09	Developmental	1.05E-04	N/A	1.30E-05	1E-04
			Chemical Total	4E-07	N/A	3E-08	4E-07		5E-01	N/A	8E-03	5E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Surface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	9.43E-04	N/A	9E-04
		Soil Exposure	ARSENIC	N/A	1E-09	N/A	1E-09	Developmental	N/A	1.72E-04	N/A	2E-04
		Area 1	COBALT	N/A	6E-09	N/A	6E-09	Respiratory	N/A	7.93E-04	N/A	8E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3.32E-02	N/A	3E-02
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1.10E-04	N/A	1E-04
			PCBs									
			TOTAL PCBs	N/A	9E-12	N/A	9E-12	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	1E-12	N/A	1E-12	N/A	N/A	3.65E-06	N/A	4E-06
			Chemical Total	N/A	7E-09	N/A	7E-09		N/A	4E-02	N/A	4E-02
		Exposure Point Total					**5E-07**					**6E-01**

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1.99E-02	N/A	N/A	2E-02
		Soil Exposure	ARSENIC	4E-07	N/A	2E-08	4E-07	Skin, Vascular	2.33E-02	N/A	1.11E-03	2E-02
		Area 2	COBALT	N/A	N/A	N/A	N/A	Thyroid	5.33E-02	N/A	N/A	5E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	4.75E-02	N/A	N/A	5E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	3.02E-02	N/A	N/A	3E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	1.22E-02	N/A	N/A	1E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	9.95E-03	N/A	N/A	1E-02
			Pesticides									
			DIELDRIN	1E-07	N/A	1E-08	1E-07	Liver	3.23E-03	N/A	3.07E-04	4E-03
			ENDRIN KETONE	N/A	N/A	N/A	N/A	Liver	3.53E-03	N/A	3.35E-04	4E-03
			HEPTACHLOR EPOXIDE	1E-08	N/A	2E-09	2E-08	Liver	3.32E-03	N/A	3.15E-04	4E-03
			PCBs									
			TOTAL PCBs	3E-06	N/A	4E-07	3E-06	Eye, Nails, Immune	3.55E+00	N/A	4.72E-01	4E+00
			SVOCs									
			BENZO[A]ANTHRACENE	4E-08	N/A	5E-09	4E-08	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	2E-07	N/A	2E-08	2E-07	Developmental	4.05E-03	N/A	4.99E-04	5E-03
			BENZO[B]FLUORANTHENE	4E-08	N/A	5E-09	4E-08	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	2E-09	N/A	2E-10	2E-09	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	4E-08	N/A	6E-09	5E-08	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	2E-08	N/A	3E-09	2E-08	N/A	N/A	N/A	N/A	N/A
			Chemical Total	4E-06	N/A	5E-07	4E-06		4E+00	N/A	5E-01	4E+00

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Fugitive Dust from Surface Soil	Fire Training Area Soil Exposure Area 2	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	9.24E-04	N/A	9E-04
			ARSENIC	N/A	1E-09	N/A	1E-09	Developmental	N/A	1.80E-04	N/A	2E-04
			COBALT	N/A	4E-09	N/A	4E-09	Respiratory	N/A	6.18E-04	N/A	6E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	3.36E-03	N/A	3E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1.16E-04	N/A	1E-04
			Pesticides									
			DIELDRIN	N/A	2E-11	N/A	2E-11	N/A	N/A	N/A	N/A	N/A
			ENDRIN KETONE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			HEPTACHLOR EPOXIDE	N/A	3E-12	N/A	3E-12	N/A	N/A	N/A	N/A	N/A
			PCBs									
			TOTAL PCBs	N/A	6E-10	N/A	6E-10	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]ANTHRACENE	N/A	9E-12	N/A	9E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	N/A	4E-11	N/A	4E-11	Developmental	N/A	1.41E-04	N/A	1E-04
			BENZO[B]FLUORANTHENE	N/A	8E-12	N/A	8E-12	N/A	N/A	N/A	N/A	N/A
			BENZO[K]FLUORANTHENE	N/A	4E-13	N/A	4E-13	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	N/A	1E-11	N/A	1E-11	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	N/A	5E-12	N/A	5E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	6E-09	N/A	6E-09		N/A	5E-03	N/A	5E-03
		Exposure Point Total					**4E-06**					**4E+00**

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	2.20E-02	N/A	N/A	2E-02
		Soil Exposure	ARSENIC	5E-07	N/A	2E-08	5E-07	Skin, Vascular	2.68E-02	N/A	1.27E-03	3E-02
		Area 1	COBALT	N/A	N/A	N/A	N/A	Thyroid	5.69E-02	N/A	N/A	6E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	5.37E-02	N/A	N/A	5E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	4.58E-02	N/A	N/A	5E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	1.49E-02	N/A	N/A	1E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	1.05E-02	N/A	N/A	1E-02
			VOCs									
			VINYL CHLORIDE	6E-09	N/A	N/A	6E-09	Liver	3.79E-05	N/A	N/A	4E-05
			Chemical Total	5E-07	N/A	2E-08	5E-07		2E-01	N/A	1E-03	2E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	1.02E-03	N/A	1E-03
		Soil Exposure	ARSENIC	N/A	2E-09	N/A	2E-09	Developmental	N/A	2.07E-04	N/A	2E-04
		Area 1	COBALT	N/A	5E-09	N/A	5E-09	Respiratory	N/A	6.60E-04	N/A	7E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	5.10E-03	N/A	5E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1.23E-04	N/A	1E-04
			VOCs									
			VINYL CHLORIDE	N/A	3E-14	N/A	3E-14	Liver	N/A	2.64E-10	N/A	3E-10
			Chemical Total	N/A	6E-09	N/A	6E-09		N/A	7E-03	N/A	7E-03
		Exposure Point Total					**5E-07**					**2E-01**

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil	Fire Training	**Metals**									
		Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	2.17E-02	N/A	N/A	2E-02
		Soil Exposure	ARSENIC	6E-07	N/A	3E-08	6E-07	Skin, Vascular	3.32E-02	N/A	1.57E-03	3E-02
		Area 2	COBALT	N/A	N/A	N/A	N/A	Thyroid	5.88E-02	N/A	N/A	6E-02
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	5.37E-02	N/A	N/A	5E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	3.73E-02	N/A	N/A	4E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	1.59E-02	N/A	N/A	2E-02
			VANADIUM	N/A	N/A	N/A	N/A	Hair	1.06E-02	N/A	N/A	1E-02
			PCBs									
			TOTAL PCBS	3E-07	N/A	5E-08	4E-07	Eye, Nails, Immune	4.55E-01	N/A	6.05E-02	5E-01
			SVOCs									
			BENZO[A]PYRENE	9E-09	N/A	1E-09	1E-08	Developmental	1.79E-04	N/A	2.21E-05	2E-04
			DIBENZ[A,H]ANTHRACENE	2E-09	N/A	2E-10	2E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	9E-07	N/A	8E-08	1E-06		7E-01	N/A	6E-02	7E-01
Soil	Fugitive Dust	Fire Training	**Metals**									
	from Subsurface Soil	Area	ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	N/A	1.01E-03	N/A	1E-03
		Soil Exposure	ARSENIC	N/A	2E-09	N/A	2E-09	Developmental	N/A	2.56E-04	N/A	3E-04
		Area 2	COBALT	N/A	5E-09	N/A	5E-09	Respiratory	N/A	6.82E-04	N/A	7E-04
			IRON	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	N/A	4.15E-03	N/A	4E-03
			THALLIUM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			VANADIUM	N/A	N/A	N/A	N/A	Respiratory	N/A	1.24E-04	N/A	1E-04
			PCBs									
			TOTAL PCBs	N/A	8E-11	N/A	8E-11	N/A	N/A	N/A	N/A	N/A
			SVOCs									
			BENZO[A]PYRENE	N/A	2E-12	N/A	2E-12	Developmental	N/A	6.24E-06	N/A	6E-06
			DIBENZ[A,H]ANTHRACENE	N/A	4E-13	N/A	4E-13	N/A	N/A	N/A	N/A	N/A
			Chemical Total	N/A	7E-09	N/A	7E-09		N/A	6E-03	N/A	6E-03
		Exposure Point Total					**1E-06**					**8E-01**

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Fire Training Area	**Metals**									
			ALUMINUM	N/A	N/A	N/A	N/A	Nervous System	1.06E-02	N/A	4.69E-05	1E-02
			ARSENIC	2E-05	N/A	1E-07	2E-05	Skin, Vascular	4.79E-01	N/A	2.12E-03	5E-01
			CADMIUM	N/A	N/A	N/A	N/A	Kidney	2.43E-02	N/A	2.14E-03	3E-02
			COBALT	N/A	N/A	N/A	N/A	Thyroid	2.49E-01	N/A	4.40E-04	2E-01
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	6.37E-02	N/A	2.81E-04	6E-02
			MANGANESE	N/A	N/A	N/A	N/A	Nervous System	1.60E+00	N/A	1.76E-01	2E+00
			THALLIUM	N/A	N/A	N/A	N/A	Hair	2.12E-01	N/A	9.36E-04	2E-01
			PFAS									
			PFOS	N/A	N/A	N/A	N/A	Developmental	1.55E-01	N/A	N/A	2E-01
			PFOA	4E-08	N/A	N/A	4E-08	Developmental	3.08E-01	N/A	N/A	3E-01
			SVOCs									
			1,1-BIPHENYL	3E-09	N/A	2E-09	5E-09	Kidney	7.48E-06	N/A	5.43E-06	1E-05
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	None reported	4.57E-04	N/A	7.43E-04	1E-03
			VOCs									
			CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	Increased relative kidney weights	1.16E-01	N/A	9.07E-03	1E-01
			TRICHLOROETHENE	2E-06	N/A	3E-07	2E-06	Thyroid, Developmental, Vascular	4.09E-01	N/A	6.02E-02	5E-01
			VINYL CHLORIDE	1E-06	N/A	6E-08	1E-06	Liver	2.88E-03	N/A	1.31E-04	3E-03
			Chemical Total	2E-05	N/A	5E-07	2E-05	Chemical Total	4E+00	N/A	3E-01	4E+00
Groundwater	Shower Air	Fire Training Area	**SVOCs**									
			1,1-BIPHENYL	N/A	N/A	N/A	N/A	Liver, Kidney	N/A	3.08E-02	N/A	3E-02
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	5.83E-02	N/A	6E-02
			VOCs									
			TRICHLOROETHENE	N/A	1E-06	N/A	1E-06	Thyroid, Vascular	N/A	5.75E-01	N/A	6E-01
			VINYL CHLORIDE	N/A	9E-08	N/A	9E-08	Liver	N/A	6.44E-04	N/A	6E-04
			Chemical Total	N/A	1E-06	N/A	1E-06		N/A	7E-01	N/A	7E-01
Groundwater	Indoor Air	Fire Training Area	**SVOCs**									
			HEXACHLOROCYCLOPENTADIENE	N/A	N/A	N/A	N/A	Nasal	N/A	8.60E-03	N/A	9E-03
			VOCs									
			TRICHLOROETHENE	N/A	5E-07	N/A	5E-07	Thyroid, Vascular	N/A	2.32E-01	N/A	2E-01
			VINYL CHLORIDE	N/A	9E-08	N/A	9E-08	Liver	N/A	7.84E-04	N/A	8E-04
			Chemical Total	N/A	6E-07	N/A	6E-07		N/A	2E-01	N/A	2E-01
		Exposure Point Total					**2E-05**					**5E+00**

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Fire Training	**Metals**									
		Area	ARSENIC	4E-09	N/A	9E-09	1E-08	Skin, Vascular	2.06E-04	N/A	2.54E-04	5E-04
		Wetland	MANGANESE	N/A	N/A	N/A	N/A	Nervous System	4.20E-04	N/A	1.29E-02	1E-02
			THALLIUM	N/A	N/A	N/A	N/A	Hair	3.80E-04	N/A	4.69E-04	8E-04
			PCBs						N/A		N/A	N/A
			TOTAL PCBs	2E-10	N/A	N/A	2E-10	Eye, Nails, Immune	2.26E-04	N/A	N/A	2E-04
			SVOCs									
			1,2,4,5-TETRACHLOROBENZENE	N/A	N/A	N/A	N/A	Kidney	4.35E-06	N/A	7.07E-04	7E-04
			BENZO[A]ANTHRACENE	1E-11	N/A	N/A	1E-11	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	4E-11	N/A	N/A	4E-11	Developmental	3.01E-06	N/A	N/A	3E-06
			BENZO[K]FLUORANTHENE	1E-12	N/A	N/A	1E-12	N/A	N/A	N/A	N/A	N/A
			BIS(2-CHLOROETHYL)ETHER	3E-11	N/A	7E-11	1E-10	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	9E-12	N/A	N/A	9E-12	N/A	N/A	N/A	N/A	N/A
			Chemical Total	5E-09	N/A	9E-09	1E-08		1E-03	N/A	1E-02	2E-02
		Exposure Point Total					**1E-08**					**2E-02**
Sediment	Sediment	Fire Training	**Metals**									
		Area	ARSENIC	7E-08	N/A	3E-09	7E-08	Skin, Vascular	3.96E-03	N/A	1.88E-04	4E-03
		Wetland	COBALT	N/A	N/A	N/A	N/A	Thyroid	7.41E-03	N/A	N/A	7E-03
			IRON	N/A	N/A	N/A	N/A	Gastrointestinal	5.90E-03	N/A	N/A	6E-03
			PCBs									
			TOTAL PCBs	8E-09	N/A	1E-09	9E-09	Eye, Nails, Immune	1.04E-02	N/A	1.39E-03	1E-02
			SVOCs									
			BENZO[A]ANTHRACENE	7E-09	N/A	8E-10	7E-09	N/A	N/A	N/A	N/A	N/A
			BENZO[A]PYRENE	4E-08	N/A	5E-09	5E-08	Developmental	9.05E-04	N/A	1.12E-04	1E-03
			BENZO[B]FLUORANTHENE	4E-09	N/A	6E-10	5E-09	N/A	N/A	N/A	N/A	N/A
			DIBENZ[A,H]ANTHRACENE	9E-09	N/A	1E-09	1E-08	N/A	N/A	N/A	N/A	N/A
			INDENO[1,2,3-CD]PYRENE	3E-09	N/A	4E-10	4E-09	N/A	N/A	N/A	N/A	N/A
			Chemical Total	1E-07	N/A	1E-08	2E-07		3E-02	N/A	2E-03	**3E-02**
		Exposure Point Total					**2E-07**					**3E-02**

		Total of Receptor Risks:	**Total of Receptor HI (see following table for sum by target endpoint):**	
Soil Exposure Area 1	**Surface soil (a), Groundwater, surface water, sediment)**	**3E-05**	**Surface soil (a), Groundwater, surface water, sediment)**	**5E+00**
	Subsurface soil (b), Groundwater, surface water, sediment)	**3E-05**	**Subsurface soil (b), Groundwater, surface water, sediment)**	**5E+00**
Soil Exposure Area 2	**Surface soil (a), Groundwater, surface water, sediment)**	**3E-05**	**Surface soil (a), Groundwater (b), surface water, sediment)**	**9E+00**
	Subsurface soil (b), Groundwater, surface water, sediment)	**3E-05**	**Subsurface soil (b), Groundwater, surface water, sediment)**	**6E+00**

Notes:

COPC - Chemical of potential concern.

CTE - Central Tendency Estimate.

EPHs - Extractable petroleum hydrocarbons.

TABLE 9.5.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT)

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Adult and Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk Young Child + Adult				Non-Carcinogenic Hazard Quotient Young Child				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ	Ingestion	Inhalation	Dermal	Exposure Routes Total

HI - Hazard Index.

MECDC - Maine Center for Disease Control and Prevention.

N/A - Not applicable.

N/A - Not applicable.

PCBs - Polychlorinated biphenyls.

PFASs = Poly- and Perfluoroalkyl Substances.

PFOA = Perfluorooctanoic Acid.

PFOS - Perfluorooctanesulfonic acid (Perfluorooctane sulfonate).

SVOCs - Semivolatile organic compounds.

USEPA - United States Environmental Protection Agency.

VOCs - Volatile organic compounds.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

TABLE 9.5.TE.CTE

ARGET ENDPOINT EVALUATION - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future

Receptor Population: Hypothetical On-Site Resident

Receptor Age: Child

Total HI by Target Endpoint - Soil Exposure Area 1

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	3E-04	2E-04	9E-01	3E-06	1E-03	9E-01	9E-01
Gastrointestinal	4E-02	5E-02	6E-02	--	6E-03	1E-01	1E-01
Hair	2E-02	3E-02	2E-01	8E-04	--	2E-01	2E-01
Immune	6E-02	--	--	2E-04	1E-02	7E-02	1E-02
Kidney	--	--	2E-01	7E-04	--	2E-01	2E-01
Liver	--	4E-05	4E-02	--	--	4E-02	4E-02
Nasal	--	--	7E-02	--	--	7E-02	7E-02
Nervous System	4E-01	7E-02	2E+00	1E-02	--	2E+00	2E+00
None reported	--	--	1E-03	--	--	1E-03	1E-03
Respiratory	9E-04	8E-04	--	--	--	9E-04	8E-04
Thyroid	7E-02	6E-02	2E+00	--	7E-03	2E+00	2E+00
Eye	6E-02	--	--	2E-04	1E-02	7E-02	1E-02
Nails	6E-02	--	--	2E-04	1E-02	7E-02	1E-02
Skin	2E-02	3E-02	5E-01	5E-04	4E-03	5E-01	5E-01
Vascular	2E-02	3E-02	2E+00	5E-04	4E-03	2E+00	2E+00
Minimum:	3E-04	4E-05	1E-03	3E-06	1E-03	9E-04	8E-04
Maximum:	**4E-01**	**7E-02**	**2E+00**	**1E-02**	**1E-02**	**2E+00**	**2E+00**

Total HI by Target Endpoint - Soil Exposure Area 2

Target Endpoint	Media					Total HI	
	Surface Soil	Subsurface Soil	Groundwater	Wetland Surface Water	Wetland Sediment	Surface Soil (a)	Subsurface Soil (b)
Developmental	5E-03	5E-04	9E-01	3E-06	1E-03	9E-01	9E-01
Gastrointestinal	5E-02	5E-02	6E-02	--	6E-03	1E-01	1E-01
Hair	2E-02	3E-02	2E-01	8E-04	--	2E-01	2E-01
Immune	4E+00	5E-01	--	2E-04	1E-02	4E+00	5E-01
Kidney	--	--	2E-01	7E-04	--	2E-01	2E-01
Liver	1E-02	--	4E-02	--	--	5E-02	4E-02
Nasal	--	--	7E-02	--	--	7E-02	7E-02
Nervous System	5E-02	6E-02	2E+00	1E-02	--	2E+00	2E+00
None reported	--	--	1E-03	--	--	1E-03	1E-03
Respiratory	7E-04	8E-04	--	--	--	7E-04	8E-04
Thyroid	5E-02	6E-02	2E+00	--	7E-03	2E+00	2E+00
Eye	4E+00	5E-01	--	2E-04	1E-02	4E+00	5E-01
Nails	4E+00	5E-01	--	2E-04	1E-02	4E+00	5E-01
Skin	2E-02	3E-02	5E-01	5E-04	4E-03	5E-01	5E-01
Vascular	2E-02	3E-02	2E+00	5E-04	4E-03	2E+00	2E+00
Minimum:	7E-04	5E-04	1E-03	3E-06	1E-03	7E-04	8E-04
Maximum:	**4E+00**	**5E-01**	**2E+00**	**1E-02**	**1E-02**	**4E+00**	**2E+00**

TABLE 9.5.TE.CTE

ARGET ENDPOINT EVALUATION - HYPOTHETICAL FUTURE ON-SITE RESIDENT (SOIL, GROUNDWATER, WETLAND SUFACE WATER, AND WETLAND SEDIMENT

CENTRAL TENDENCY ESTIMATE

HUMAN HEALTH RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

Scenario Timeframe: Future
Receptor Population: Hypothetical On-Site Resident
Receptor Age: Child

Notes:

-- Not applicable.

CTE - Central Tendency Estimate.

HI - Hazard Index.

MECDC - Maine Center for Disease Control and Prevention.

PFOA - Perfluorooctanoic acid.

USEPA - United States Environmental Protection Agency.

(a) Totals calculated assuming potential receptors contact surface soil within the associated exposure point/area and sediment and surface water within the wetland.

(b) Totals calculated assuming potential receptors contact subsurface soil within the associated exposure point/area and sediment and surface water within the wetland.

ATTACHMENT G

UNCERTAINTY EVALUATION OF TOTAL PCBS

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ATTACHMENT G TABLE 1
SUMMARY OF TOTAL PCBS IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PCBs ND = 0 (mg/kg) Result	Total PCBs ND = RL (mg/kg) Result	*Absolute Difference Between Values (mg/kg)*
SURFACE SOIL							
DDA-E-1E	DDA-E-01E-SO-0002	N	7/15/2011	0 - 2 ft	3.45	3.558	*0.108*
DDA-N-5A	DDA-N-5A-SO-0002	N	8/20/2010	0 - 2 ft	0.599	0.698	*0.099*
DDA-NE-10D	DDA-NE-10D-SO-0002	N	7/15/2011	0 - 2 ft	7.4	7.508	*0.108*
DDA-NE-10D	DDA-NE-10D-SO-0002-D	FD	7/15/2011	0 - 2 ft	10.6	10.708	*0.108*
DDA-NE-13I	DDA-NE-13I-SO-0002	N	7/15/2011	0 - 2 ft	0.469	0.577	*0.108*
DDA-NE-2I	DDA-NE-02I-SO-0002	N	7/14/2011	0 - 2 ft	0.169	0.277	*0.108*
DDA-NE-2I	DDA-NE-02I-SO-0002-D	FD	7/14/2011	0 - 2 ft	0.192	0.3	*0.108*
DDA-NE-3E	DDA-NE-3E-0002	N	7/13/2011	0 - 2 ft	2.67	2.778	*0.108*
DDA-NE-5C	DDA-NE-5C-SO-0002	N	8/19/2010	0 - 2 ft	16	16.099	*0.099*
DDA-NE-5D	DDA-NE-5D-SO-0002	N	8/20/2010	0 - 2 ft	1.83	1.929	*0.099*
DDA-NE-5E	DDA-NE-05E-SO-0002	N	7/13/2011	0 - 2 ft	1.36	1.459	*0.099*
DDA-NE-6C	DDA-NE-6C-SO-0002	N	8/20/2010	0 - 2 ft	0.303	0.402	*0.099*
DDA-NE-6D	DDA-NE-6D-SO-0002	N	8/20/2010	0 - 2 ft	1.64	1.748	*0.108*
DDA-NE-7D	DDA-NE-07D-SO-0002	N	7/12/2011	0 - 2 ft	68.1	68.199	*0.099*
DDA-NE-7I	DDA-NE-07I-SO-0002	N	7/15/2011	0 - 2 ft	2.24	2.36	*0.12*
DDA-NE-8B	DDA-NE-08B-SO-0002	N	7/13/2011	0 - 2 ft	1.96	2.059	*0.099*
DDA-NW-10E	DDA-NW-10E-SO-0004	N	7/14/2011	0 - 2 ft	1.2	1.299	*0.099*
DDA-NW-10G	DDA-NW-10G-SO-0002	N	7/14/2011	0 - 2 ft	14.2	14.299	*0.099*
DDA-NW-10Q	DDA-NW-10Q-SO-0002	N	7/14/2011	0 - 2 ft	1.94	2.039	*0.099*
DDA-NW-2D	DDA-NW-2D-SO-0002	N	8/19/2010	0 - 2 ft	5.65	5.749	*0.099*
DDA-NW-2F	DDA-NW-2F-SO-0002	N	8/18/2010	0 - 2 ft	25.6	26.11	*0.51*
DDA-NW-2G	DDA-NW-2G-SO-0002	N	8/20/2010	0 - 2 ft	78.9	80.88	*1.98*
DDA-NW-2G	DDA-NW-2G-SO-0002-D	FD	8/20/2010	0 - 2 ft	81.7	83.68	*1.98*
DDA-NW-2P	DDA-NW-02P-SO-0002	N	7/12/2011	0 - 2 ft	0.31	0.409	*0.099*
DDA-NW-3E	DDA-NW-3E-SO-0002	N	8/20/2010	0 - 2 ft	22.2	22.71	*0.51*
DDA-NW-3F	DDA-NW-3F-SO-0002	N	8/18/2010	0 - 2 ft	3.61	3.709	*0.099*
DDA-NW-3R	DDA-NW-03R-SO-0002	N	7/14/2011	0 - 2 ft	0.166	0.265	*0.099*
DDA-NW-4D	DDA-NW-4D-SO-0002	N	8/19/2010	0 - 2 ft	8.47	8.569	*0.099*
DDA-NW-4F	DDA-NW-4F-SO-0001	N	8/18/2010	0 - 1 ft	11	11.099	*0.099*
DDA-NW-4F	DDA-NW-4F-SO-0002	N	8/18/2010	0 - 2 ft	1.3	1.399	*0.099*
DDA-NW-4R	DDA-NW-4R-0002	N	7/14/2011	0 - 2 ft	0.612	0.72	*0.108*
DDA-NW-4R	DDA-NW-4R-0002-D	FD	7/14/2011	0 - 2 ft	0.63	0.729	*0.099*
DDA-NW-4Y	DDA-NW-04Y-SO-0002	N	7/15/2011	0 - 2 ft	1.34	1.439	*0.099*
DDA-NW-5C	DDA-NW-5C-SO-0002	N	8/20/2010	0 - 2 ft	4.35	4.449	*0.099*
DDA-NW-5F	DDA-NW-5F-SO-0001	N	8/17/2010	0 - 1 ft	38.3	40.28	*1.98*
DDA-NW-5F	DDA-NW-5F-SO-0002	N	8/17/2010	0 - 2 ft	7.48	7.579	*0.099*
DDA-NW-5G	DDA-NW-5G-SO-0002	N	8/20/2010	0 - 2 ft	24.7	25.21	*0.51*
DDA-NW-6B	DDA-NW-6B-SO-0001	N	8/17/2010	0 - 1 ft	7.52	7.619	*0.099*
DDA-NW-6D	DDA-NW-6D-SO-0001	N	8/17/2010	0 - 1 ft	45.6	46.59	*0.99*
DDA-NW-6D	DDA-NW-6D-SO-0001-D	FD	8/17/2010	0 - 1 ft	45.4	46.39	*0.99*
DDA-NW-6E	DDA-NW-6E-SO-0001	N	8/17/2010	0 - 1 ft	29.4	29.91	*0.51*
DDA-NW-6E	DDA-NW-6E-SO-0001-D	FD	8/17/2010	0 - 1 ft	37.2	38.28	*1.08*
DDA-NW-6F	DDA-NW-6F-SO-0002	N	8/20/2010	0 - 2 ft	18.1	18.199	*0.099*
DDA-NW-6R	DDA-NW-06R-SO-0002	N	7/14/2011	0 - 2 ft	0.471	0.57	*0.099*
DDA-NW-6R	DDA-NW-06R-SO-0002-D	FD	7/14/2011	0 - 2 ft	0.576	0.675	*0.099*
DDA-NW-7B	DDA-NW-7B-SO-0002	N	8/20/2010	0 - 2 ft	3.55	3.649	*0.099*
DDA-NW-7E	DDA-NW-7E-SO-0002	N	8/20/2010	0 - 2 ft	5.21	5.309	*0.099*
DDA-NW-8R	DDA-NW-08R-SO-0002	N	7/14/2011	0 - 2 ft	7.85	7.949	*0.099*
DDA-NW-9B	DDA-NW-09B-SO-0002	N	7/12/2011	0 - 2 ft	0.109	0.208	*0.099*
DDA-NW-9E	DDA-NW-9E-0002	N	7/12/2011	0 - 2 ft	5.76	5.889	*0.129*
DDA-NW-9M	DDA-NW-09M-SO-0002	N	7/13/2011	0 - 2 ft	24	24.099	*0.099*
DDA-SE-5B	DDA-SE-05B-SO-0002	N	7/12/2011	0 - 2 ft	21.5	21.608	*0.108*
DDA-SW-2F	DDA-SW-2F-SO-0002	N	8/20/2010	0 - 2 ft	8.48	8.579	*0.099*
DDA-SW-2I	DDA-SW-02I-SO-0002	N	7/13/2011	0 - 2 ft	1.11	1.218	*0.108*
DDA-SW-3G	DDA-SW-03G-SO-0002	N	7/13/2011	0 - 2 ft	0.323	0.431	*0.108*
DDA-W-1F	DDA-W-1F-SO-0002	N	8/18/2010	0 - 2 ft	36	36.99	*0.99*
DDA-W-1G	DDA-W-1G-SO-0002	N	8/20/2010	0 - 2 ft	15.2	15.299	*0.099*
FTA-ANOM1C-SO-SURF	FTA-ANOM1C-SO-SURF	N	9/25/2013	0 - 2 ft	0.97	1.0475	*0.0775*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	N	9/25/2013	0 - 2 ft	0.59	0.6616	*0.0716*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF-D	FD	9/25/2013	0 - 2 ft	0.58	0.6516	*0.0716*
FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-SURF	N	9/26/2013	0 - 2 ft	0.075	0.1452	*0.0702*
FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-SURF	N	9/25/2013	0 - 2 ft	1.8	1.8761	*0.0761*
FTA-AREAA-01	FTA-AREAA-01-0002	N	6/17/2014	0 - 2 ft	0.12	0.133	*0.013*
FTA-AREAA-02	FTA-AREAA-02-0002	N	6/17/2014	0 - 2 ft	0.58	0.5931	*0.0131*
FTA-AREAA-02	FTA-AREAA-02-0002-D	FD	6/17/2014	0 - 2 ft	1.4	1.531	*0.131*
FTA-AREAB-01	FTA-AREAB-01-0002	N	6/17/2014	0 - 2 ft	3.1	3.387	*0.287*
FTA-AREAB-02	FTA-AREAB-02-0002	N	6/17/2014	0 - 2 ft	11	11.621	*0.621*

ATTACHMENT G TABLE 1
SUMMARY OF TOTAL PCBS IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PCBs ND = 0 (mg/kg) Result		Total PCBs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
FTA-AREAC-01	FTA-AREAC-01-0002	N	6/17/2014	0 - 2 ft	0.11		0.1239		*0.0139*
FTA-AREAD-01	FTA-AREAD-01-0002	N	6/19/2014	0 - 2 ft	0.083		0.0977		*0.0147*
FTA-AREAD-02	FTA-AREAD-02-0002	N	6/18/2014	0 - 2 ft	0.052		0.0668		*0.0148*
FTA-AREAF-01	FTA-AREAF-01-0002	N	6/19/2014	0 - 2 ft	0.24		0.2514		*0.0114*
FTA-AREAG-01	FTA-AREAG-01-0002	N	6/18/2014	0 - 2 ft	0.33		0.3431		*0.0131*
FTA-AREAG-02	FTA-AREAG-02-0002	N	6/18/2014	0 - 2 ft	1.2		1.347		*0.147*
FTA-AREAG-03	FTA-AREAG-03-0002	N	6/18/2014	0 - 2 ft	15		16.48		*1.48*
FTA-AREAH-01	FTA-AREAH-01-0002	N	6/18/2014	0 - 2 ft	0.57		0.5848		*0.0148*
FTA-AREAI-01	FTA-AREAI-01-0002	N	6/17/2014	0 - 2 ft	0.48		0.4923		*0.0123*
FTA-SB-200	FTA-SB-200-0002	N	11/8/2012	0 - 2 ft	0.58		1.071		*0.491*
FTA-SB-201	FTA-SB-201-0002	N	11/13/2012	0 - 2 ft	0.87		1.336		*0.466*
FTA-SB-202	FTA-SB-202-0002	N	11/7/2012	0 - 2 ft	<0.012	U	<0.092	U	*ND*
FTA-SB-203	FTA-SB-203-0002	N	11/7/2012	0 - 2 ft	<0.0097	U	<0.0753	U	*ND*
FTA-SB-204	FTA-SB-204-0002	N	11/8/2012	0 - 2 ft	0.1		0.1754		*0.0754*
FTA-SB-205	FTA-SB-205-0002	N	11/8/2012	0 - 2 ft	0.076		0.1528		*0.0768*
FTA-SB-205	FTA-SB-205-0002-D	FD	11/8/2012	0 - 2 ft	0.019		0.0835		*0.0645*
FTA-SB-206	FTA-SB-206-0002	N	11/6/2012	0 - 2 ft	15		16.04		*1.04*
FTA-SB-206	FTA-SB-206-0002-D	FD	11/6/2012	0 - 2 ft	14		15.39		*1.39*
FTA-SB-208	FTA-SB-208-0002	N	11/6/2012	0 - 2 ft	0.015		0.097		*0.082*
FTA-SB-209	FTA-SB-209-0002	N	11/6/2012	0 - 2 ft	8.7		9.44		*0.74*
FTA-SB-210	FTA-SB-210-0002	N	11/6/2012	0 - 2 ft	1.9		1.9723		*0.0723*
FTA-SB-211	FTA-SB-211-0002	N	11/6/2012	0 - 2 ft	16		16.892		*0.892*
FTA-SB-211	FTA-SB-211-0002-D	FD	11/6/2012	0 - 2 ft	44		46.02		*2.02*
FTA-SB-212	FTA-SB-212-0002	N	11/5/2012	0 - 2 ft	0.32		0.3954		*0.0754*
FTA-SB-213	FTA-SB-213-0002	N	11/5/2012	0 - 2 ft	0.054		0.121		*0.067*
FTA-SB-214	FTA-SB-214-0002	N	11/5/2012	0 - 2 ft	0.6		0.6716		*0.0716*
FTA-SB-214	FTA-SB-214-0002-D	FD	11/5/2012	0 - 2 ft	0.71		0.7787		*0.0687*
FTA-SB-215	FTA-SB-215-0002	N	11/7/2012	0 - 2 ft	1.1		1.1761		*0.0761*
FTA-SB-216	FTA-SB-216-0002	N	11/6/2012	0 - 2 ft	0.46		0.5389		*0.0789*
FTA-SB-217	FTA-SB-217-0002	N	11/7/2012	0 - 2 ft	<0.011	U	<0.0862	U	*ND*
FTA-SB-217	FTA-SB-217-0002-D	FD	11/7/2012	0 - 2 ft	<0.011	U	<0.0846	U	*ND*
FTA-SB-218	FTA-SB-218-0002	N	11/7/2012	0 - 2 ft	<0.012	U	<0.092	U	*ND*
FTA-SB-219	FTA-SB-219-0002	N	11/8/2012	0 - 2 ft	0.041		0.188		*0.147*
FTA-SB-220	FTA-SB-220-0002	N	11/6/2012	0 - 2 ft	1.5		1.5723		*0.0723*
PCBAREA1-003	PCBAREA1-003	N	9/18/2013	2 - 2 ft	74		76.6		*2.6*
PCBAREA1-003	PCBAREA1-093	FD	9/18/2013	2 - 2 ft	67		72.13		*5.13*
PCBAREA1-004	PCBAREA1-004	N	9/18/2013	2 - 2 ft	0.4		0.4525		*0.0525*
PCBAREA1-005	PCBAREA1-005	N	9/18/2013	1 - 1 ft	0.37		0.4225		*0.0525*
PCBAREA1-006	PCBAREA1-006	N	9/18/2013	1 - 1 ft	0.13		0.1825		*0.0525*
PCBAREA1-009	PCBAREA1-009	N	9/18/2013	2 - 2 ft	0.048		0.1005		*0.0525*
PCBAREA1-010	PCBAREA1-010	N	9/19/2013	2 - 2 ft	3.2		3.2519		*0.0519*
PCBAREA1-011	PCBAREA1-011	N	9/19/2013	2 - 2 ft	240		247.4		*7.4*
PCBAREA1-012	PCBAREA1-012	N	9/19/2013	2 - 2 ft	8.9		9.7		*0.8*
PCBAREA1-013	PCBAREA1-013	N	9/19/2013	1 - 1 ft	610		621.7		*11.7*
PCBAREA1-014	PCBAREA1-014	N	9/19/2013	1 - 1 ft	140		144.69		*4.69*
PCBAREA1-017	PCBAREA1-017	N	9/19/2013	1 - 1 ft	1.3		1.3518		*0.0518*
PCBAREA1-207	PCBAREA1-207	N	9/27/2013	1.5 - 1.5 ft	1.1		1.1525		*0.0525*
PCBAREA1-208	PCBAREA1-208	N	9/27/2013	1.5 - 1.5 ft	66		71.19		*5.19*
PCBAREA1-219	PCBAREA1-219	N	9/27/2013	1.5 - 1.5 ft	1		1.0506		*0.0506*
PCBAREA1-220	PCBAREA1-220	N	9/27/2013	1 - 1 ft	35		39.63		*4.63*
PCBAREA2-001	PCBAREA2-001	N	9/18/2013	2 - 2 ft	5.2		5.725		*0.525*
PCBAREA2-001	PCBAREA2-091	FD	9/18/2013	2 - 2 ft	4.2		4.725		*0.525*
PCBAREA2-002	PCBAREA2-002	N	9/18/2013	1 - 1 ft	1.7		1.7525		*0.0525*
PCBAREA2-003	PCBAREA2-003	N	9/18/2013	1 - 1 ft	2.4		2.4525		*0.0525*
PCBAREA2-004	PCBAREA2-004	N	9/18/2013	1 - 1 ft	19		21.1		*2.1*
PCBAREA2-005	PCBAREA2-005	N	9/18/2013	1 - 1 ft	5		5.525		*0.525*
SUBSURFACE SOIL									
DDA-E-1E	DDA-E-01E-SO-0608	N	7/15/2011	6 - 8 ft	<0.018	U	<0.126	U	*ND*
DDA-N-2A	DDA-N-2A-SO-0507	N	8/16/2010	5 - 7 ft	0.3		0.42		*0.12*
DDA-N-3A	DDA-N-3A-SO-0305	N	8/16/2010	3 - 5 ft	17.7		17.808		*0.108*
DDA-N-3A	DDA-N-3A-SO-0709	N	8/20/2010	7 - 9 ft	<0.0165	U	<0.1155	U	*ND*
DDA-N-5A	DDA-N-5A-SO-0406	N	8/20/2010	4 - 6 ft	<0.0165	U	<0.1155	U	*ND*
DDA-N-5A	DDA-N-5A-SO-0608	N	8/20/2010	6 - 8 ft	<0.0165	U	<0.1155	U	*ND*
DDA-NE-10D	DDA-NE-10D-SO-0608	N	7/15/2011	6 - 8 ft	<0.018	U	<0.126	U	*ND*
DDA-NE-3E	DDA-NE-03E-SO-0608	N	7/13/2011	6 - 8 ft	<0.018	U	<0.126	U	*ND*
DDA-NE-5C	DDA-NE-5C-SO-0204	N	8/19/2010	2 - 4 ft	<0.018	U	<0.126	U	*ND*
DDA-NE-5D	DDA-NE-5D-SO-0204	N	8/20/2010	2 - 4 ft	0.46		0.559		*0.099*
DDA-NE-5E	DDA-NE-05E-SO-0406	N	7/13/2011	4 - 6 ft	0.012		0.12		*0.108*

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FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PCBs ND = 0 (mg/kg) Result		Total PCBs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
DDA-NE-6C	DDA-NE-6C-SO-0204	N	8/20/2010	2 - 4 ft	<0.018	U	<0.126	U	*ND*
DDA-NE-6E	DDA-NE-06E-SO-0204	N	7/13/2011	2 - 4 ft	3.36		3.468		*0.108*
DDA-NE-6E	DDA-NE-06E-SO-0204-D	FD	7/13/2011	2 - 4 ft	3.3		3.408		*0.108*
DDA-NE-6E	DDA-NE-06E-SO-0406	N	7/13/2011	4 - 6 ft	4.99		5.098		*0.108*
DDA-NE-8B	DDA-NE-08B-SO-0406	N	7/13/2011	4 - 6 ft	<0.018	U	<0.126	U	*ND*
DDA-NW-10G	DDA-NW-10G-SO-0204	N	7/14/2011	2 - 4 ft	0.484		0.583		*0.099*
DDA-NW-10Q	DDA-NW-10Q-SO-0406	N	7/14/2011	4 - 6 ft	1.84		1.939		*0.099*
DDA-NW-2D	DDA-NW-2D-SO-0204	N	8/19/2010	2 - 4 ft	<0.018	U	<0.126	U	*ND*
DDA-NW-2F	DDA-NW-2F-SO-0204	N	8/18/2010	2 - 4 ft	0.449		0.548		*0.099*
DDA-NW-2G	DDA-NW-2G-SO-0204	N	8/20/2010	2 - 4 ft	13.5		13.608		*0.108*
DDA-NW-2P	DDA-NW-02P-SO-0406	N	7/12/2011	4 - 6 ft	<0.018	U	<0.126	U	*ND*
DDA-NW-3B	DDA-NW-3B-SO-0305	N	8/16/2010	3 - 5 ft	0.074		0.194		*0.12*
DDA-NW-3E	DDA-NW-3E-SO-0204	N	8/20/2010	2 - 4 ft	1.48		1.588		*0.108*
DDA-NW-3F	DDA-NW-3F-SO-0204	N	8/18/2010	2 - 4 ft	0.145		0.253		*0.108*
DDA-NW-3R	DDA-NW-03R-SO-0810	N	7/15/2011	8 - 10 ft	<0.018	U	<0.126	U	*ND*
DDA-NW-4D	DDA-NW-4D-SO-0204	N	8/19/2010	2 - 4 ft	<0.02	U	<0.14	U	*ND*
DDA-NW-4P	DDA-NW-4P-0406	N	7/12/2011	4 - 6 ft	0.076		0.184		*0.108*
DDA-NW-4Y	DDA-NW-04Y-SO-0204	N	7/15/2011	2 - 4 ft	<0.0215	U	<0.1505	U	*ND*
DDA-NW-5C	DDA-NW-5C-SO-0204	N	8/20/2010	2 - 4 ft	1.05		1.158		*0.108*
DDA-NW-5G	DDA-NW-5G-SO-0204	N	8/20/2010	2 - 4 ft	2.02		2.128		*0.108*
DDA-NW-6B	DDA-NW-6B-SO-0204	N	8/17/2010	2 - 4 ft	0.158		0.278		*0.12*
DDA-NW-6C	DDA-NW-6C-SO-0204	N	8/17/2010	2 - 4 ft	0.104		0.212		*0.108*
DDA-NW-6D	DDA-NW-6D-SO-0204	N	8/17/2010	2 - 4 ft	0.204		0.324		*0.12*
DDA-NW-6E	DDA-NW-6E-SO-0204	N	8/17/2010	2 - 4 ft	0.154		0.274		*0.12*
DDA-NW-6F	DDA-NW-6F-SO-0204	N	8/20/2010	2 - 4 ft	1.62		1.728		*0.108*
DDA-NW-6R	DDA-NW-06R-SO-0406	N	7/14/2011	4 - 6 ft	<0.018	U	<0.126	U	*ND*
DDA-NW-7D	DDA-NW-7D-SO-0204	N	8/20/2010	2 - 4 ft	0.113		0.212		*0.099*
DDA-NW-8I	DDA-NW-08I-SO-0204	N	7/13/2011	2 - 4 ft	2.38		2.479		*0.099*
DDA-NW-8I	DDA-NW-08I-SO-0204-D	FD	7/13/2011	2 - 4 ft	4.43		4.529		*0.099*
DDA-NW-8R	DDA-NW-08R-SO-0204	N	7/14/2011	2 - 4 ft	0.215		0.314		*0.099*
DDA-NW-9B	DDA-NW-09B-SO-0406	N	7/12/2011	4 - 6 ft	0.044		0.143		*0.099*
DDA-NW-9M	DDA-NW-09M-SO-0608	N	7/14/2011	6 - 8 ft	<0.02	U	<0.14	U	*ND*
DDA-SE-2C	DDA-SE-2C-SO-0608	N	8/19/2010	6 - 8 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-2D	DDA-SE-2D-SO-0608	N	8/20/2010	6 - 8 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-3D	DDA-SE-3D-SO-0810	N	8/20/2010	8 - 10 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-4C	DDA-SE-4C-SO-0608	N	8/19/2010	6 - 8 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-4D	DDA-SE-04D-SO-0810	N	7/11/2011	8 - 10 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-4D	DDA-SE-4D-SO-0810	N	8/20/2010	8 - 10 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-5B	DDA-SE-05B-SO-0204	N	7/12/2011	2 - 4 ft	<0.018	U	<0.126	U	*ND*
DDA-SE-5C	DDA-SE-05C-SO-0810	N	7/12/2011	8 - 10 ft	0.038		0.146		*0.108*
DDA-SE-5C	DDA-SE-5C-SO-0810	N	8/20/2010	8 - 10 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-5D	DDA-SE-05D-SO-0204	N	7/12/2011	2 - 4 ft	<0.02	U	<0.14	U	*ND*
DDA-SE-5D	DDA-SE-05D-SO-0204-D	FD	7/12/2011	2 - 4 ft	<0.0165	U	<0.1155	U	*ND*
DDA-SE-5D	DDA-SE-05D-SO-0406	N	7/12/2011	4 - 6 ft	<0.018	U	<0.126	U	*ND*
DDA-SW-2F	DDA-SW-2F-SO-0204	N	8/20/2010	2 - 4 ft	0.569		0.668		*0.099*
DDA-SW-3G	DDA-SW-03G-SO-0406	N	7/13/2011	4 - 6 ft	0.014		0.113		*0.099*
DDA-SW-3N	DDA-SW-03N-SO-0406	N	7/13/2011	4 - 6 ft	2.64		2.739		*0.099*
DDA-SW-5C	DDA-SW-05C-SO-0406	N	7/13/2011	4 - 6 ft	0.026		0.134		*0.108*
DDA-W-1B	DDA-W-1B-SO-0305	N	8/17/2010	3 - 5 ft	1.9		2.008		*0.108*
DDA-W-1F	DDA-W-1F-SO-0204	N	8/18/2010	2 - 4 ft	0.208		0.307		*0.099*
DDA-W-1G	DDA-W-1G-SO-0204	N	8/20/2010	2 - 4 ft	1.11		1.209		*0.099*
DDA-W-1L	DDA-W-01L-SO-0406	N	7/13/2011	4 - 6 ft	0.332		0.44		*0.108*
FTA-ANOM1A-SO-DEEP	FTA-ANOM1A-SO-DEEP	N	9/25/2013	3 - 4.5 ft	0.32		0.3947		*0.0747*
FTA-ANOM1B-SO-DEEP	FTA-ANOM1B-SO-DEEP	N	9/25/2013	3 - 4.5 ft	0.054		0.1178		*0.0638*
FTA-ANOM1C-SO-INT	FTA-ANOM1C-SO-INT	N	9/25/2013	2 - 3.75 ft	0.35		0.465		*0.115*
FTA-ANOM1D-SO-INT	FTA-ANOM1D-SO-INT	N	9/25/2013	2 - 4 ft	0.12		0.1895		*0.0695*
FTA-ANOM1E-SO-INT	FTA-ANOM1E-SO-INT	N	9/26/2013	2 - 4 ft	0.15		0.2179		*0.0679*
FTA-ANOM2-SO-DEEP	FTA-ANOM2-SO-DEEP	N	9/25/2013	6 - 7.5 ft	1.2		1.2782		*0.0782*
FTA-ANOM2-SO-INT	FTA-ANOM2-SO-INT	N	9/25/2013	2 - 4 ft	12		13.47		*1.47*
FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-DEEP	N	9/25/2013	3 - 4 ft	<0.013	U	<0.101	U	*ND*
FTA-ANOM4-SO-DEEP	FTA-ANOM4-SO-DEEP-D	FD	9/25/2013	3 - 4 ft	<0.0096	U	<0.0752	U	*ND*
FTA-ANOM4-SO-INT	FTA-ANOM4-SO-INT	N	9/25/2013	2 - 4 ft	0.22		0.2895		*0.0695*
FTA-AREAA-01	FTA-AREAA-01-0206	N	6/17/2014	2 - 6 ft	<0.0024	U	<0.0184	U	*ND*
FTA-AREAA-02	FTA-AREAA-02-0206	N	6/17/2014	2 - 6 ft	<0.0024	U	<0.0184	U	*ND*
FTA-AREAB-01	FTA-AREAB-01-0206	N	6/17/2014	2 - 6 ft	0.063		0.0761		*0.0131*
FTA-AREAB-01	FTA-AREAB-01-0610	N	6/17/2014	6 - 10 ft	0.049		0.0629		*0.0139*
FTA-AREAB-02	FTA-AREAB-02-0206	N	6/17/2014	2 - 6 ft	0.035		0.0514		*0.0164*
FTA-AREAC-01	FTA-AREAC-01-0206	N	6/17/2014	2 - 6 ft	0.037		0.0493		*0.0123*

ATTACHMENT G TABLE 1
SUMMARY OF TOTAL PCBS IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PCBs ND = 0 (mg/kg) Result		Total PCBs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
FTA-AREAD-01	FTA-AREAD-01-0206	N	6/19/2014	2 - 6 ft	<0.0023	U	<0.0175	U	*ND*
FTA-AREAD-02	FTA-AREAD-02-0206	N	6/18/2014	2 - 6 ft	<0.0021	U	<0.0165	U	*ND*
FTA-AREAE-01	FTA-AREAE-01-0610	N	6/19/2014	6 - 10 ft	0.013		0.0269		*0.0139*
FTA-AREAE-01	FTA-AREAE-01-0610-D	FD	6/19/2014	6 - 10 ft	0.023		0.0369		*0.0139*
FTA-AREAF-01	FTA-AREAF-01-0206	N	6/19/2014	2 - 6 ft	<0.002	U	<0.0156	U	*ND*
FTA-AREAG-01	FTA-AREAG-01-0206	N	6/18/2014	2 - 6 ft	0.044		0.0571		*0.0131*
FTA-AREAG-02	FTA-AREAG-02-0206	N	6/18/2014	2 - 6 ft	0.026		0.0423		*0.0163*
FTA-AREAG-03	FTA-AREAG-03-0206	N	6/18/2014	2 - 6 ft	0.56		0.5748		*0.0148*
FTA-AREAH-01	FTA-AREAH-01-0206	N	6/18/2014	2 - 6 ft	0.099		0.1129		*0.0139*
FTA-AREAH-01	FTA-AREAH-01-0206-D	FD	6/18/2014	2 - 6 ft	0.088		0.1028		*0.0148*
FTA-AREAI-01	FTA-AREAI-01-0206	N	6/17/2014	2 - 6 ft	0.02		0.0347		*0.0147*
FTA-AREAJ-01	FTA-AREAJ-01-0206	N	6/18/2014	2 - 6 ft	0.043		0.0585		*0.0155*
FTA-AREAJ-01	FTA-AREAJ-01-069.4	N	6/18/2014	6 - 9.4 ft	0.017		0.0309		*0.0139*
FTA-NPCB-SO-BOTPCB	FTA-NPCB-SO-BOTPCB	N	9/25/2013	2 - 3 ft	0.29		0.357		*0.067*
FTA-SB-200	FTA-SB-200-0206	N	11/8/2012	2 - 6 ft	<0.074	U	<0.578	U	*ND*
FTA-SB-201	FTA-SB-201-0206	N	11/13/2012	2 - 6 ft	<0.045	U	<0.349	U	*ND*
FTA-SB-202	FTA-SB-202-0206	N	11/7/2012	2 - 6 ft	<0.011	U	<0.0854	U	*ND*
FTA-SB-203	FTA-SB-203-0206	N	11/7/2012	2 - 6 ft	<0.0092	U	<0.0716	U	*ND*
FTA-SB-204	FTA-SB-204-0610	N	11/8/2012	6 - 10 ft	0.018		0.0941		*0.0761*
FTA-SB-205	FTA-SB-205-0206	N	11/8/2012	2 - 6 ft	<0.011	U	<0.0846	U	*ND*
FTA-SB-206	FTA-SB-206-0206	N	11/6/2012	2 - 6 ft	0.022		0.0988		*0.0768*
FTA-SB-208	FTA-SB-208-0610	N	11/6/2012	6 - 10 ft	<0.01	U	<0.0812	U	*ND*
FTA-SB-209	FTA-SB-209-0206	N	11/6/2012	2 - 6 ft	2		2.0702		*0.0702*
FTA-SB-209	FTA-SB-209-0610	N	11/6/2012	6 - 10 ft	<0.012	U	<0.092	U	*ND*
FTA-SB-210	FTA-SB-210-0610	N	11/6/2012	6 - 10 ft	<0.011	U	<0.0846	U	*ND*
FTA-SB-211	FTA-SB-211-0206	N	11/6/2012	2 - 6 ft	0.95		1.0174		*0.0674*
FTA-SB-211	FTA-SB-211-0610	N	11/6/2012	6 - 10 ft	0.072		0.1407		*0.0687*
FTA-SB-212	FTA-SB-212-0206	N	11/5/2012	2 - 6 ft	<0.01	U	<0.0812	U	*ND*
FTA-SB-212	FTA-SB-212-0610	N	11/8/2012	6 - 10 ft	<0.01	U	<0.0812	U	*ND*
FTA-SB-213	FTA-SB-213-0610	N	11/5/2012	6 - 10 ft	<0.01	U	<0.0804	U	*ND*
FTA-SB-214	FTA-SB-214-0206	N	11/5/2012	2 - 6 ft	<0.012	U	<0.0912	U	*ND*
FTA-SB-215	FTA-SB-215-0610	N	11/7/2012	6 - 10 ft	<0.012	U	<0.092	U	*ND*
FTA-SB-216	FTA-SB-216-0206	N	11/6/2012	2 - 6 ft	0.078		0.1467		*0.0687*
FTA-SB-216	FTA-SB-216-0610	N	11/6/2012	6 - 10 ft	<0.011	U	<0.083	U	*ND*
FTA-SB-217	FTA-SB-217-0206	N	11/7/2012	2 - 6 ft	<0.0098	U	<0.0762	U	*ND*
FTA-SB-218	FTA-SB-218-0610	N	11/7/2012	6 - 10 ft	<0.011	U	<0.0878	U	*ND*
FTA-SB-219	FTA-SB-219-0206	N	11/8/2012	2 - 6 ft	<0.011	U	<0.0878	U	*ND*
FTA-SB-220	FTA-SB-220-0206	N	11/6/2012	2 - 6 ft	<0.01	U	<0.0812	U	*ND*
FTA-WANOM1-SO-BOTPCB	FTA-WANOM1-SO-BOTPCB	N	9/25/2013	2 - 3 ft	0.44		0.5071		*0.0671*
PCBAREA1-201	PCBAREA1-201	N	9/27/2013	3 - 3 ft	0.67		0.7163		*0.0463*
PCBAREA1-202	PCBAREA1-202	N	9/27/2013	3 - 3 ft	83		88.06		*5.06*
PCBAREA1-202	PCBAREA1P-202	FD	9/27/2013	3 - 3 ft	<0.01	U	<0.061	U	*ND*
GROUNDWATER									
FTA-MW-206	FTA-MW-206-112812	N	11/28/2012	--	< 0.24	U	< 2.16	U	*ND*
FTA-MW-206	FTA-MW206-092613	N	9/26/2013	--	< 0.24	U	< 2.16	U	*ND*
FTA-MW-210	FTA-MW-210-112912-D	FD	11/29/2012	--	< 0.26	U	< 2.34	U	*ND*
FTA-MW-210	FTA-MW-210-112912	N	11/29/2012	--	< 0.24	U	< 2.16	U	*ND*
FTA-MW-210	FTA-MW210-092613-D	FD	9/26/2013	--	< 0.26	U	< 2.34	U	*ND*
FTA-MW-210	FTA-MW210-092613	N	9/26/2013	--	< 0.26	U	< 2.34	U	*ND*
SURFACE WATER									
FTA-SW-01	FTA-SW-01-061914	N	6/19/2014	--	< 0.024	U	< 0.216	U	*ND*
FTA-SW-02	FTA-SW-02-061914	N	6/19/2014	--	< 0.048	U	< 0.432	U	*ND*
FTA-SW-03	FTA-SW-03-061914	N	6/19/2014	--	< 0.05	U	< 0.45	U	*ND*
FTA-SW-06	FTA-SW-06-061914	N	6/19/2014	--	0.38		0.764		*0.384*
FTA-SW-06	FTA-SW-06-061914-D	FD	6/19/2014	--	< 0.047	U	< 0.423	U	*ND*
FTA-SW-07	FTA-SW-07-061914	N	6/19/2014	--	< 0.047	U	< 0.423	U	*ND*
FTA-SW-08	FTA-SW-08-061914	N	6/19/2014	--	< 0.047	U	< 0.423	U	*ND*
SEDIMENT									
FTA-SED-01	FTA-SED-01-0005	N	11/27/2012	0 - 0.5 ft	1.4		1.49		*0.09*
FTA-SED-01	FTA-SD-01-000.5	N	6/19/2014	0 - 0.5 ft	1.2		1.437		*0.237*
FTA-SED-02	FTA-SED-02-0005	N	11/27/2012	0 - 0.5 ft	1.3		1.414		*0.114*
FTA-SED-02	FTA-SED-02-0005-D	FD	11/27/2012	0 - 0.5 ft	1.3		1.407		*0.107*
FTA-SED-02	FTA-SD-02-000.5	N	6/19/2014	0 - 0.5 ft	0.079		0.0954		*0.0164*
FTA-SED-03	FTA-SED-03-0005	N	11/27/2012	0 - 0.5 ft	0.22		0.31		*0.09*
FTA-SED-03	FTA-SD-03-000.5	N	6/19/2014	0 - 0.5 ft	0.23		0.257		*0.027*
FTA-SED-04	FTA-SED-04-0005	N	11/27/2012	0 - 0.5 ft	2.1		2.23		*0.13*
FTA-SED-04	FTA-SD-04-000.5	N	6/21/2014	0 - 0.5 ft	0.6		0.6286		*0.0286*
FTA-SED-05	FTA-SED-05-0005	N	11/27/2012	0 - 0.5 ft	0.76		0.956		*0.196*

ATTACHMENT G TABLE 1
SUMMARY OF TOTAL PCBS IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
HUMAN HEALTH RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PCBs ND = 0 (mg/kg) Result	Total PCBs ND = RL (mg/kg) Result	*Absolute Difference Between Values (mg/kg)*
FTA-SED-05	FTA-SD-05-000.5	N	6/20/2014	0 - 0.5 ft	0.44	0.5079	*0.0679*
FTA-SED-06	FTA-SED-06-0005	N	11/27/2012	0 - 0.5 ft	0.29	0.552	*0.262*
FTA-SED-06	FTA-SD-06-000.5	N	6/19/2014	0 - 0.5 ft	0.63	0.6913	*0.0613*
FTA-SED-06	FTA-SD-06-000.5-D	FD	6/19/2014	0 - 0.5 ft	1.1	1.1482	*0.0482*
FTA-SED-07	FTA-SED-07-0005	N	11/28/2012	0 - 0.5 ft	0.066	0.222	*0.156*
FTA-SED-07	FTA-SD-07-000.5	N	6/19/2014	0 - 0.5 ft	0.16	0.2229	*0.0629*
FTA-SED-08	FTA-SED-08-0005	N	11/28/2012	0 - 0.5 ft	< 0.026 U	< 0.202 U	*ND*
FTA-SED-08	FTA-SD-08-000.5	N	6/19/2014	0 - 0.5 ft	0.028	0.0492	*0.0212*

Notes:
ND - Not Detected. See Attachment A for data tables.
RL - Reporting Limit.
U - Not Detected at Specified Reporting Limit.
ND = RL Data Treatment - Total PCBs were calculated per sample by summing the individual Aroclor concentrations for detected results and the full reporting detection limit for non-detect results. For samples without any detections of individual Aroclors, the maximum reporting detection limit within the sample is presented as a non-detect value. This value is considered in the uncertainty section of the risk assessment.

ND = 0 Data Treatment - Total PCBs were calculated per sample by summing only the detected individual Aroclor concentrations. For samples without any detections of individual Aroclors, the maximum reporting detection limit within the sample is presented as a non-detect value. This approach was used in the risk assessment.

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APPENDIX E

ECOLOGICAL RISK ASSESSMENT

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TABLE OF CONTENTS

TABLES

FIGURES

ATTACHMENTS

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ACRONYMS AND ABBREVIATIONS

AUF	area use factor
AWQC	ambient water quality criteria
BERA	baseline ecological risk assessment
bgs	below ground surface
CCME	Canadian Council of Ministers of the Environment
COPC	chemical of potential concern
CSM	conceptual site model
Cutler	Cutler, Maine
DDA	drum disposal area
dw	dry weight
Eco-SSL	ecological soil screening level
ED	exposure duration, year
EPC	exposure point concentration
ERA	ecological risk assessment
FOD	frequency of detection
ft	foot or feet
FTA	Fire Training Area
HMW	high molecular weight
HQ	hazard quotient
LANL	Los Alamos National Laboratory
LMW	low molecular weight
LOAEL	lowest-observed-adverse-effect level
LOD	limit of detection
MATC	maximum allowable threshold concentration
mg/kg	milligram per kilogram
mg/kg-day	milligram per kilogram per day
mg/L	milligram per liter
MPR	Maximal Permissible Risk

NCTAMS LANT Det	Naval Computer and Telecommunications Area Master Station Atlantic Detachment
NOAEL	no-observed-adverse-effect level
ORNL	Oak Ridge National Laboratory
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PEC	probable effect concentration
RI	Remedial Investigation
SAP	Sampling and Analysis Plan
SCV	Secondary Chronic Value
SEV	screening ecological value
SMDP	Scientific/Management Decision Point
SRA	screening risk assessment
SVOC	semivolatile organic compound
SYA	Salvage Yard Area
TDD	total daily dose
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TRV	toxicity reference value
U.S.	United States
UCL	upper confidence limit
USEPA	United States Environmental Protection Agency
VLF	Very Low Frequency
VOC	volatile organic compound

1.0 INTRODUCTION

This appendix presents an ecological risk assessment (ERA) conducted for the former Fire Training Area (FTA) located at the Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det) in Cutler, Maine (Cutler) (**Figure 1**). This ERA addresses the potential for ecological risks associated with the historical use of the area.

The former FTA (Site 1) consists of a former gravel pit that was used by the Navy for firefighting training exercises from the early 1960s to the 1980s and a drum disposal area (DDA; Site 5) located on the southern edge of the former FTA, which was combined with the former FTA into a single site (Site 1) in 2012. Since the DDA was physically located within the boundaries of the former FTA, they were combined in 2012 and all environmental issues are being addressed as site 1. The chemicals associated with these activities, and therefore potentially present at the site, include volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons, and metals. The site history and a site description are presented in detail in the Remedial Investigation (RI) report text.

1.1 Objectives

The primary objective of this ERA for the site is to evaluate whether chemicals of potential concern (COPCs) attributable to past operations have the potential to cause unacceptable adverse risk to ecological receptors. The specific objectives of the ERA are as follows:

- Determine whether any complete exposure pathways associated with surface water, sediment, or soil exist at the former FTA.
- For areas with complete exposure pathways, compare the concentrations of chemicals detected in surface soil and sediment to ecological risk-based screening criteria to determine the site COPCs for further evaluation.
- Evaluate chemicals found to exceed screening criteria for potential to cause unacceptable adverse risk to ecological receptors.

This ERA focuses on surface soil, surface water, and sediment exposure pathways. Chemicals in surface soil may be contacted directly by plants and invertebrates living in the soil. Chemicals in sediment and surface water may be contacted directly by aquatic or benthic invertebrates living in the wetland. Wildlife foraging within the former FTA could also be exposed directly to chemicals in soil, surface water, and sediment through incidental ingestion of soil, surface water, and sediment and indirectly by ingestion of contaminated prey items living at the site.

1.2 Approach for the ERA

This ERA was conducted in accordance with the *Navy Policy for Conducting Ecological Risk Assessments* and *Navy Guidance for Conducting Ecological Risk Assessments* (DON 1999a; 1999b).

This approach is consistent with the eight-step tiered approach to ERAs presented in the *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final* (USEPA 1997). Additional guidance documentation includes, but is not limited to, the following:

- Department of the Navy Environmental Restoration Program Manual (DON 2006)
- Navy Policy on the Use of Background Chemical Levels (DON 2004)
- Navy Policy on Sediment Site Investigation and Response Action (DON 2002)
- Guidelines for Ecological Risk Assessment (USEPA 1998)
- The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments (USEPA 2001a)

As described in Navy guidance (DON 1999a; 1999b), a three-tiered approach that incorporates different levels of assessment complexity is used to evaluate the potential for ecological risk. The tiered approach may be implemented in its entirety depending on the level and magnitude of risk that is determined in prior tiers. This approach consists of the following tiers:

- Tier 1 – Ecological Screening Risk Assessment (SRA)
- Tier 2 – Baseline Ecological Risk Assessment (BERA)
- Tier 3 – Risk Evaluation of Remedial Alternatives

The approach for the ERA follows the approach used recently for the Very Low Frequency (VLF) Peninsula and Salvage Yard Area (SYA) ERAs (Resolution 2016a,b). An ERA Work Plan was not generated for the former FTA, but the 2012 Tier II Sampling and Analysis Plan (SAP) for the former FTA (Tetra Tech 2012) identified ecological screening levels and relevant exposure pathways that were similar to those considered at the SYA; both areas included terrestrial and wetland habitats.

This ERA has been structured according to United States (U.S.) Navy policy (DON 1999a; 1999b) to fulfill both the requirements of an eight-step U.S. Environmental Protection Agency (USEPA) ERA (USEPA 1997) and a U.S. Navy ERA. **Section 3.0** of this document presents the Tier 1 ecological SRA and **Section 4.0** presents the first step of the Tier 2 BERA. Tier 3 will be presented separately, if warranted.

2.0 DATA EVALUATION

The purpose of **Section 2.0** is to summarize the environmental data available for use for each of the media quantitatively evaluated in the ERA. In addition, **Section 2.0** summarizes the methodology used to determine exposure point concentrations (EPCs) for COPCs in each medium.

Environmental data used in this ERA include surface soil and freshwater surface water and sediment collected between 2006 and 2016. A detailed discussion of the sampling can be found in the RI report (Resolution 2017).

2.1 Data Used in the ERA

The following sections summarize the environmental data available for each of the media quantitatively evaluated in this ERA. **Attachment A** includes tables summarizing the samples by media and identifying the analyses performed for each sample considered in the ERA. Individual analytical results for samples used in this ERA are also included in **Attachment A**. Summary statistics are included in **Attachment B** and data treatment for these statistics is summarized in **Section 2.2**. Samples were analyzed for a variety of parameters including PCBs, metals, pesticides, total petroleum hydrocarbons (TPH), VOCs, and semivolatile organic compounds (SVOCs).

TPH data for diesel range organics, gasoline range organics, and hydrocarbon ranges were not evaluated in the ERA due to a lack of relevant screening levels. Impacts due to petroleum products are assessed using the relevant VOC (i.e., benzene, toluene, ethylbenzene, xylene) and PAH data.

2.1.1 Soil

Surface soil samples (**Figure 2** and **Figure 3**) were collected from the top 0 to 2 feet (ft) below ground surface (bgs) during multiple sampling events conducted between 2007 and 2016. Samples were analyzed for inorganics, PCBs, pesticides, SVOCs, VOCs, and TPH. Surface soil samples collected in November 2016 were analyzed for both total and hexavalent chromium. With the exception of the petroleum hydrocarbon data, all data were considered in the ERA. Samples identified as removed during excavations were not included in the ERA.

2.1.2 Surface Water

Surface water samples (**Figure 2**) were collected from the wetland in 2006 and 2012. Samples were analyzed for total and dissolved phase inorganics, PCBs, SVOCs, VOCs, and TPH. With the exception of the petroleum hydrocarbon data, all data were considered in the ERA.

2.1.3 Sediment

Sediment samples (**Figure 2**) were collected from the wetland area in November 2012, June 2014, and November 2016 (one sample) from a depth of 0 to 0.5 ft bgs. Samples were analyzed for inorganics, PCBs, pesticides, SVOCs, VOCs, and TPH. The sediment sample collected in November

2016 (FTA-SED-07) was analyzed for total and hexavalent chromium. With the exception of the petroleum hydrocarbon data, all data were considered in the ERA.

2.1.4 Groundwater

Ecological receptors are not exposed to groundwater. The pathway to this medium is not complete and was not evaluated in the ecological evaluation.

2.2 Available Background Data

Three freshwater sediment samples collected as part of the SYA RI effort in 2009 are also considered to be background samples for the freshwater sediments of the former FTA. The *Background Study for Remedial Investigations for Installation Restoration Sites at NCTAMS LANT Det in Cutler, Maine* (Battelle 2005) described the collection of background surface soil samples (0–1 ft bgs). Samples collected from 15 locations in each of the two primary soil types (glacial till and glacio-marine sediments) were considered to be applicable to the former FTA. The data associated with these samples are included in Appendix A of the RI report.

While it is assumed that chemicals within background levels are not attributed to Navy activities, background levels have not been utilized for screening purposes but are considered in the Tier 2 BERA. Appendix C of the RI report includes the background evaluation considered in the BERA.

2.3 Data Treatment

Analytical data were evaluated, validated and qualified prior to use in the risk assessment. Data evaluation and validation included a comparison of the site data to corresponding blank (laboratory, field, equipment, and trip) concentration data. Data rejected by the evaluation ("R" qualified) were not used. Estimated values (e.g., "J" qualified) were used in the risk assessment without modification. If the value was flagged with "U" or "UJ", the result was considered a non-detected (an undetected) value.

For each exposure area and medium, the data were compiled into summary statistics as discussed in the following paragraphs. For each chemical detected at least once within an area/media, the summary statistics include frequency of detection (FOD), range of detection limits, range of detected concentrations, mean of detected concentrations, and location of maximum detected result. The following guidance documents were used to develop the summary statistics:

- Navy Human Health Risk Assessment Guidance (DON 2008)
- Risk Assessment Guidance for Superfund: Volume I – Human Health Evaluation Manual, Parts A and D (USEPA 1989; 2001b)
- Navy Guidance for Conducting Ecological Risk Assessments (DON 1999a,b)

Treatment of Duplicates: For sample locations in which a duplicate sample was also collected, the duplicate sample results for each chemical/medium/area combination were processed for use in the calculation of summary statistics. Duplicates were resolved as follows: (1) where both the sample and the duplicate are not detected, the resulting values is the average of the limits of detection (LODs); (2) where both the sample and the duplicate are detected, the resulting values is the average of the detected results; and (3) where one of the pair is reported as not detected and the other is detected, the detected concentration is used.

Frequency of Detection: The detection frequency is reported as the number of detected samples out of the total number of samples analyzed for a specific chemical, after resolution of duplicates as described above. The number of samples that will be used to calculate the detection frequency reflects the treatment of non-detects described above.

Minimum Detected Concentration or Minimum Reporting Limit: This is the minimum detected concentration or the minimum detection limit (for analytes not detected) for each chemical/medium/depth interval/area combination, after resolution of duplicates as described above.

Maximum Detected Concentration or Maximum Reporting Limit: This is the maximum detected concentration or the maximum detection limit (for analytes not detected) for each chemical/medium/depth interval/area combination, after resolution of duplicates as described above.

Mean of Detected Concentrations: This is the average of the detected concentrations for each chemical/medium/depth interval/area combination, after resolution of duplicates as described above.

Location of Maximum Detected Concentration: This is the sample location associated with the maximum detected concentration, as defined above, for each chemical/medium/depth interval/area combination.

In addition to individual chemicals, summary statistics were calculated for Total Xylenes, Total PCBs (as Aroclors), and Total PAHs (including totals for both high and low molecular weight [LMW] PAHs) as follows:

- For samples with at least one detect, only the detected results were summed to calculate the total concentration.
- Where a sample does not have any detections of individual chemicals, then the total concentration was considered a non-detect with a LOD equal to the maximum LOD of the individual chemicals.

Summary statistics for samples considered in the ERA are included in **Attachment B**. For each medium, the summary tables provide the FOD, range of detection limits, range of detected concentrations, mean of detected concentrations, and location of maximum detected result for each detected chemical.

3.0 TIER 1 ECOLOGICAL SCREENING RISK ASSESSMENT

The primary objective of a Tier 1 ecological SRA is to determine which, if any, exposure pathways and COPCs warrant further evaluation in a more refined ERA. The Navy Tier 1 ecological SRA process can be described in two steps. Step 1 is equivalent to Step 1 of the USEPA (1997) ERA process and includes a site description, pathway identification/problem formulation, and toxicity evaluation. The goals of this step are to describe the ecological setting of the site and determine whether ecological exposure pathways are potentially complete. Step 2 of the Navy Tier 1 ecological SRA process is equivalent to Step 2 of the USEPA (1997) ERA process. First, potential exposure is evaluated based on conservative assumptions. Then, risk is estimated by comparing the chemical concentrations detected in each medium of concern to conservative, screening-level, medium-specific benchmark criteria.

After Step 2 in the risk assessment process, a Scientific/Management Decision Point (SMDP) is normally reached to determine whether exit criteria for Tier 1, Step 2 have been met. The potential outcomes of the SMDP are as follows:

- The site passes the ecological SRA based on an absence of complete exposure pathways and/or an absence of unacceptable risks (i.e., all maximum concentrations less than benchmarks). Under these conditions, the decision is made that the site poses no unacceptable risks to ecological resources, further ERA or site remediation is unwarranted, and the site may be closed out for ecological concerns.
- The site fails the ecological SRA on the basis that complete pathways and potential unacceptable risks are indicated for at least one chemical. Under these conditions, the decision is made to either initiate interim cleanup or proceed to Tier 2 of the ERA process. The Tier 1 process also identifies those chemicals that should be retained for further consideration and those chemicals that can be eliminated from the risk assessment.

The Tier 1 ecological SRA is being submitted with the draft RI report for regulatory review. A preliminary Tier 2, Step 3a BERA has been prepared based on the results of the Tier 1 ecological SRA to further assess the potential for adverse effects to ecological receptors at the former FTA. If necessary, a SMDP conference with the regulatory and Navy risk managers will be scheduled to discuss the Tier 1 results. The Preliminary Tier 2 assessment will be revised in response to regulatory comments.

3.1 Step 1 – Screening-Level Problem Formulation

Step 1 is divided into several sections that help define the problem at the screening level. Site history details and ecological setting characteristics specifically relevant to this ecological SRA are provided in **Section 3.1.1**. Assessment and measurement endpoints selected for this ecological SRA are presented in **Section 3.1.2**. The selection of representative species for the ecological SRA

is described in **Section 3.1.3**. Exposure pathways are presented in **Section 3.1.4** and their incorporation into the conceptual site model (CSM) is described in **Section 3.1.5**. **Section 3.1.6** provides a description of the toxicity evaluation and **Section 3.1.7** discusses the selection of COPC.

3.1.1 Ecological Setting

The NCTAMS LANT Det Cutler facility, situated on a 2,800-acre peninsula on the coast of eastern Maine (**Figure 1**), was established on June 23, 1961. The former FTA is located in the northern portion of the NCTAMS LANT, to the north of the VLF Peninsula, east of Holmes Bay and Machias Bay, and west of Little Machias Bay. Undeveloped forested land and several freshwater wetlands (known locally as heaths) surround the former FTA. The site was historically used for firefighting operations and disposal of fuel oil.

In 2004, Tetra Tech performed a remedial action in the heath wetland north of the former FTA. Previous investigations had indicated that the area had been impacted by petroleum-contaminated soils. This area, referred to as the Sand Wedge, was excavated and the wetlands restored (**Figure 4**). After the soil was removed, the wetland was restored through placing a layer of organic enriched soil, seeding with a wetland mix, and planting native saplings and other plants in the wetlands.

Additional removal actions were conducted in the center of the former FTA between 2006 and 2009 and a wetland was developed during restoration activities. During the 2009 soil removal action at the former FTA, an area of lower elevation in the central portion of the site was created to enhance the wetland restoration area to the north and to provide additional habitats for wildlife. The elevation in the central portion of the former FTA was reduced during the creation of the freshwater wetland, producing shallow groundwater levels at or near the ground surface. Currently, the majority of runoff drains into the created wetland in the central portion of the site (**Figure 4**).

Standing water may be seasonally present within the wetlands; however, fish are not expected to be present. Maximum water depths during the 2014 wetland sampling effort were approximately 6 inches with no standing water present at some locations. The Sand Wedge and the created wetland account for approximately 3.3 acres of wetlands within the site.

The rest of the site (approximately 7 acres) is primarily composed of cleared, open areas with a forested area around the perimeter. The DDA is located in the southwest corner of the former FTA immediately to the south of the removal area/created wetland and directly upgradient of the wetland, based on previous determinations of groundwater flow. Previous removal actions have removed over 30 drums and drum remnants from the DDA. The DDA is currently a cleared open area adjacent to a forested area located to the south.

3.1.2 Assessment Endpoints and Measures of Effect

Assessment endpoints describe the characteristics of an ecosystem that has an intrinsic environmental value to be protected (e.g., protection of avian community). Typically, assessment endpoints and receptors are selected for their potential exposure, ecological significance, economic importance, and/or societal relevance. Because the ecological SRA represents a very conservative screening level assessment, the assessment endpoints are stated in generic terms. Assessment endpoints are critical to problem formulation, because they link the risk assessment to management concerns and are central to refining the CSM (USEPA 1997).

Because assessment endpoints often cannot be measured directly, measures of effect are a set of surrogate endpoints used to provide a quantitative metric for evaluating potential effects of chemicals on the ecosystem components potentially at risk. Measures of effect provide the actual measurements used to evaluate ecological risk and are selected to represent mechanisms of toxicity and exposure pathways.

Ecological receptors are defined as plant and animal populations, communities, habitats, or sensitive environments. The following assessment endpoints and their associated measures of effect were considered for the former FTA.

Assessment Endpoint	**Measures of Effect**
Protection and maintenance of indigenous soil invertebrate communities in upland habitat areas at levels similar to those of nearby populations not exposed to site-related chemicals.	Comparison of onsite concentrations of chemicals in surface soil to soil screening values derived for the protection of soil invertebrates.
Protection and maintenance of indigenous terrestrial plant communities in upland habitat areas at levels similar to those of nearby populations not exposed to site-related chemicals.	Comparison of onsite concentrations of chemicals in surface soil to soil screening values derived for the protection of plants.
Protection and maintenance of aquatic communities in freshwater habitat areas at levels similar to those of nearby populations not exposed to site-related chemicals.	Comparison of onsite wetland surface water concentrations to surface water screening values.
Protection and maintenance of benthic invertebrate communities in freshwater habitat areas at levels similar to those of nearby populations not exposed to site-related chemicals.	Comparison of onsite wetland sediment concentrations to sediment screening values.
Protection and maintenance of herbivorous wildlife receptors within upland habitat areas at levels similar to those of nearby populations not exposed to site-related chemicals.	Comparison of calculated TDD for avian and mammalian receptors from exposure to chemicals in surface soil and ingestion of contaminated plants to chemical-specific TRVs.

Assessment Endpoint	Measures of Effect
Protection and maintenance of insectivorous wildlife receptors within upland habitat areas at levels similar to those of nearby populations not exposed to site-related chemicals.	Comparison of calculated TDD for avian and mammalian receptors from exposure to chemicals in surface soil and ingestion of contaminated earthworms to chemical-specific TRVs.
Protection and maintenance of insectivorous wildlife receptors within wetland habitat areas at levels similar to those of nearby populations not exposed to site-related chemicals.	Comparison of calculated TDD for avian and mammalian receptors from exposure to chemicals in wetland sediment and ingestion of contaminated invertebrates to chemical-specific TRVs.

TDD total daily dose
TRV toxicity reference value

Screening on the basis of toxicity due to direct exposure in the ecological SRA was done by comparing the maximum detected site concentrations against appropriate risk-based screening levels. The risk-based screening levels used to select COPCs for lower trophic level receptors are discussed in **Section 3.1.7**.

Food web models were used to assess risks to mammals and birds due to bioaccumulation. Bioaccumulation-based measures of effects corresponding to the survival, growth, and reproductive assessment endpoints for indirect exposure of wildlife (i.e., birds and mammals) were identified for the representative species or their surrogates and are discussed in **Section 3.2.1**. The expected exposure of the representative species was modeled from measured COPC concentrations in site media to estimate the measurement endpoint (ingestion/uptake) in the representative species. The expected exposure was compared to the toxicity reference values (TRVs) to estimate the likelihood of adverse effects.

3.1.3 Selection of Representative Wildlife Species

Many receptors in the soil and surface water environments at the site are adequately described in general categories such as soil invertebrates, benthic invertebrates, vegetation, and aquatic invertebrates. This is due to the nature of the threshold values, effects values, or criteria that are typically used to characterize risk for such organisms. For vertebrate receptors, selection of a particular species is required so that intake through eating and drinking can be estimated. The selected receptors are either present at the site or similar to receptors that are present at the site.

As described in **Section 3.1.1**, the areas under evaluation for the food web model are the upland portion of the site, including cleared open areas surrounded by forest with wetland habitat in the northern and central portions of the site. Selection of representative receptors for the ecological SRA was determined based on site-specific information (i.e., site presence/observations, local/regional occurrence records, and/or likelihood of site presence) and relevant exposure pathways. The primary weight in selection of representative species was placed on selection of receptors that represent key feeding guilds and ecological communities known and/or expected to

be present at the site, and for which adequate life history data are available (e.g., per USEPA 1993).

Receptors were selected to represent species with limited home ranges (e.g., short-tailed shrew) that would be expected to make extensive use of the site. Since chemicals may bioaccumulate through the food web, representative vertebrate wildlife species from two trophic levels were selected for evaluation. These trophic levels include Trophic Level 2 (TL2) herbivores and Trophic Level 3 (TL3) insectivores. Herbivores (TL2) are primary consumers, ingesting primary producers (vegetation) and analytes from one trophic level. Insectivores (TL3) consume primary consumers (invertebrates).

Trophic Level 4 (TL4) carnivorous birds and mammals were not selected for evaluation in the ERA because their home ranges (hundreds of acres) are much larger than the site (approximately 10.3 acres with approximately 3.3 acres of wetlands), so they would only consume a small portion of their food from the site. Therefore, risks would be greater to small mammals and birds that obtain all of their food from the site.

The following representative birds and mammals were selected for evaluation in the food web model:

- Herbivorous mammal – meadow vole
- Herbivorous bird – bobwhite quail
- Insectivorous mammals – short-tailed shrew (terrestrial area) and raccoon (wetland habitat)
- Insectivorous birds – American robin (terrestrial area) and marsh wren (wetland habitat)

These receptors are consistent with those used recently for the ERA at the SYA, which also contains terrestrial and wetland habitats.

3.1.4 Exposure Pathway Analysis

Exposure pathways vary in importance depending on the species and site. In general, chemicals released from materials dumped in terrestrial areas can initially contaminate surface soils. Natural precipitation can then cause the chemical contaminants to leach downward into subsurface soils and groundwater. Discharge of the groundwater can result in the contamination of surface water and sediment inhabited by aquatic receptors. Erosion of the surface soil was possible at this site and eroded soil may have deposited into the wetland portions of the site. Therefore, it is anticipated that ecological receptors may come in contact with surface soil, surface water, and surface sediment within the former FTA.

The following exposure pathways were evaluated for the former FTA:

- Soil invertebrates and plants directly exposed to site-related compounds in surface soil.
- Benthic invertebrates directly exposed to site-related compounds in freshwater surface sediment.
- Aquatic invertebrates directly exposed to site-related compounds in freshwater surface water.
- Birds and mammals (i.e., meadow vole, bobwhite quail, short-tailed shrew, American robin) exposed to site-related compounds through incidental ingestion of surface soil and by ingestion of contaminated prey items impacted by surface soil.
- Birds and mammals (i.e., marsh wren, raccoon) exposed to site-related compounds through incidental ingestion of sediment, ingestion of surface water as drinking water, and by ingestion of contaminated prey items impacted by surface sediment and surface water.

Although reptiles are likely to be present in the wetland area, they were not selected for evaluation because of the general lack of toxicity information and the lack of methods to evaluate their exposure to chemicals. Aquatic and semi-aquatic plants were also not selected for evaluation because there is limited toxicity data to evaluate potential risks to these receptors. These exposure pathways are consistent with those evaluated at the SYA (Resolution 2016b).

3.1.5 Development of Ecological Conceptual Site Model

An ecological CSM was developed to provide a clear and concise description of how ecological receptors may come into contact with site-related COPCs via release mechanisms and exposure to soil and/or sediment. The ecological CSM provides a schematic representation of the potential site-related COPC release mechanisms, the exposure pathways, and potential ecological communities or wildlife receptors to be assessed. **Figure 5** presents an ecological CSM figure for the site identifying potential source areas, migration pathways, and potentially exposed ecological receptors.

At the former FTA, the source of the chemicals includes fire-training activities and disposal of waste fuel oil and drum disposal within the DDA. Therefore, the immediate exposure medium is the surface soil. Terrestrial plants, invertebrates, and vertebrates are exposed to the surface soil by direct contact and/or ingestion of soil and other food items. Chemicals can also infiltrate into the groundwater, which is then released to the surface water where chemicals can contaminate wetland sediment. Overland runoff or erosion leads to contamination of the wetland surface water and sediment as well. Aquatic and semi-aquatic vegetation, benthic invertebrates, and vertebrates are exposed to the surface water and sediment by direct contact and/or ingestion of sediment, surface water, and other food items. Terrestrial vertebrates may be exposed to chemicals found in

the air via inhalation. Although this pathway is possible, it is not a significant pathway and will not be evaluated in this ERA.

3.1.6 Toxicity Evaluation

The toxicity evaluation consists of identification of screening ecological values (SEVs) for surface soil and sediment, and TRVs for the food web pathways. These values are expressed as concentrations (in milligram per kilogram [mg/kg] on a dry weight [dw] basis for soil and sediment; in micrograms per liter for surface water) or dosage (in mg/kg of body weight per day [mg/kg-day] for wildlife) of a chemical believed to have little or no effect on the long-term health of the representative species of concern. **Attachment D** includes the SEVs for soil and sediment as well as the TRVs for wildlife.

Soil Screening Levels

For the surface soil data sets, the maximum detected concentration of each chemical was compared to media-specific SEVs to assess the potential for risks to the plant and soil invertebrate communities. Chemicals detected above these SEVs were identified as COPCs for further evaluation in the Tier 2 BERA. To be consistent among recent ERAs completed at the NCTAMS LANT Det Cutler facility, the selection of SEVs deviated somewhat from what was presented in the 2012 SAP (Tetra Tech 2012). Soil SEVs were selected, when available, from the following hierarchy of sources:

- USEPA Ecological Soil Screening Levels (Eco-SSLs) for plants and soil invertebrates derived according to USEPA guidance (2005).
- Canadian Council of Ministers of the Environment (CCME) Soil Quality Guidelines for environmental health (2002; 2015).
- Plant- and invertebrate-based soil screening benchmarks developed by the Oak Ridge National Laboratory (ORNL) (Efroymson et al. 1997; Efroymson, Will, and Suter 1997).
- Dutch Target Values (Buchman 2008) were also considered for organic chemicals.

Soil SEVs from alternate sources (e.g., USEPA 2003; 2015) were considered when values were not available from the sources listed above. Because a terrestrial food web model was completed as part of the ecological SRA, comparison of soil data to SEVs for the protection of birds and mammals was not warranted.

Surface Water Screening Levels

For the surface water data set, the maximum detected concentration of each chemical was compared to media-specific SEVs to assess the potential for risks to the aquatic community (i.e., aquatic invertebrates). Chemicals detected above these SEVs were identified as COPCs for further

evaluation in the Tier 2 BERA. Surface water SEVs were selected, when available, from the following hierarchy of sources:

- USEPA federal Ambient Water Quality Criteria (AWQC) (USEPA 2009).
- USEPA Region 3 Freshwater Screening Benchmarks (USEPA 2006a).
- Secondary Chronic Values (SCVs) from Suter and Tsao (1996).
- Surface water screening values from alternate sources (e.g., USEPA 2003; 2015) were considered when values are not available from the sources listed above.

For hardness-dependent criteria, a site-specific average hardness of 111 milligrams per liter (mg/L) was used to adjust the values.

Sediment Screening Levels

For the surface sediment data set, the maximum detected concentration of each chemical was compared to media-specific SEVs to assess the potential for risks to the benthic invertebrate community. Chemicals detected above these SEVs were identified as COPCs for further evaluation in the Tier 2 BERA. Sediment SEVs were selected, when available, from the following hierarchy of sources:

- Consensus-based Threshold Effects Concentrations (MacDonald et al. 2000).
- USEPA Region 3 Freshwater Sediment Screening Benchmarks (USEPA 2006b).
- Threshold Effect Levels from the National Oceanic and Atmospheric Administration Screening Quick Reference Tables (Buchman 2008).
- Sediment Quality Benchmarks derived by ORNL using SCVs and the theory of equilibrium partitioning (Jones et al. 1997).
- USEPA Region 5 Ecological Screening Levels derived by USEPA (2003).

Wildlife Dose-based TRVs

Risks to mammals and birds from exposure to chemicals in surface soil and sediment were determined using food web models to estimate the total daily dose (TDD), which was compared to chemical-specific TRVs representing acceptable daily doses in mg/kg-day. Only chemicals identified by USEPA as bioaccumulative (2000) were evaluated in the food web model.

Per the approach used at the VLF Peninsula and the SYA, the TRVs used in the ecological SRA were based on the maximum allowable threshold concentration (MATC). The MATC represents the geometric mean of TRVs based on the no-observed-adverse-effect level (NOAEL) and the lowest-observed-adverse-effect level (LOAEL). Both NOAEL- and LOAEL-based TRVs were

determined for each COPC for avian and mammalian receptors; the MATC value was used in the food web to evaluate potential risks to wildlife. The TRV relates the dose of a respective COPC from oral exposure with a potential adverse effect. If no toxicity information was available for a COPC, and it was not possible to identify TRVs, risks associated with the estimated exposure for the respective COPCs were not quantitatively evaluated. TRVs were identified for nearly all COPCs evaluated in the food web model.

TRVs incorporated into the quantitative evaluation of potential ecological risks to wildlife were obtained from the USEPA guidance for the development of Eco-SSLs (USEPA 2005) and ORNL's publication *Toxicological Benchmarks for Wildlife: 1996 Revision* (Sample et al. 1996).

Some TRVs are based on either a LOAEL or a NOAEL endpoint, without measurement of the corresponding value. In cases where the TRV was based on a NOAEL value, LOAEL was estimated from the NOAEL by using an uncertainty factor of 10 (USEPA 1997). Conversely, if the TRV is based on LOAEL, the NOAEL was estimated at 0.1 times the LOAEL value.

No body weight scaling was used to scale NOAELs (or LOAELs) for surrogate test species to an equivalent NOAEL (or LOAEL) for the receptor species. Therefore, $NOAEL_{receptor} = NOAEL_{test\ species}$ and $LOAEL_{receptor} = LOAEL_{test\ species}$.

3.1.7 COPC Selection

Maximum concentrations in surface soil, surface water, and sediment were compared to published SEVs to select COPCs. Chemicals that were detected at concentrations greater than the SEVs were selected as COPCs and risks are characterized in **Section 3.2.4**. Chemicals that were detected but do not have associated SEVs were also maintained as COPCs.

Twenty-three surface soil COPCs (**Table 1**) were identified. Two COPCs were retained due to lack of a SEV. The other 21 COPCs were retained due to SEV exceedances.

Twelve COPCs were identified in surface water (**Table 2**). One COPC, silver, was retained due to lack of a SEV. The other 11 COPCs were retained due to SEV exceedances. Three COPCs (barium, iron, and manganese) were retained in both the dissolved and total recoverable phases.

Twenty-nine COPCs were identified in surface sediment (**Table 3**). Five of the COPCs were retained due to lack of a SEV. The other 24 COPCs were retained due to SEV exceedances.

3.2 Step 2 – Exposure Estimation and Risk Characterization

Section 3.2 presents the methods and results of Step 2 of the ecological SRA process. This step comprises a semi-quantitative risk analysis, in which the potential for adverse effects to ecological receptors is estimated. **Section 3.2** is divided into four subsections: exposure estimation

(**Section 3.2.1**), risk calculations (**Section 3.2.2**), uncertainty analysis (**Section 3.2.3**), and risk characterization (**Section 3.2.4**). The COPCs identified in **Section 3.1.7** are the focus of this analysis.

3.2.1 Exposure Estimation

Mechanisms for exposure of a representative species to chemicals depend on the physical and behavioral characteristics of the organism. Most exposure for benthic invertebrates, aquatic invertebrates, soil invertebrates, and plants can be loosely termed "direct contact." Benthic invertebrates and soil invertebrates have in common the ability to absorb chemicals from sediment or moist soil through external body surfaces or by intake of food, sediment, or soil.

Wildlife species may be exposed to chemicals in soil, surface water, and sediment directly though ingestion (incidental or intentional) or indirectly through ingestion of contaminated food organisms. Information used to calculate exposure includes EPCs, species-specific exposure factors, chemical-specific exposure factors, and exposure equations.

Exposure Point Concentrations

Exposure was estimated using analytical data for surface soil, sediment, and tissue included in **Attachment A**. Maximum values were used as the EPCs in Tier 1, Step 2 of the ecological SRA for the COPCs per media identified in **Section 3.1.7**.

Species-Specific Exposure Factors

Table 4 presents the exposure factors for the selected ecological receptors. Exposure assumptions (e.g., body weights, food and water ingestion rates, relative consumption of food items, foraging range, exposure duration [ED], etc.) for wildlife species were generally obtained from the USEPA's Wildlife Exposure Factors Handbook (USEPA 1993). Alternate sources (e.g., USEPA 2007a; Beyer et al. 1994) were only used when the handbook did not provide sufficient information. Allometric equations (Nagy 2001; USEPA 1993) were used to estimate food ingestion rates.

This Tier 1 screening-level assessment included certain species- and chemical-specific assumptions regarding exposure factors:

- Assumed soil, surface water, and sediment COPC concentrations are represented by the maximum concentrations in the surface soil, surface water, and sediment data sets.
- Assumed representative species' weight and food intake rate are the average for the receptor (per the approach used for the VLF Peninsula).
- Assumed 100 percent bioavailability of COPCs.
- Assumed species is present year-round.

- Assumed that receptors obtain all of their daily dietary requirements from within the site.
- For the ecological SRA, diets of receptors were modeled as exclusive diets (i.e., consisting of 100 percent soil invertebrates, plants, or freshwater benthic invertebrates).

Chemical-Specific Exposure Factors

Exposure of representative species also depends, to some extent, on chemical-specific factors such as solubility or tendency to bioaccumulate. Site-specific data are preferred for evaluating the potential for bioaccumulation impacts; in the absence of these data, bioaccumulation factors may be used to estimate tissue concentrations. Site-specific tissue data is not available so abiotic media was used to estimate tissue concentrations.

For soil invertebrates, the site-specific soil-to-worm regression equations developed for the VLF Peninsula (Resolution 2016a) were used to estimate tissues at the former FTA (consistent with the approach used at the SYA). When regressions were not available from the VLF Peninsula, uptake factors or regression equations from the USEPA Eco-SSL Guidance (USEPA 2007a) were used. In the absence of values from these two sources, values were obtained from Sample et al. (1998) and the Los Alamos National Laboratory (LANL) EcoRisk Database (2015).

Site-specific plant tissue data were not available, so plant tissue concentrations were estimated using soil concentrations and appropriate uptake factors or regression equations. The primary source of uptake factors was the soil-to-plant uptake factors and regression equations recommended by USEPA in development of Eco-SSLs (USEPA 2007a). In the absence of Eco-SSL-based values, other literature sources such as the online Risk Assessment Information System (ORNL 2012) were reviewed for relevant uptake factors.

Site-specific freshwater benthic invertebrate tissue data were not available, so invertebrate tissue concentrations were estimated using sediment concentrations and appropriate uptake factors. Uptake factors for inorganics were preferentially selected from Bechtel Jacobs (1998). In the absence of values available from Bechtel Jacobs (1998), values were obtained from USEPA (1999). The USEPA's Biota-Sediment Accumulation Factor database was used to identify sediment-to-invertebrate uptake factors for PCBs.

Exposure Equations

To estimate potential dietary exposure, a TDD was estimated for each species. The TDD calculation considers the following factors: the concentrations of the COPCs in the food items that the species would consume, the estimated amounts of abiotic media (e.g., soil, sediment) that it would incidentally ingest, the relative amount of different food items in its diet, body weight, ED, species-specific area use factor (AUF), and food ingestion rates.

An AUF is defined as the ratio of the area of organisms' home range to the available habitat area onsite. In the screening level evaluation it was conservatively assumed that 100 percent of the receptor's diet comes from the given exposure area and there is no seasonal migration out of the exposure area (i.e., AUF of 1 and ED of 1 assumed). These assumptions are conservative for receptors which may migrate off site during parts of the year.

The following generalized equation was used to evaluate the TDD from all sources (i.e., food or prey item, drinking water, incidental ingestion) for each COPC:

$$TDD = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w]) \times ED \times AUF}{\text{Body Weight}}$$

Where:

IR_f = Ingestion rate of food (kg_{dw}/day)
IR_s = Incidental ingestion rate of soil or sediment (kg_{dw}/day)
IR_w = Ingestion rate of water (L/day)
C_f = Concentration of COPC in food (mg_{dw}/kg)
C_s= Concentration of COPC in sediment or soil (mg_{dw}/kg)
C_w = Concentration of COPC in water (mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range, etc., relative to the size of exposure area)

The sum of the doses from the various sources represents the full TDD from each COPC that a receptor may be exposed through as a result of foraging within an exposure area. This generalized equation was modified for each representative species using the exposure parameters presented in **Table 4**.

3.2.2 Risk Calculations

The integration of toxicity and exposure information is used to predict possible adverse effects to ecological receptors. The hazard quotient (HQ) method is used to screen sites when potential adverse effects to ecological receptors occur.

To estimate risks to plants, soil invertebrates, aquatic receptors, and benthic invertebrates in the ecological SRA, screening level HQs were calculated by comparing the maximum detected concentration for each chemical in each medium (i.e., an estimate of exposure) to the appropriate SEV (i.e., an estimate of effects) using the following formula:

$$HQ = \text{Maximum detected concentration/SEV}$$

For higher trophic level wildlife receptors, the risk estimate is also based on the HQ, defined as the ingested dose divided by the species-specific TRV:

$$HQ = TDD/TRV$$

Due to the consistently applied conservative assumptions implicit in a Tier 1 ecological SRA, the presence of HQs above 1 does not necessarily constitute ecological risk; only that additional consideration is warranted.

As described in **Section 3.1.7**, analytes with maximum detected concentrations above their respective screening benchmarks (i.e., HQs > 1) and analytes without screening benchmarks were retained as COPCs. Risks due to COPCs are characterized further in **Section 3.2.4**.

Comparison of Chemical Concentrations in Surface Soil to Soil SEVs

The potential effects on plants and soil invertebrates were evaluated by comparing maximum detected soil concentrations with direct contact soil screening levels. As indicated in **Table 5**, 19 COPCs have HQs above 1 when compared against the soil invertebrate-based SEVs and 11 COPCs have HQs above 1 when compared against the plant-based SEVs; these COPCs are recommended for the Tier 2 evaluation. Eight compounds are retained as COPCs due to a lack of SEVs.

Comparison of Chemical Concentrations in Freshwater Surface Water to Surface Water SEVs

The potential effects on the aquatic community (i.e., aquatic invertebrates present in the wetland) were evaluated by comparing maximum detected surface water concentrations with direct contact surface water screening levels. As indicated in **Table 6**, 14 COPCs have HQs above 1 and are recommended for the Tier 2 evaluation. One compound (silver) is retained as a COPC due to lack of a SEV.

Comparison of Chemical Concentrations in Freshwater Surface Sediment to Sediment SEVs

The potential effects on benthic invertebrates were evaluated by comparing maximum detected surface sediment concentrations with direct contact sediment screening levels. As indicated in **Table 7**, 24 COPCs have HQs above 1 and are recommended for the Tier 2 evaluation. Five compounds are retained as COPCs due to a lack of a SEV.

Comparison of Wildlife Total Daily Doses to MATC-based TRVs

Maximum media concentrations were used with the exposure assumptions presented in **Table 4** to calculate TDD values for each detected COPC for each wildlife receptor. All detected constituents in surface soil, freshwater sediment, and marine sediment were evaluated in the food web model.

Attachment E and **Attachment F** include the supporting information for the food web models for the terrestrial and freshwater exposure units, respectively. These attachments identify the media concentrations, TRVs, and equations used to calculate the TDD and HQs for both birds and mammals. Receptors and COPCs with MATC-based HQs above 1 are recommended for further evaluation in a Tier 2 evaluation.

Table 8 presents a summary of COPCs with food web HQs greater than 1 in the terrestrial exposure area. The terrestrial food web model evaluated the potential for wildlife risks within the former FTA using maximum detected concentrations in soil. The only HQ above 1 for the herbivores was for meadow vole exposed to PCBs. There were no exceedances for the bobwhite quail.

HQs above one were identified for multiple COPCs for the short-tailed shrew and American robin consuming exclusive diets of soil invertebrates. HQs above 1 were identified for cadmium, chromium, lead, mercury, selenium, zinc, LMW PAHs, high molecular weight (HMW) PAHs, 4,4-DDT, dieldrin, endrin, endrin aldehyde, endrin ketone, and Total PCBs for the American robin. HQs above 1 were identified for cadmium, selenium, zinc, HMW PAHs, dieldrin, endrin ketone, and Total PCBs for the short-tailed shrew.

Table 9 presents a summary of COPCs with food web HQs greater than 1 in the freshwater wetland exposure area. This food web model evaluated the potential for wildlife risks within freshwater wetland using maximum detected concentrations in sediment. It was assumed that the marsh wren and the raccoon both consumed diets exclusively containing benthic invertebrates. As indicated in **Table 9**, HQs above 1 were identified for copper, mercury, and selenium for the marsh wren and selenium for the raccoon.

3.2.3 Uncertainty Analysis

ERA results depend primarily on the use of multiple lines of evidence supporting particular conclusions, and each line of evidence is subject to varying degrees of uncertainty. Because of the complexity of ecosystems and the associated mechanisms that cause ecological stress, uncertainty in environmental risk characterization is inevitable. Uncertainty could be attributable to a number of sources, including but not limited to the following:

- Sampling and statistical variability
- Difficulty of extrapolating from laboratory data to field data

- Problems in evaluating environmental responses to mixtures of contaminants
- Range of conditions for which models or HQs are applicable

Additional sources of uncertainty associated with this ecological risk characterization are described below. In general, the assumptions made in multiple points in the ecological SRA tend to err on the side of overestimating risks. The cumulative impact of multiple conservative assumptions is more likely to overestimate than underestimate potential risks to ecological receptors.

Detected Chemicals that Lack Screening Levels

Soil SEVs were not available for dichlorodifluoromethane and methyl acetate which were detected in surface soil. Avian TRVs were not available for heptachlor epoxide. Sediment SEVs were not available for beryllium, thallium, 1,4-dioxane, carbazole, cis-1,2-dichloroethene, and methyl cyclohexane which were detected in freshwater sediment. A surface water SEV is not available for silver, which was detected in total recoverable, but not dissolved, surface water. These chemicals could not be quantitatively evaluated in the ecological SRA, but were selected as COPCs because with no SEV or TRV, it cannot be stated with certainty that those COPCs do not pose an ecological risk.

Uncertainties in Ecological Exposure Estimation

In general, the sampling targeted areas with the potential to have been impacted by historical activities in the former FTA, particularly within the DDA. However, these areas may not represent preferred ecological habitats or areas likely to be frequented by ecological receptors. This is particularly true in the terrestrial portions of the site, which are primarily open areas with limited vegetation which may be unattractive to some wildlife receptors. Therefore, ecological exposures to some samples may be limited or receptors may prefer to forage in other portions of the site. This type of sampling is expected to bias results high.

As described in the ERA for the VLF Peninsula (Resolution 2016a), there are some uncertainties associated with the site-specific regression models developed for use in the food web models using the VLF soil and earthworm tissue data sets. These uncertainties apply to the former FTA evaluation as well; however, there is a higher level of uncertainty associated with the former FTA evaluation since the soil and worm tissue used in the regressions were associated with the VLF towers and not the former FTA itself. The use of these regressions is discussed further in the Tier 2, Step 3a evaluation.

Total PCBs and Total PAHs were calculated as the sum of the individual detected PCBs or PAHs, respectively. However, it is possible that individual constituents are present at or below the reporting limits, so this methodology could underestimate the true totals. An alternate approach would be to treat the non-detect data as if it were detected and then sum the individual detections

and reporting limits. However, this approach is likely to overestimate risks. The potential uncertainties associated with the Total PCB and Total PAH calculations are discussed further in the Tier 2, Step 3a evaluation (**Section 4.5**).

Uncertainties in Ecological Toxicity Assessment

Toxicological studies reported in the literature used for generating screening or protective criteria may not have been obtained under conditions that accurately represent the complexities of potential exposures in the field.

The community-level screening benchmarks and wildlife TRVs used do not generally account for possible synergistic, antagonistic, or additive effects of COPC mixtures in environmental media. These factors may result in an underestimate or overestimate of potential risk. Assessing potential risks due to exposures to chemical mixtures is challenging since chemicals within the mixture may not be equally bioavailable and may not act on the receptor with the same toxic mechanisms.

3.2.4 Risk Characterization

The COPCs and receptors with HQs greater than 1 in the Tier 1 ecological SRA are summarized below and shown in **Table 10**.

Risk to Plants and Soil Invertebrates

The maximum detected concentrations for the surface soil COPCs identified in **Table 1** were compared against direct contact soil SEVs identified for both soil invertebrates and terrestrial plants; the resulting HQs are presented in **Table 5**.

Nineteen COPCs had HQs above 1 when maximum detected soil concentrations were compared against the soil invertebrate SEVs. These HQs ranged from 1.1 for vanadium to 22,000 for endosulfan sulfate. Eleven COPCs had HQs above 1 when maximum detected soil concentrations were compared against the terrestrial plant SEVs with HQs ranging from 1.9 for cobalt to 22,000 for endosulfan sulfate.

Risk to Freshwater Aquatic Receptors

The maximum detected concentrations for freshwater surface water COPCs identified in **Table 2** were compared against direct contact surface water SEVs. The resulting HQs are presented in **Table 6**.

Fourteen COPCs had HQs above 1 when maximum detected surface water concentrations were compared against the surface water SEVs. Barium, iron, and manganese were retained in both the dissolved and total recoverable phases. Aluminum, cadmium, iron, four SVOCs, and PCBs were retained only in the total recoverable phase. These HQs ranged from 3.4 for dissolved barium to

27.1 for total recoverable PCBs. Silver in the total recoverable, but not dissolved, phase was retained due to a lack of a SEV.

Risk to Freshwater Benthic Invertebrates

The maximum detected concentrations for freshwater sediment COPCs identified in **Table 2** were compared against direct contact sediment SEVs identified for freshwater benthic invertebrates. The resulting HQs are presented in **Table 7**.

Twenty-four COPCs had HQs above 1 when maximum detected sediment concentrations were compared against the benthic invertebrate SEVs. These HQs ranged from 1.3 for iron to 345 for acetone; however, acetone is a common laboratory contaminant and may not be site-related (several laboratory blanks had acetone contamination). Beryllium, thallium, carbazole, cis-1,2-dichlorophenol and methyl cyclohexane were retained due to a lack of a SEV.

Risk to Birds and Mammals

Risks to mammals and birds were assessed using food web models which estimated a TDD for each COPC and compared the dose to a chemical-specific, MATC-based TRV. **Attachment E** and **Attachment F** include the supporting calculations for the food web model; **Table 8** and **Table 9** summarize the HQs.

For the upland terrestrial receptors, the bobwhite quail and meadow vole were assumed to feed exclusively on plants and the American robin and short-tailed shrew were assumed to feed exclusively on soil invertebrates. The marsh wren and the raccoon were assumed to feed exclusively on freshwater benthic invertebrates in the freshwater wetland at the former FTA.

For the terrestrial food web, the following COPCs resulted in HQs above 1 for the American robin, meadow vole, or the short-tailed shrew in the terrestrial exposure area: cadmium, chromium, lead, mercury, selenium, zinc, HMW PAHs, LMW PAHs, Total PCBs, 4,4-DDT, dieldrin, endrin, endrin aldehyde, and endrin ketone. The HQs above 1 ranged from 1.1 for the American robin exposed to LMW PAHs to 627 for the short-tailed shrew exposed to Total PCBs. No HQs above 1 were identified for the bobwhite quail.

For the freshwater food web, HQs above 1 were identified for copper, mercury, and selenium for the marsh wren and for selenium for the raccoon. These HQs above 1 ranged from 3.9 for the wren exposed to copper to 12.5 for the wren exposed to selenium.

3.3 Tier 1 Conclusions/Recommendations

In this Tier 1 ecological SRA, it was determined that complete exposure pathways exist from the surface soil, freshwater surface water, and freshwater sediment at the former FTA to plants, soil

invertebrates, aquatic receptors, benthic invertebrates, and wildlife receptors. The ecological SRA identified potential concerns for ecological receptors from exposure to surface soil, surface water, and sediment that warrant further attention. **Table 10** summarizes the COPCs and receptors with HQs above 1 in the Tier 1 ecological SRA.

3.4 Tier 1, Step 2 Exit Criteria

One of three outcomes is possible at this point in the ecological SRA:

- There is adequate information to conclude that the ecological risks are negligible and, therefore, no need for remediation based on ecological risk.
- The information is not adequate to make a decision at this point; the ERA process will continue to the Tier 2, Step 3a BERA.
- The information indicates a potential for adverse ecological effects, and a more thorough assessment is warranted.

Maximum concentrations of certain metals, pesticides, SVOCs, VOCs, and Total PCBs pose potential risk to plants, invertebrates, and/or wildlife, with Tier 1 HQs greater than 1. Therefore, certain media and receptors at the former FTA fail the ecological SRA and these surface soil, surface water, and sediment pathways require further evaluation in a Tier 2 assessment.

3.5 Scientific/Management Decision Point

The Tier 1 ecological SRA is being submitted with the draft RI report for regulatory review. If necessary, a SMDP conference with the regulatory and Navy risk managers will be scheduled to discuss the Tier 1 results. Based on the results of the Tier 1 ecological SRA, a Tier 2, Step 3a BERA has been prepared to further assess the potential for adverse effects to ecological receptors associated with the former FTA. The Preliminary Tier 2 assessment will be revised in response to regulatory comments.

4.0 TIER 2 BASELINE ECOLOGICAL RISK ASSESSMENT

4.1 Introduction

The ecological SRA for the former FTA covered Tier 1, Steps 1 and 2, conducted in accordance with USEPA (1997) guidance. In **Section 4.1**, the preliminary Tier 2, Step 3a evaluation is presented based on the data reviewed for the Tier 1 ecological SRA but with site-specific adjustments to exposure and toxicity assumptions. The BERA Tier 2, Step 3a evaluates the same assessment endpoints as the Tier 1 ecological SRA, but only for pathways and COPCs that failed to be eliminated in the Tier 1 ecological SRA.

4.2 Overview of Tier 2, Step 3a BERA Process

The Tier 2 ERA is the BERA for a site. Per USEPA (1997) guidance, it applies a five-step process to evaluate ecological risks and determine whether site remediation is warranted from an ecological perspective. The five steps that make up Tier 2 are consistent with Steps 3 through 7 of the USEPA Superfund process for ERA (USEPA 1997). Under Navy protocol, the Tier 2 BERA includes two sets of decision criteria (Step 3a and Step 7) for exiting from or proceeding with the ERA process.

In recognition of the fact that a complete BERA encompassing Steps 3 through 7 of the risk assessment process is a lengthy and complex process, and that Steps 1 and 2 of the ecological SRA yields very conservative results, USEPA recognized the possibility of an intermediate decision point based on a refinement of the COPCs following completion of the ecological SRA (USEPA 2001a). This decision point is called Tier 2, Step 3a under Navy protocol. This evaluation is conducted using the same data set used for the ecological SRA, and does not require additional site-specific data collection. However, for the former FTA, the Step 3a evaluation considered background data that were not discussed in the ecological SRA.

The purpose of Tier 2, Step 3a is to reevaluate COPCs that were retained from Tier 1 for further evaluation in a Tier 2 BERA, and to identify and eliminate from further consideration those COPCs that were retained because of the use of conservative exposure scenarios (e.g., maximum concentrations). Using more realistic Tier 2, Step 3a assumptions, the Tier 1 ecological SRA risk estimates were recalculated for the pathways and COPCs retained at the end of the Tier 1 ecological SRA.

These recalculated risk estimates were used to refine the list of COPCs identified in the Tier 1 ecological SRA. Step 3a of Tier 2 refines the Tier 1 ecological SRA by asking:

- Do site concentrations exceed background levels?
- Are high concentrations and risks widespread across the site or limited to discrete locations (magnitude and extent of contamination and risk)?

- Could the COPC be in a chemical form that is less hazardous (bioavailability of the COPC)?
- Are the conservative exposure assumptions used in Tier 1 representative of site-specific exposure?

The adjusted exposure assumptions for Tier 2, Step 3a were refined from the Tier 1 exposure assumptions in **Section 3.2.1** and are discussed further in the following sections. The Navy Step 3a re-evaluation/refinement process follows these steps:

- Revise exposure assumptions and calculate Tier 2, Step 3a doses and HQ risk estimates.
- Apply both no-effect and low-effect SEVs and TRVs (as available) to provide a risk range for risk managers to consider.
- Identify COPCs with a HQ less than 1 and eliminate from further evaluation.
- For COPCs with a HQ greater than 1, compare media concentrations to background levels. Identify COPCs present at concentrations below background and propose these for elimination from further evaluation.
- For COPCs with a HQ greater than 1, consider bioavailability, identify COPCs likely to be biologically unavailable, and propose these for elimination from further evaluation.
- Review detection frequency to identify COPCs with low detection frequencies (and sufficient data for acceptable site characterization). If a COPC was detected in only a very small percentage of the samples collected (5 percent or less), the risk identified in the ecological SRA may be overestimated and further evaluation of the COPC is not warranted.

After the re-evaluation/refinement, the decision criteria for Tier 2 Step 3a include:

- If the re-evaluation of the conservative exposure assumptions used in the ecological SRA supports an acceptable risk determination for all COPCs, then a No Further Action designation is warranted, and the site exits the ERA process.
- If the re-evaluation of the conservative exposure assumptions does not support an acceptable risk for all chemicals, the BERA process continues to Step 3b and subsequent steps, or to remedial decisions.

Tier 2, Step 3a evaluation employs the same dose models and risk characterization methods as those described in **Section 3.2** for the Tier 1 ecological SRA, with appropriate adjustments to the values of some input parameters and media data sets.

4.3 Tier 2, Step 3a Refinement Approach

4.3.1 Refinement of the EPC

The EPCs considered in the ecological SRA represented the maximum detected concentrations in the relevant surface soil, surface water, and surface sediment data sets. Two EPCs were used in the Tier 2, Step 3a evaluation, a refined maximum EPC and an average EPC; these EPCs were based on a review of the maximum and average detected concentrations and values calculated using USEPA's ProUCL Version 5.1 software (USEPA 2013). The ProUCL software was used to calculate the upper confidence limit (UCL) on the arithmetic mean and the ProUCL-recommended UCL (i.e., 95 percent, 97.5 percent, 99 percent) was used as the selected UCL. ProUCL Version 5.0 recommends at least 10 to 15 distinct results for the most accurate and reliable UCL calculation.

UCLs were only calculated where at least 10 samples and at least 6 detects are available. The refined maximum EPC was selected as the lower of the UCL and the maximum detected concentration (USEPA 2002).

The ProUCL software was also used to calculate Kaplan-Meier method means for data sets containing non-detects. The average EPC used in the Tier 2, Step 3a evaluation was the average of the detected concentrations for data sets where all concentrations were detected, or the Kaplan-Meier mean when data sets included non-detects.

Attachment G includes the EPCs used in the Tier 2, Step 3a evaluation and the ProUCL exports presenting the calculation of the UCLs.

4.3.2 Refinement of Plant and Soil Invertebrate SEVs

In the Tier 1 ecological SRA, terrestrial plants and soil invertebrate endpoints were evaluated against conservative screening levels intended to be protective under most or all situations. These screening levels were primarily derived from three sources: the Eco-SSL guidance (USEPA 2005), CCME Soil Quality Guidelines (2002; 2015), and ORNL (Efroymson et al. 1997; Efroymson, Will, and Suter 1997). These screening levels were derived through literature surveys and typically represent low- or no-effect levels. In some cases, such as selenium, the screening levels for plants (0.52 mg/kg) are lower than natural concentrations in many soils.

An appropriate Tier 2, Step 3a risk range would be based on identifying LOAEL-based screening levels applicable to the species at the site. However, LOAEL-based screening levels are not typically available in the literature and have not been derived by USEPA or CCME. Therefore, additional evaluation in Tier 2, Step 3a is limited to the evaluation of the refined EPCs against the soil SEVs, comparison to background values, and discussion of COPC-specific factors that can affect bioavailability and toxicity.

4.3.3 Refinement of Surface Water SEVs

Alternative surface water SEVs were selected from federal freshwater acute AWQC (USEPA 2009) or ORNL Secondary Acute Values (SAVs) (Suter and Tsao 1996). For hardness-dependent criteria, a site-specific average hardness of 111 mg/L was used to adjust the values.

4.3.4 Refinement of Freshwater Benthic Invertebrate SEVs

Alternate freshwater sediment effects-based SEVs were identified when available. The probable effect concentrations (PECs) from the consensus-based sediment quality guidelines (MacDonald et al. 2000) were the primary source of refined sediment SEVs. Additional effects-based screening values from alternate sources (e.g., Buchman 2008) were considered when PECs were not available. **Attachment C** includes the SEVs used in the Tier 2, Step 3a evaluation.

4.3.5 Refinement of Wildlife Exposure Factors

The ecological SRA had assumed that wildlife receptors obtained all of their diets from within the former FTA and that the receptors were present and feeding year-round. This is likely an overly conservative assumption given the size of the former FTA (approximately 10.3 acres total including approximately 3.3 acres of wetlands), the expected migration of most birds, and the seasonal lack of access to benthic invertebrates and soil invertebrates due to winter conditions.

The refinement of exposure assumptions applied in the Tier 2, Step 3a evaluation includes the following:

- Assumed some species may migrate out of the area for a portion of the year (ED of 0.5 for American robin and marsh wren based on assumption that these birds migrate out of the area for the winter months [October through March]). Northern robins and marsh wrens migrate to warmer climates in the winter, departing between September and November and returning between February and May (USEPA 1993).
- Assumed that low temperature conditions limit activity of prey items (benthic invertebrates and soil invertebrates) and ground foraging. Air and soil temperatures fall close to or below 40 degrees Fahrenheit[1,2] for five to six months of the year. Earthworm activity slows down in response to low soil temperatures (Edwards and Bohlen 1996) and requires average soil temperatures of 36 degrees Fahrenheit or more to become active in the soil after seasonal hibernation (Teale 1951). An ED of 0.67 for the raccoon is used assuming that temperatures are below freezing for 4 months a year and benthic invertebrates are not accessible for

[1] Average air temperature for Cutler is below 40 degrees Fahrenheit for five out of 12 months (https://temperature.weatherdb.com/l/6225/Cutler-Maine).

[2] Monthly average soil temperatures in the Bear Brook Watershed in Maine were recorded at below 41 degrees Fahrenheit (5 degrees Celsius) for five to six months of the year in 2001-2004 (https://umaine.edu/bbwm/bbwm-characteristics/soils/soil-temperature/).

foraging. An ED of 0.5 for the short-tailed shrew is used based on assumption that foraging for soil invertebrates is unlikely in cold weather months (October through March).

- Assumed that, when present in the area, receptors may only obtain a portion of their diets from within the site (AUF < 1 for bobwhite quail and raccoon based on their average home ranges, both of which exceed the exposure area). Receptors with smaller home ranges (robin, wren, shrew, vole) are conservatively assumed to obtain all of their diet, when present, from the former FTA (AUF=1). Given the availability of quality terrestrial habitat surrounding the former FTA, this is a very conservative assumption since even small receptors are likely to forage in areas outside the former FTA.

4.3.6 Refinement of Wildlife TRVs

In Tier 2, Step 3a, the TDD calculated in the food web model was divided by both the NOAEL- and LOAEL-based TRVs to estimate the potential for adverse effects to ecological receptors over the range of toxicity levels. NOAEL-based TRVs represent a no-effect level of exposure, corresponding to the highest tested level showing no adverse effects. The LOAEL identifies the lowest level tested at which an adverse effect has been noted. The difference between the NOAEL and LOAEL response provides a natural range of response that can be used to estimate a risk range. The true toxicity threshold is likely to exist between these values for the test species, also subject to uncertainties when extrapolating from the test species to the representative species.

The Tier 2, Step 3a calculation of wildlife HQs presents both NOAEL- and LOAEL-based TRVs to provide risk managers a risk range to consider when making risk management decisions for the site.

4.4 Tier 2, Step 3a Risk Calculations

As described previously, based on the results of the ecological SRA, several COPCs and receptors were evaluated further in a Tier 2, Step 3a evaluation. The results of the Tier 2, Step 3a risk calculations are presented below, starting with a summary of the results of a background evaluation. Although risks are calculated for COPCs that fall within the range of background concentrations, it is assumed that these COPCs are not attributed to Navy activities.

4.4.1 Background Evaluation

Tier 2, Step 3a evaluation allows consideration of background concentrations when evaluating ecological risk. This step eliminates COPCs with a HQ greater than 1 if the COPC is consistent with background. Based on the results of the ecological SRA, surface soil, surface water, and sediment, data were evaluated against the background data sets in Appendix C of the RI report. The results of the background evaluation are summarized in the following paragraphs. Greater detail on the evaluation is included in Appendix C.

For surface soil, site concentrations of COPCs were compared to background concentrations. The statistical analyses and graphical displays indicate that site surface soil concentrations of cadmium, lead, mercury, selenium, and vanadium were found to be less than or similar to background soil.

Due to the small size of the background surface water and sediment data sets (n=3 or n=2), a robust statistical population comparison against the site data could not be conducted. Appendix C includes a tabular summary and a graphical display of the site and background data. Concentrations in several site samples fall within the range of the background data sets for surface water and sediment, and most, but not all, COPC concentrations in the wetland are similar to background.

4.4.2 Soil Invertebrates and Terrestrial Plants

Table 11 presents the refined evaluation of the terrestrial plant and soil invertebrate endpoints using the refined maximum and average EPCs in surface soil. As indicated in **Section 4.3.2**, LOAEL-based SEVs were not identified and the SEVs considered in this evaluation are the same as in the ecological SRA. The HQs are presented below and discussed in more detail in Risk Characterization (**Section 4.6**). As indicated in the background evaluation discussed previously, cadmium, lead, mercury, selenium, and vanadium are consistent with background conditions.

For soil invertebrates, HQs for 16 COPCs are above 1 using the refined maximum EPC. This includes manganese, Total PCBs, eight pesticides, four SVOCs, and two VOCs. When the average EPC is considered, thirteen COPCs are above 1.

For plants, HQs for 10 COPCs are above 1 using the refined maximum EPC. This includes three inorganics, Total PCBs, and six pesticides. When the average EPC is considered, 8 COPCs are above 1.

Of the soil COPCs with HQs above 1 for soil invertebrates and plants, selenium and vanadium concentrations within the former FTA appear to be similar to background based on the statistical and/or graphical comparisons included in Appendix C of the RI report.

One of the pesticides and two of the SVOCs with HQs above 1 for soil invertebrates or plants meet the low FOD threshold of less than or equal to 5 percent detected with at least 20 samples analyzed. Therefore, no further evaluation is warranted for endrin aldehyde, carbazole and dibenzofuran on the basis of low FOD.

4.4.3 Freshwater Aquatic Community

Table 12 presents a refined evaluation of the surface water SEV comparison using the refined maximum and average surface water EPCs and surface water SEVs. The HQs are presented in the following paragraphs and discussed in more detail in Risk Characterization (**Section 4.6**).

Background samples were collected from three upstream SYA wetland locations in May 2009. A review of the graphical comparisons of the background and site surface water data sets (Appendix C of the RI report) indicates overlapping ranges of concentrations for a number of COPCs.

For the aquatic community, only one metal (aluminum) in the total recoverable phase has a HQ greater than 1 using the refined maximum EPC. When the average EPC is considered, all HQs are below 1. Typically, aquatic receptors are more highly exposed to COPCs in the dissolved phase and none of the metals in the dissolved phase exceeded the refined surface water EPC (PCBs and PAHs were not sampled in the dissolved phase, but these organics are hydrophobic and more likely to be bound to particulate matter).

Concentrations of aluminum within the former FTA appear to be below background based on the graphical comparisons included in Appendix C of the RI report.

4.4.4 Freshwater Benthic Invertebrates

Table 13 presents a refined evaluation of the benthic invertebrate SEV comparison using the refined maximum and average sediment EPCs and effect-based SEVs. The HQs are presented below and discussed in more detail in Risk Characterization (**Section 4.6**). Background samples were collected from three upstream SYA wetland locations in May 2009. A review of the graphical comparisons of the background and site sediment data sets (Appendix C of the RI report) indicates overlapping ranges of concentrations for a number of COPCs.

The maximum EPC for Total PCBs slightly exceeded the effect-based SEV in with a HQ of 1.3.

Background comparisons were not possible for Total PCBs due to a lack of analyses for PCBs in the background samples (Appendix C of the RI report).

4.4.5 Wildlife Endpoints

A refined food web model was used to assess the potential for risks to mammals, birds, and COPCs retained after the screening level food web models (**Attachment H** and **Attachment I**). Refined evaluations were warranted for at least one COPC for the American robin, meadow vole, and the short-tailed shrew in the terrestrial exposure area, and the marsh wren and raccoon in the freshwater exposure area. The HQs are presented below and discussed in more detail in Risk Characterization (**Section 4.6**).

Consistent with the ecological SRA, the food web models assumed these receptors fed exclusively on either plants (meadow vole), earthworms (American robin and short-tailed shrew), or benthic invertebrates (marsh wren and raccoon). As discussed in **Section 4.3.5**, it was assumed that migration out of the area or cold weather conditions limited exposures for the wren, robin, raccoon, and shrew (ED=0.5). The average home range for the raccoon is larger than the wetland portion of

the former FTA, resulting in a calculated AUF of 0.0021 (Table 6, **Attachment I**). However, it was assumed that the raccoon would consume five percent of its diet (AUF=0.05) from the wetland to account for the former FTA wetlands potentially containing more attractive habitat than other nearby habitats.

For the remaining receptors (wren, robin, vole, and shrew), it was assumed that when the receptors were present, they forage only with in the subject exposure areas (AUF=1). This may be a conservative assumption since even small receptors may forage in other areas outside of the former FTA.

The results of the refined evaluations are presented in this section for each of the exposure areas and wildlife receptors. Both NOAEL- and LOAEL-based HQs were calculated using both refined maximum and average EPCs.

The American robin, meadow vole, and short-tailed shrew were evaluated in the refined food web models for the terrestrial area (**Attachment H**). **Table 14** provides a summary of the HQs for these receptors and the COPCs retained in the ecological SRA.

As indicated in the background evaluation discussed in **Section 4.4.1**, cadmium, lead, mercury, and selenium in surface soil are consistent with background conditions so the HQs above 1 identified in **Table 14** do not warrant further evaluation.

As indicated in the following table, HQs for the following COPCs were above 1 for the refined terrestrial food web model. All HQs for the meadow vole were below 1 in the refined terrestrial food web model.

Receptor	Refined Maximum EPC		Average EPC	
	NOAEL-based TRV	LOAEL-based TRV	NOAEL-based TRV	LOAEL-based TRV
American robin	Cadmium [a] Chromium Selenium [a] Zinc HMW PAH Total PCBs Dieldrin Endrin Endrin aldehyde Endrin ketone	Selenium [a] Total PCBs Endrin Endrin ketone	Chromium Selenium [a] Zinc Total PCBs Endrin Endrin aldehyde Endrin ketone	Selenium [a] Total PCBs Endrin ketone
Short-tailed shrew	Cadmium Selenium [a] Zinc HMW PAHs Total PCBs Dieldrin Endrin ketone	Selenium [a] Total PCBs	Cadmium Selenium [a] Total PCBs Dieldrin Endrin ketone	Selenium [a] Total PCBs

Note:
[a] Concentrations in surface soil (0-1 ft) at the former FTA are consistent with background.

The marsh wren and raccoon were evaluated in the refined food web models for the freshwater wetland area located to the north of the former FTA (**Attachment I**). Copper, mercury, and selenium were evaluated for the marsh wren and selenium was evaluated for the raccoon. Site-specific benthic invertebrate tissue data were not available, so tissue concentrations were estimated from sediment concentrations using regression equations. **Table 15** presents the results of the refined food web model for the wetland. All HQs for the raccoon were well below 1 in the refined food web model.

The graphical background evaluation included in Appendix C of the RI report indicates that copper, mercury, and selenium were also detected in background sediment; therefore, a portion of these HQs may be attributable to naturally occurring background conditions.

As indicated in the following table, HQs for the following COPCs were above 1 for the refined wetland food web model. No HQs for the raccoon were above 1 in the refined food web model.

Receptor	Refined Maximum EPC		Average EPC	
	NOAEL-based TRV	LOAEL-based TRV	NOAEL-based TRV	LOAEL-based TRV
Marsh wren	Copper Mercury Selenium [a]	Selenium	Copper Mercury [a] Selenium [a]	No HQs > 1

Note:
[a] EPC is within the range of background concentrations in sediment.

4.5 Tier 2 Uncertainty Analysis

The uncertainties described in **Section 3.2.3** for the Tier 1 ecological SRA also apply to the Tier 2, Step 3a analysis. In general, the use of refined EPCs and more realistic toxicity ranges (e.g., LOAELs) reduce the deliberate overestimation of risk inherent in the Step 1 ecological SRA. Nonetheless, the same type of uncertainties are also applicable to this level of analysis.

Uncertainties in Ecological Exposure Estimation

Assumptions regarding chemical bioavailability and mobility add uncertainty to the risk assessment. Extraction methods used to determine chemical concentrations in soil and sediment are rigorous and destructive; chemicals are often sorbed to soil or sediment particles such that they may not be available to ecological receptors under normal environmental conditions.

Organic carbon present in the soil and sediment can bind to non-ionic organic molecules and some inorganics, making them unavailable for absorption by plants or invertebrate organisms. Total organic carbon (TOC) content in the surface soils at former FTA was not measured, but TOC in soils at the SYA were below 1 percent and the former FTA soils may be in a similar range. TOC in the eight samples collected from within the former FTA wetlands ranged from 5.2 percent to 44 percent TOC, with an average of 16 percent, which may serve to bind some of the COPCs in the wetland sediments.

Bioavailability in prey items is likely overestimated because the food web models assumed that the COPCs consumed by wildlife receptors were present in a form that was 100 percent bioavailable (100 percent of the COPC is assimilated by the organism after ingestion); however, this is unlikely.

The food web model assumptions of exclusive diets and an AUF of 1 are also likely to be overly conservative. The marsh wren, robin, vole, and shrew were assumed to forage only within the subject exposure areas (i.e., wetland or terrestrial areas); however, given the availability of quality habitat surrounding the former FTA, this is a very conservative assumption and even small receptors are likely to forage in areas outside the former FTA. The insectivores (marsh wren, robin, and shrew) are also likely to feed on a more variable diet than was assumed in the food web model (i.e., 100 percent benthic or soil invertebrates) which would reduce COPC exposure and associated risks.

The estimate of uptake and/or bioaccumulation from environmental media into plants, invertebrates, and wildlife is a source of uncertainty in the ERA. Ideally, site-specific tissue data are available to incorporate into the food web model; however, these data were not consistently available for all exposure areas. In the absence of site-specific tissue data in the upland, uptake factors or regression models were used to estimate invertebrate tissue concentrations. These uptake factors, such as the SEVs and TRVs, were generally obtained from laboratory studies which

are more likely to overestimate rather than underestimate bioavailability because of the test conditions selected for laboratory studies (e.g., low pH and TOC).

Worm and soil concentrations from the VLF Peninsula were used to derive regression equations to predict worm tissue concentrations when site-specific worm tissue data are not available. As discussed in the ERA for the VLF Peninsula (Resolution 2016a), there are some uncertainties for these regression equations including lack of true co-location in time and space between soil and worm tissue samples and the fact that the regression data set does not capture the full range of soil concentrations across the peninsula.

In addition, these relationships are based on the assumption that there is a positive linear relationship between soil and worm tissue concentrations for all COPCs where increasing soil concentrations are correlated with increasing worm tissue concentrations. Positive regressions were calculated for all COPCs except thallium. The positive regressions for chromium, cobalt, lead, zinc, and Total PCBs were significant (p-value less than 0.05) whereas the positive regressions for antimony, cadmium, and selenium were not significant. All positive regression equations were used to derive worm tissue concentrations for the food web model regardless of statistical significance of the relationship on the basis that site-specific relationships between soil and tissue are more appropriate than literature-based uptake factors. However, for antimony, cadmium, and selenium, it is uncertain if the regressions are sufficient to establish a relationship between soil and worm tissue concentrations, and it is unknown if worm tissue concentrations are over- or underestimated as a result.

The VLF Peninsula regression models for earthworms often predict higher bioaccumulation into earthworms than would be predicted using literature-based models. For example, for a zinc soil concentration of 100 mg/kg, the VLF Peninsula regression model predicts an earthworm concentration of 2,281 mg/kg dw and the Eco-SSL regression predicts a tissue concentration of 387 mg/kg dw (approximately six times lower than predicted by the VLF Peninsula regression). Even with a zinc concentration of zero mg/kg in soil, the VLF Peninsula regression model predicts elevated zinc concentrations in worm tissue (1,264 mg/kg dw). This regression in particular appears to overestimate worm tissue concentrations of zinc at low soil concentrations. However, the worm tissue concentrations for several COPCs within the VLF Peninsula are elevated so it is possible that conditions on the peninsula result in higher bioaccumulation into worms than would be expected based on the literature. It is unknown if conditions within the former FTA would result in similarly elevated worm concentrations.

There is the potential for the Total PAH and Total PCB concentrations used in the ERA to underestimate risks because they are based on the sum of only the individual detected PAHs or PCBs within a sample. **Attachment J** includes a summary of the sample-by-sample Total PCB and

Total PAH concentrations for surface soil and sediment calculated using the two methods (i.e., assuming non-detects equal to zero and equal to the reporting limit).

As indicated in **Attachment J**, the maximum concentration of Total PCBs in soil (after treatment of field duplicates) is 622 mg/kg when the full reporting limit is used and 610 mg/kg, assuming non-detects are equal to zero and the maximum difference between the two methods is 11.7 mg/kg for a sample collected from location PCBAREA1-013 in 2013. Given the range of the Total PCB data in soil, the calculation methodology does not significantly alter the findings of the ERA. Similarly, the differences in the Total PCB concentrations in sediment are small (maximum difference of 0.262 mg/kg in a sample from location FTA-SED-06 from 2012) and do not change the findings of the ERA.

For Total PAHs in soil and sediment, there are larger differences between the two methods due to the greater number of non-detect results. In soil, the maximum concentration of Total PAHs in soil (after treatment of field duplicates) of 73 mg/kg is the same under both calculation methods and the maximum difference between the two methods is 17.9 mg/kg for a sample collected from location FTA-SB-200 in 2012. In sediment, the maximum Total PAH concentration of 43 mg/kg is the same under both calculation methods, and the maximum difference between the two methods is 13.2 mg/kg for a sample collected from location FTA-SED-05 in 2014.

In surface soil and sediment, the maximum concentrations of Total HMW and LMW PAHs are the same under both calculation methods. The maximum differences between the two methods ranged from 3.3 mg/kg for LMW PAHs in a sample collected from location FTA-SB-220 to 8.2 mg/kg for LMW PAHs in a sample collected from location FTA-SB-200. These increases are insufficient to change the overall findings for PAHs in the screening or food web models conducted for surface soil or sediment.

Overall, the results of the comparisons of PCB and PAH total calculations in **Attachment J** indicate that, while assuming non-detects are equal to the reporting limit (i.e., a more conservative assumption than used in the ERA) increases the EPCs, it does not change the overall findings of the ERA.

Uncertainties in Ecological Toxicity Assessment

While several COPCs had plant and invertebrate HQs greater than 1, risk is probably overestimated due to uncertainties in the SEVs and the likelihood that studies conducted in the laboratory with bioavailable chemicals are likely to overestimate risks under field conditions. Specific uncertainties in SEVs are identified in the following paragraphs for COPCs with HQs above 1 that were not excluded due to FOD or background comparisons in **Table 11**.

USEPA Region 4 soil invertebrate values were also used for endrin, endrin ketone, heptachlor epoxide, methoxychlor, 1,1-biphenyl, bis(2-ethylhexyl)phthalate, carbazole, dibenzofuran, acetone, and carbon disulfide. These values were based on recent USEPA Region 4 guidance (2015) which uses equilibrium partitioning as the basis to derive soil screening levels when screening values are not available from Eco-SSL documents, ORNL, or the LANL database. This model assumes that the water quality benchmarks derived to be protective of aquatic invertebrates in interstitial pore water are also protective of terrestrial invertebrates in soil. It is uncertain how applicable these values are to the soil conditions or soil invertebrates present at the former FTA.

USEPA Region 4 (2015) plant values were used for endrin and endrin ketone. The endrin value (also used as a surrogate for endrin ketone) is a no-effect level from the LANL database; a low-effect screening level from the LANL database would reduce the plant HQs tenfold.

Dutch soil benchmarks were used for endosulfan I, endosulfan II, and endosulfan sulfate. The Dutch Target Values are typically assumed to be 1 percent of the Maximal Permissible Risk (MPR) level for ecosystems, where the MPR is the concentration expected to be hazardous for 5 percent of the species in the ecosystem, or the 95 percent protection level. Therefore, these SEVs may be overly protective for use in a refined evaluation. There is less confidence in these benchmarks than in other benchmarks such as the Eco-SSLs which are not available for these chemicals.

The Total PCB SEVs for plants and soil invertebrates were screening levels derived by ORNL and CCME, respectively. The plant SEV of 40 mg/kg was based on studies conducted with agricultural plant species in sandy soils, which identified no effect levels ranging from 10 to 1000 mg/kg depending upon the species and endpoint (Efroymson et al. 1997). The LANL database identifies a no-effect SEV of 160 mg/kg and a low-effect SEV of 620 mg/kg for plants (LANL 2015); the soil EPCs are well below these alternate SEVs. The soil invertebrate SEV is the CCME soil contact guideline (33 mg/kg) for commercial land use (CCME 1999). This value is derived from studies for soil invertebrates and plants. Plant studies evaluated for the development of this guideline reported toxicity values ranging from 100 to 1000 mg/kg for growth and reproduction endpoints for corn, fescue, soybean, sorghum, and beets. Toxicity values for terrestrial invertebrates ranged from 1,200 to 2,500 mg/kg for survival endpoints for 7- to 14-day studies. To calculate the PCB guideline, CCME divided the lowest effects concentration (100 mg/kg) by an uncertainty factor of three to account for the limited availability of acceptable toxicity studies. The soil EPCs are below the toxicity values identified by CCME. A review of the plant and soil invertebrate SEVs indicates that PCB risks are likely overestimated by the use of these benchmarks.

The manganese soil invertebrate and plant SEVs were Eco-SSLs derived by USEPA based on a review and evaluation of the available literature. There is more confidence in these values, relative to the ORNL and USEPA Region 4 values, since they are based on a more recent and

comprehensive review of the literature. However, nearly all of the studies used to derive these Eco-SSLs were conducted with agricultural plants such as alfalfa, soybean, cotton, and barley that may not be representative of the species found within the former FTA. In addition, adverse responses under laboratory conditions may not occur in the field.

The selected Eco-SSL for plants or invertebrates is typically the geometric mean of toxicity test data reported for plants and invertebrates based on studies that meet the Eco-SSL acceptability criteria. The Eco-SSLs are used as screening-level guidelines, are considered conservative, and are not predictive of risks (USEPA 2005). Therefore, the highest acceptable toxicity result included in the studies to derive the Eco-SSLs was evaluated for the COPCs below as a refined SEV relative to the refined maximum and average EPCs presented in **Table 11**.

- The manganese invertebrate Eco-SSL (450 mg/kg) (USEPA 2007b) is based on the geometric mean of three 20-percent effective concentration (EC_{20}) values reported in three studies covering invertebrate species (potworm, springtail, and earthworm). The highest EC_{20} value reported for these studies is 1209 mg/kg for the springtail. The average soil EPC is well below this value and the refined maximum is only slightly higher than this value, indicating that overall risks to invertebrates based on the Eco-SSL may be overestimated. Only three samples from the northern portion of the site (FTA-SB-200, FTA-SB-201, and FTA-SB-219) exceed the EC_{20} value of 1209 mg/kg; therefore, potential manganese concerns may occur within a limited area.
- The manganese plant Eco-SSL (220 mg/kg) (USEPA 2007b) is based on the geometric mean of four growth MATC values reported in three studies covering three plant species (barley, cotton, and Nile grass). The highest MATC value identified for manganese is 707 mg/kg for cotton and Nile grass. The refined maximum and average soil EPCs are both above this value; however, only three samples from the northern portion of the site (FTA-SB-200, FTA-SB-201, and FTA-SB-219) exceed the MATC value of 707 mg/kg. Therefore, potential manganese concerns may occur within a limited area.

4.6 Tier 2, Step 3a Risk Characterization

For ecological receptors associated with the former FTA, the potential for risk cannot be excluded if a LOAEL-based HQ is greater than 1 and the site data are above background. In addition, some COPCs do not warrant further evaluation because they were detected infrequently.

Terrestrial Exposure Area

Table 16 summarizes the COPCs with HQs above 1 at the end of the Tier 2, Step 3a evaluation for the terrestrial exposure area. COPCs are identified in this table if a HQ above 1 was noted for a receptor using the refined SEVs.

As indicated in **Table 16**, three organic COPCs (endrin aldehyde, carbazole, and dibenzofuran) were eliminated from further evaluation based on low FOD (less than or equal to 5 percent detected with at least 20 samples analyzed). Two COPCs (selenium and vanadium) are eliminated from further evaluation based on consistency with background. The remaining COPCs with HQs above 1 in the Step 3a evaluation are discussed in the following paragraphs.

The soil invertebrate HQs are greater than 1 for manganese, Total PCBs, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, endrin ketone, heptachlor epoxide, methoxychlor, 1,1-biphenyl, bis(2-ethylhexyl)phthalate, acetone, and carbon disulfide in the Tier 2, Step 3a evaluation using the refined maximum EPCs and for all of the same COPCs except Total PCBs, dieldrin, and 1,1-biphenyl using the average EPCs.

The plant HQs are greater than 1 for manganese, Total PCBs, endosulfan I, endosulfan II, endosulfan sulfate, endrin, and endrin ketone in the Tier 2, Step 3a evaluation using the refined maximum EPCs, and greater than 1 for all of the same COPCs except Total PCBs using the average EPCs.

The elevated HQs shown in **Table 11** are expected to overestimate risk to plants and invertebrates based on the very conservative nature of the benchmarks, and the fact that these COPCs may be less bioavailable and toxic in the former FTA soils, relative to the test chemicals and soils used in the toxicity tests on which the benchmarks are based. In particular for the pesticides, the EPCs may overestimate site-wide risks because UCLs could not be calculated for many of these COPCs, and because the average EPCs are based on a small number of detected samples (although not few enough to meet the low FOD threshold). As indicated in **Section 4.5**, there are uncertainties associated with the SEVs for the organic COPCs (based on Region 4 equilibrium partitioning or Dutch values) and Total PCBs.

Potential manganese risks to plants and invertebrates cannot be ruled out based on background or the SEV toxicity review. However, given the relatively low magnitude of the exceedances relative to the alternate toxicity values, the infrequency of the exceedances (three samples in the northern portion of the site), and the much lower manganese concentrations in the nearby restored Sand Wedge wetland (maximum of 496 mg/kg in sediment), it is expected that risks to plants and soil invertebrates are overestimated and not sufficient to warrant carrying these COPCs further in the ERA process.

The terrestrial food web models are included in **Attachment H** and summarized in **Table 14**, and identified HQs above 1 for the American robin and the short-tailed shrew for several COPCs. The models used to evaluate these receptors may overestimate potential risks because they assume that the receptors are only foraging on soil invertebrates within the terrestrial exposure area. It is more likely that receptors are consuming a mixed diet from locations within and outside the former

FTA. In addition, the limited vegetation in the open terrestrial areas likely provide lower quality habitat (i.e., less attractive to receptors) than the surrounding forested areas outside of the former FTA. Therefore, the focus of the risk characterization is on COPCs and receptors with HQs above 1 when the average EPC and the LOAEL-based TRV are considered.

Selenium, Total PCBs, and endrin ketone are the only COPCs with HQs above 1 when the average EPC and LOAEL-based TRV are considered. These HQs range from 1.9 to 3.9 for the robin and from 2.3 to 2.9 for the shrew. The endrin ketone HQ for the shrew is below 1 when the average EPC and LOAEL-based TRV are considered. Based on the background evaluation included in Appendix C of the RI report, selenium is consistent with background and does not warrant further evaluation.

A review of the endrin ketone data indicates that the EPCs are driven up by three detected concentrations above 0.99 mg/kg from within the DDA. The associated risks to the robin and shrew are also driven by a soil-to-worm uptake factor from the LANL EcoRisk Database (LANL 2015) that is based on a calculated, not measured, uptake. Given the relatively low levels of endrin ketone detected in the majority of the samples and the uncertainties associated with the estimation of worm tissue concentrations, it is expected that risks to these receptors due to endrin ketone are overestimated and not sufficient to warrant carrying this COPC further in the ERA process.

Although the robin and shrew HQs for Total PCBs are relatively low and there are some conservative assumptions included in the refined food web model (exclusive worm diet; AUF of 1), there may be a potential for risks to small insectivorous birds and mammals due to exposure to Total PCBs. However, the refined food web model assumed a 100-percent earthworm diet for these receptors obtained only from within the terrestrial portion of the former FTA, when in reality this assumption is likely an overestimate and there may be low risk from the former FTA soils to these receptors.

Freshwater Exposure Areas

Table 17 summarizes the COPCs with HQs above 1 at the end of the Tier 2, Step 3a evaluation for the freshwater wetland exposure area.

As summarized in **Table 17**, in the surface water SEV comparisons for aquatic invertebrates, total recoverable phase aluminum results in a HQ above 1 in the Tier 2, Step 3a risk evaluation using the refined maximum EPC. When the average EPC is considered, all HQs are less than 1. None of the dissolved phase metals exceeded the refined SEVs and metals concentrations in most samples were similar to levels in background samples. The wetland does not support a fish community, so the surface water SEVs may be overly conservative for the aquatic community present in the wetland and no further evaluation is warranted.

In the freshwater sediment SEV comparisons summarized in **Table 17**, only the Total PCB HQ is above 1 for the refined maximum, but not average, EPC. Given the low magnitude of the HQs and the lack of other COPCs with HQs above 1, these results indicate that risks to benthic invertebrates are expected to be minimal within the wetlands of the former FTA and no further evaluation is warranted.

In the wetland food web model included in **Attachment I**, HQs above 1 were identified for the marsh wren, but not for the raccoon. The model for the wren may overestimate potential risks because it assumes that, when the wren is present, it only forages for benthic invertebrates within the wetlands of the former FTA. It is unlikely that the former FTA can support a population of wren and it is more likely that any wren present in the former FTA wetlands also forages from locations across, and potentially off, the peninsula. Therefore, the focus of the risk characterization is on COPCs and receptors with HQs above 1 when the average EPC and the LOAEL-based TRV are considered. These COPCs are summarized in **Table 15** (along with the results when the refined maximum EPCs and NOAEL-based TRVs are considered).

None of the COPCs had HQs above 1 when the average EPC and the LOAEL-based TRV were considered. Therefore, it can be concluded that risks to birds and mammals are expected to be minimal within the wetlands of the former FTA and no further evaluation is warranted.

4.7 ERA Summary and Conclusions

The Tier 1 ecological SRA concluded that inorganics, PCBs, pesticides, SVOCs, and VOCs associated with surface soil, surface water, or freshwater sediment at the former FTA may pose potential risk to plants, invertebrates, and/or wildlife. Based on the results of the Tier 1 ecological SRA, a preliminary Tier 2, Step 3a BERA has been prepared to further assess the potential for adverse effects to ecological receptors at the former FTA. The Tier 2, Step 3a risk evaluation for the former FTA evaluated COPCs that failed the Tier 1 ecological SRA. **Section 4.7** summarizes the results.

For terrestrial plants and soil invertebrates, HQs are greater than 1 for several inorganic and organic COPCs. Two inorganic COPCs with HQs above 1 are consistent with background (selenium, vanadium) and do not require further valuation; three organic COPCs are eliminated from further evaluation based on low FOD (endrin aldehyde, carbazole, and dibenzofuran). There are significant uncertainties about the true bioavailability and toxicity of the remaining COPCs to plants and invertebrates.

Based on a review of the SEV sources and additional toxicity information, and given the relatively low magnitude of the exceedances and the infrequency of the exceedances, it is expected that risks to plants and soil invertebrates are overestimated and not sufficient to warrant carrying these COPCs further in the ERA process.

For small insectivorous birds and mammals exposed to surface soil and earthworms, selenium, Total PCBs, and endrin ketone are the only COPCs with HQs above 1 when the average EPC and LOAEL-based TRV are considered. The average EPCs and LOAEL-based TRVs resulted in robin HQs above 1 for selenium (HQ=3.1), Total PCBs (HQ=1.9), and endrin ketone (HQ=3.9) and shrew HQs above 1 for selenium (HQ=2.3) and Total PCBs (HQ=2.9). As stated previously, selenium is consistent with background and the endrin ketone HQs are expected to overestimate risk due to the limited nature of the elevated concentrations and the uncertainties associated with the worm tissue estimates; therefore, these COPCs do not warrant further evaluation. Although the robin and shrew HQs are relatively low, and there are some conservative assumptions included in the refined food web model (exclusive worm diet; AUF of 1), there may be a potential for risks to small insectivorous birds and mammals due to exposure to Total PCBs. However, as stated previously, the refined food web model assumption of a 100-percent earthworm diet from the former FTA for these receptors likely overestimates risks and in reality, there may be low risk from the former FTA soils to these receptors.

In the wetland exposure area, risks are expected to be minimal and generally similar to background; no further evaluation is warranted for the aquatic community or the benthic invertebrate community. Risks to birds and mammals are also expected to be minimal within the wetlands of the former FTA and no further evaluation is warranted.

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TABLES

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TABLE 1
SELECTION OF SURFACE SOIL COPCS FOR PLANTS AND INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Maximum Detected Surface Soil Concentration	Selected Soil SEV [a]	SEV Source	COPC Determination and Rationale	
INORGANICS						
ALUMINUM	37 : 37	19700	pH<5.5	Eco-SSL	NO	soil pH is > 5.5 [b]
ANTIMONY	36 : 37	0.72	5	ORNL (plants)	NO	Max Detect < SEV
ARSENIC	37 : 37	12	18	Eco-SSL (plants)	NO	Max Detect < SEV
BARIUM	37 : 37	114	330	Eco-SSL (inverts)	NO	Max Detect < SEV
BERYLLIUM	37 : 37	0.89	10	ORNL (plants)	NO	Max Detect < SEV
CADMIUM	37 : 37	1.3	32	Eco-SSL (plants)	NO	Max Detect < SEV
CALCIUM	37 : 37	22700	NA		NO	Essential Nutrient
CHROMIUM, TOTAL	47 : 48	42	64	CCME (residential/parkland)	NO	Max Detect < SEV
COBALT	37 : 37	24	13	Eco-SSL (plants)	YES	Max Detect > SEV
COPPER	37 : 37	32	70	Eco-SSL (plants)	NO	Max Detect < SEV
IRON	37 : 37	32000	pH<5, pH>8	Eco-SSL	NO	soil pH is between 5 and 8 [b]
LEAD	37 : 37	48	120	Eco-SSL (plants)	NO	Max Detect < SEV
MAGNESIUM	37 : 37	9690	NA		NO	Essential Nutrient
MANGANESE	37 : 37	8600	220	Eco-SSL (plants)	YES	Max Detect > SEV
MERCURY	29 : 37	0.21	12	CCME (residential/parkland)	NO	Max Detect < SEV
NICKEL	36 : 37	32	38	Eco-SSL (plants)	NO	Max Detect < SEV
POTASSIUM	36 : 37	2790	NA		NO	Essential Nutrient
SELENIUM	25 : 37	6.4	0.52	Eco-SSL (plants)	YES	Max Detect > SEV
SILVER	37 : 37	0.22	20	CCME (residential/parkland)	NO	Max Detect < SEV
SODIUM	31 : 37	417	NA		NO	Essential Nutrient
THALLIUM	37 : 37	0.14	1.0	ORNL (plants)	NO	Max Detect < SEV
VANADIUM	37 : 37	47	2.0	ORNL (plants)	YES	Max Detect > SEV
ZINC	37 : 37	72	120	Eco-SSL (inverts)	NO	Max Detect < SEV
POLYCHLORINATED BIPHENYLS (PCBs)						
TOTAL AROCLORS	103 : 107	610	33	CCME (commercial)	YES	Max Detect > SEV
PESTICIDES						
4,4-DDD	1 : 30	0.0092	12	CCME (commercial)	NO	Max Detect < SEV
4,4-DDT	10 : 30	0.76	12	CCME (commercial)	NO	Max Detect < SEV
ALDRIN	1 : 30	0.00016	0.0025	USEPA R4 (unspecified)	NO	Max Detect < SEV
DIELDRIN	11 : 30	0.48	0.10	USEPA R4 (inverts)	YES	Max Detect > SEV
ENDOSULFAN I	2 : 30	0.00044	0.000010	TV	YES	Max Detect > SEV
ENDOSULFAN II	2 : 30	0.02	0.000010	TV	YES	Max Detect > SEV
ENDOSULFAN SULFATE	7 : 30	0.22	0.000010	TV	YES	Max Detect > SEV
ENDRIN	5 : 30	0.13	0.0034	USEPA R4 (inverts)	YES	Max Detect > SEV
ENDRIN ALDEHYDE	1 : 30	0.017	0.0034	USEPA R4 (plants)	YES	Max Detect > SEV
ENDRIN KETONE	25 : 30	3.0	0.0034	USEPA R4 (plants)	YES	Max Detect > SEV
HEPTACHLOR EPOXIDE	3 : 30	0.087	0.004	USEPA R4 (inverts)	YES	Max Detect > SEV
METHOXYCHLOR	6 : 30	1.6	0.0025	USEPA R4 (inverts)	YES	Max Detect > SEV

TABLE 1
SELECTION OF SURFACE SOIL COPCS FOR PLANTS AND INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Maximum Detected Surface Soil Concentration	Selected Soil SEV [a]	SEV Source	COPC Determination and Rationale	
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)						
1,1-BIPHENYL	9 : 41	0.64	0.03	ORNL (plants)	YES	Max Detect > SEV
2,3,4,6-TETRACHLOROPHENOL	2 : 37	0.0041	20	ORNL (inverts)	NO	Max Detect < SEV
2,4,6-TRICHLOROPHENOL	1 : 41	0.0035	0.5	CCME (residential/parkland)	NO	Max Detect < SEV
ATRAZINE	5 : 41	0.0021	0.073	USEPA R4 (inverts)	NO	Max Detect < SEV
BIS(2-ETHYLHEXYL)PHTHALATE	3 : 41	0.61	0.23	USEPA R4 (inverts)	YES	Max Detect > SEV
BUTYLBENZYLPHTHALATE	4 : 41	0.031	0.59	USEPA R4 (inverts)	NO	Max Detect < SEV
CARBAZOLE	1 : 41	0.76	0.16	USEPA R4 (inverts)	YES	Max Detect > SEV
DIBENZOFURAN	1 : 41	0.62	0.16	USEPA R4 (inverts)	YES	Max Detect > SEV
HEXACHLOROBENZENE	5 : 41	0.013	2	CCME (residential/parkland)	NO	Max Detect < SEV
HPAH, TOTAL	26 : 37	57	18	Eco-SSL (inverts)	YES	Max Detect > SEV
LPAH, TOTAL	9 : 37	15	29	Eco-SSL (inverts)	NO	Max Detect < SEV
VOLATILE ORGANIC COMPOUNDS (VOCs)						
1,1,1-TRICHLOROETHANE	1 : 42	0.00085	5	CCME (residential/parkland)	NO	Max Detect < SEV
1,2,4-TRICHLOROBENZENE	9 : 42	0.0040	2.0	CCME (residential/parkland)	NO	Max Detect < SEV
1,2-DICHLOROBENZENE	1 : 42	0.0033	1.0	CCME (residential/parkland)	NO	Max Detect < SEV
1,2-DICHLOROETHENE, TOTAL	1 : 20	0.014	5	CCME (residential/parkland)	NO	Max Detect < SEV
1,3-DICHLOROBENZENE	1 : 42	0.0042	1.0	CCME (residential/parkland)	NO	Max Detect < SEV
1,4-DICHLOROBENZENE	2 : 42	0.0015	1.0	CCME (residential/parkland)	NO	Max Detect < SEV
2-BUTANONE	2 : 4	0.023	1	USEPA R4 (inverts)	NO	Max Detect < SEV
ACETONE	25 : 41	2.0	0.04	USEPA R4 (inverts)	YES	Max Detect > SEV
BENZENE	1 : 41	0.0014	31	CCME (residential/parkland)	NO	Max Detect < SEV
CARBON DISULFIDE	2 : 4	0.038	0.005	USEPA R4 (inverts)	YES	Max Detect > SEV
CIS-1,2-DICHLOROETHENE	2 : 42	0.014	0.04	USEPA R4 (inverts)	NO	Max Detect < SEV
DICHLORODIFLUOROMETHANE	1 : 5	0.0010	NA		YES	No SEV
ETHYLBENZENE	2 : 41	0.0080	0.27	USEPA R4 (inverts)	NO	Max Detect < SEV
ISOPROPYLBENZENE	1 : 41	0.011	31	CCME (residential/parkland)	NO	Max Detect < SEV
METHYL ACETATE	1 : 4	0.037	NA		YES	No SEV
TOLUENE	4 : 41	0.016	0.15	USEPA R4 (inverts)	NO	Max Detect < SEV
TRICHLOROETHENE	1 : 42	0.0078	5.0	CCME (residential/parkland)	NO	Max Detect < SEV

Notes:
All results reported in milligrams per kilogram (mg/kg).
CCME - Canadian Council of Ministers of the Environment (2002; 2015). Values for environmental health selected.
COPC - Chemical of Potential Concern.
Eco-SSL - Ecological Soil Screening Level. Derived by USEPA according to USEPA guidance (2005a).
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
NA - Not available/applicable.
ORNL - Oak Ridge National Laboratory (Efroymson, et al., 1997a and b).
PAH - Polycyclic Aromatic Hydrocarbon.
SEV - Screening Ecotoxicity Value.
TV - Target Value (Dutch standards presented in Buchman, 2008).
USEPA - United States Environmental Protection Agency.
USEPA R4 - USEPA Region 4 recommended ecological screening values for soil (USEPA, 2001).

[a] Lowest of the SEVs for terrestrial plants and soil invertebrates. See Attachment D for details.
[b] Average of soil pH measurements is 6.0 SU. See Attachment A for data (24 samples collected).

TABLE 2
SELECTION OF SURFACE WATER COPCs
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Detected Analyte	Maximum Detected Surface Water Concentration	Selected Surface Water SEV [a]	SEV Source	COPC Determination and Rationale	
INORGANICS - DISSOLVED					
ALUMINUM	58	87	USEPA AWQC	NO	Max Detect < SEV
ANTIMONY	0.21	30	USEPA R3	NO	Max Detect < SEV
ARSENIC	7.0	150	USEPA AWQC	NO	Max Detect < SEV
BARIUM	14	4.0	USEPA R3	YES	Max Detect > SEV
CADMIUM	0.040	0.26	USEPA AWQC [b]	NO	Max Detect < SEV
CALCIUM	83400	116000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
COBALT	4.2	23	USEPA R3	NO	Max Detect < SEV
COPPER	6.6	9.8	USEPA AWQC [b]	NO	Max Detect < SEV
IRON	3570	1000	USEPA AWQC	YES	Max Detect > SEV
LEAD	0.46	2.8	USEPA AWQC [b]	NO	Max Detect < SEV
MAGNESIUM	7120	82000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
MANGANESE	1120	120	USEPA R3	YES	Max Detect > SEV
MERCURY	0.030	0.77	USEPA AWQC	NO	Max Detect < SEV
NICKEL	2.2	57	USEPA AWQC	NO	Max Detect < SEV
POTASSIUM	3940	53000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
SELENIUM	0.67	5.0	USEPA AWQC	NO	Max Detect < SEV
SODIUM	6350	680000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
ZINC	10	129	USEPA AWQC [b]	NO	Max Detect < SEV
INORGANICS - TOTAL RECOVERABLE					
ALUMINUM	1590	87	USEPA AWQC	YES	Max Detect > SEV
ANTIMONY	0.19	30	USEPA R3	NO	Max Detect < SEV
ARSENIC	7.9	150	USEPA AWQC	NO	Max Detect < SEV
BARIUM	21	4.0	USEPA R3	YES	Max Detect > SEV
BERYLLIUM	0.040	0.66	USEPA R3	NO	Max Detect < SEV
CADMIUM	2.1	0.29	USEPA AWQC [b]	YES	Max Detect > SEV
CALCIUM	87800	116000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
COBALT	5.3	23	USEPA R3	NO	Max Detect < SEV
COPPER	9.4	10.2	USEPA AWQC [b]	NO	Max Detect < SEV
IRON	6480	1000	USEPA AWQC	YES	Max Detect > SEV
LEAD	2.1	3.6	USEPA AWQC [b]	NO	Max Detect < SEV
MAGNESIUM	7340	82000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
MANGANESE	1190	120	USEPA R3	YES	Max Detect > SEV
NICKEL	8.1	57	USEPA AWQC	NO	Max Detect < SEV
POTASSIUM	4180	53000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
SELENIUM	0.82	5.0	USEPA AWQC	NO	Max Detect < SEV
SILVER	0.11	NA		YES	No SEV
SODIUM	6540	680000	USEPA R3	NO	Max Detect < SEV; Essential nutrient
THALLIUM	0.32	0.80	USEPA R3	NO	Max Detect < SEV
ZINC	23	130	USEPA AWQC [b]	NO	Max Detect < SEV

TABLE 2
SELECTION OF SURFACE WATER COPCs
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Detected Analyte	Maximum Detected Surface Water Concentration	Selected Surface Water SEV [a]	SEV Source	COPC Determination and Rationale	
POLYCHLORINATED BIPHENYLS (PCBs)					
TOTAL AROCLORS	0.38	0.014	USEPA AWQC	YES	Max Detect > SEV
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)					
1,1-BIPHENYL	0.082	140	USEPA R3	NO	Max Detect < SEV
1,2,4,5-TETRACHLOROBENZENE	0.11	3	USEPA R3	NO	Max Detect < SEV
2,4,6-TRICHLOROPHENOL	0.22	4.9	USEPA R3	NO	Max Detect < SEV
ATRAZINE	0.060	1.8	USEPA R3	NO	Max Detect < SEV
BENZO[A]ANTHRACENE	0.065	0.018	USEPA R3	YES	Max Detect > SEV
BENZO[A]PYRENE	0.076	0.015	USEPA R3	YES	Max Detect > SEV
BENZO[K]FLUORANTHENE	0.052	0.015	USEPA R3 [c]	YES	Max Detect > SEV
BIS(2-CHLOROETHYL)ETHER	0.044	19000	USEPA R5	NO	Max Detect < SEV
DIBENZOFURAN	0.087	3.7	USEPA R3	NO	Max Detect < SEV
INDENO[1,2,3-CD]PYRENE	0.16	0.015	USEPA R3	YES	Max Detect > SEV
NAPHTHALENE	0.10	1.1	USEPA R3	NO	Max Detect < SEV
PHENANTHRENE	0.10	0.40	USEPA R3	NO	Max Detect < SEV
VOLATILE ORGANIC COMPOUNDS (VOCs)					
ACETONE	9.3	1500	USEPA R3	NO	Max Detect < SEV
TOLUENE	5.1	2.0	USEPA R3	YES	Max Detect > SEV

Notes:
All screening values reported in micrograms per liter (ug/L).
AWQC - Ambient Water Quality Criteria (chronic values; USEPA, 2014).
COPC - Chemical of Potential Concern.
NA - Not available/applicable.
SEV - Screening Ecotoxicity Value.
USEPA - United States Environmental Protection Agency.
USEPA R3 - USEPA Region 3 freshwater screening values (USEPA, 2006b).
USEPA R4 - EPA Region 4 recommended ecological screening values for surface water (USEPA, 2001).

[a] See Attachment D for SEVs.
[b] Value is hardness dependent. The site specific average hardness value of 111 mg/L $CaCO_3$ was used in the calculation.
[c] Value for benzo(a)pyrene used as a surrogate due to structural similarities (high molecular weight polycyclic aromatic hydrocarbons).

TABLE 3
SELECTION OF SURFACE SEDIMENT COPCs
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Detected Analyte	FOD	Maximum Detected Surface Sediment Concentration	Selected Sediment SEV [a]	SEV Source	COPC Determination and Rationale	
INORGANICS						
ALUMINUM	16 : 16	20400	25500	NOAA SQuiRT (TEL)	NO	Max Detect < SEV
ANTIMONY	16 : 16	0.73	2.0	USEPA R3	NO	Max Detect < SEV
ARSENIC	16 : 16	19	9.8	MacDonald (TEC)	YES	Max Detect > SEV
BARIUM	16 : 16	89	48.0	NOAA SQuiRT (Marine; AET)	YES	Max Detect > SEV
BERYLLIUM	16 : 16	0.84	NA		YES	No SEV
CADMIUM	16 : 16	0.67	1.0	MacDonald (TEC)	NO	Max Detect < SEV
CALCIUM	16 : 16	33700	NA		NO	Essential Nutrient
CHROMIUM, TOTAL	17 : 17	33.7	43.4	MacDonald (TEC)	NO	Max Detect < SEV
COBALT	16 : 16	19.0	50.0	USEPA R3	NO	Max Detect < SEV
COPPER	16 : 16	108	31.6	MacDonald (TEC)	YES	Max Detect > SEV
IRON	16 : 16	25600	20000	USEPA R3	YES	Max Detect > SEV
LEAD	16 : 16	26	35.8	MacDonald (TEC)	NO	Max Detect < SEV
MAGNESIUM	16 : 16	7580	NA		NO	Essential Nutrient
MANGANESE	16 : 16	714	460	USEPA R3	YES	Max Detect > SEV
MERCURY	16 : 16	0.32	0.18	MacDonald (TEC)	YES	Max Detect > SEV
NICKEL	16 : 16	35	22.7	MacDonald (TEC)	YES	Max Detect > SEV
POTASSIUM	16 : 16	2500	NA		NO	Essential Nutrient
SELENIUM	8 : 16	5.5	2.0	USEPA R3	YES	Max Detect > SEV
SILVER	14 : 16	2.3	1.0	USEPA R3	YES	Max Detect > SEV
SODIUM	16 : 16	284	NA		NO	Essential Nutrient
THALLIUM	15 : 16	0.3	NA		YES	No SEV
VANADIUM	16 : 16	46	57.0	NOAA SQuiRT (Marine; AET)	NO	Max Detect < SEV
ZINC	16 : 16	198	121	MacDonald (TEC)	YES	Max Detect > SEV
POLYCHLORINATED BIPHENYLS (PCBs)						
TOTAL AROCLORS	15 : 16	2.1	0.060	MacDonald (TEC)	YES	Max Detect > SEV
PESTICIDES						
4,4-DDD	6 : 16	0.043	0.0049	MacDonald (TEC)	YES	Max Detect > SEV
4,4-DDE	7 : 16	0.0061	0.0032	MacDonald (TEC)	YES	Max Detect > SEV
4,4-DDT	7 : 16	0.043	0.0042	MacDonald (TEC)	YES	Max Detect > SEV
DIELDRIN	2 : 16	0.0078	0.0019	MacDonald (TEC)	YES	Max Detect > SEV
ENDOSULFAN I	1 : 16	0.00073	0.0029	USEPA R3	NO	Max Detect < SEV
ENDOSULFAN II	1 : 16	0.013	0.014	USEPA R3	NO	Max Detect < SEV
ENDOSULFAN SULFATE	2 : 16	0.035	0.0054	USEPA R3	YES	Max Detect > SEV
ENDRIN ALDEHYDE	1 : 16	0.0072	0.0022	MacDonald (TEC)	YES	Max Detect > SEV
ENDRIN KETONE	10 : 16	0.29	0.0022	MacDonald (TEC)	YES	Max Detect > SEV

TABLE 3
SELECTION OF SURFACE SEDIMENT COPCs
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Detected Analyte	FOD	Maximum Detected Surface Sediment Concentration	Selected Sediment SEV [a]	SEV Source	COPC Determination and Rationale	
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)						
1,1-BIPHENYL	2 : 16	0.013	1.2	USEPA R3	NO	Max Detect < SEV
1,4-DIOXANE	1 : 16	0.013	0.12	USEPA R5	NO	Max Detect < SEV
2,3,4,6-TETRACHLOROPHENOL	5 : 16	0.045	0.28	USEPA R3	NO	Max Detect < SEV
2,4,6-TRICHLOROPHENOL	5 : 16	0.020	0.21	USEPA R3	NO	Max Detect < SEV
2,4-DICHLOROPHENOL	1 : 16	0.0055	0.12	USEPA R3	NO	Max Detect < SEV
2,4-DINITROTOLUENE	3 : 16	0.15	0.042	USEPA R3	YES	Max Detect > SEV
3- AND 4-METHYLPHENOL	4 : 16	0.35	0.67	USEPA R3	NO	Max Detect < SEV
ATRAZINE	1 : 16	0.0059	0.0066	USEPA R3	NO	Max Detect < SEV
BIS(2-ETHYLHEXYL)PHTHALATE	5 : 16	2.9	0.18	USEPA R3	YES	Max Detect > SEV
BUTYLBENZYLPHTHALATE	1 : 16	0.059	11	USEPA R3	NO	Max Detect < SEV
CARBAZOLE	1 : 16	1.2	NA		YES	No SEV
DIBENZOFURAN	1 : 16	0.79	0.42	USEPA R3	YES	Max Detect > SEV
DI-N-BUTYLPHTHALATE	1 : 16	0.11	6.5	USEPA R3	NO	Max Detect < SEV
HEXACHLOROETHANE	1 : 16	0.015	1.0	USEPA R3	NO	Max Detect < SEV
PAH, TOTAL	16 : 16	43	1.6	MacDonald (TEC)	YES	Max Detect > SEV
PENTACHLOROPHENOL	2 : 16	0.078	0.50	USEPA R3	NO	Max Detect < SEV
VOLATILE ORGANIC COMPOUNDS (VOCs)						
1,2-DICHLOROETHENE, TOTAL	1 : 8	0.0060	0.40	ORNL SCV	NO	Max Detect < SEV
ACETONE	14 : 16	3.0	0.0087	ORNL SCV	YES	Max Detect > SEV
CIS-1,2-DICHLOROETHENE	1 : 16	0.0060	NA		YES	No SEV
ETHYLBENZENE	3 : 16	0.011	1.1	USEPA R3	NO	Max Detect < SEV
ISOPROPYLBENZENE	3 : 16	0.0039	0.086	USEPA R3	NO	Max Detect < SEV
METHYL CYCLOHEXANE	1 : 16	0.0028	NA		YES	No SEV
TOLUENE	14 : 16	0.31	0.050	ORNL SCV	YES	Max Detect > SEV

Notes:
All results reported in milligrams per kilogram (mg/kg).
AET - Apparent Effect Threshold.
COPC - Chemical of Potential Concern.
EqP - Equilibrium Partitioning (1% organic carbon assumed).
FOD - Frequency of Detection.
NA - Not available/applicable.
NOAA SQuiRT - National Oceanic and Atmospheric Administration Screening Quick Reference Tables (Buchman, 2008).
ORNL SCV - Oak Ridge National Laboratory Secondary Chronic Value; sediment screening value derived using EqP approach (Jones, et al., 1997).
PAH - Polycyclic Aromatic Hydrocarbon.
SEV - Screening Ecotoxicity Value.
TEC - Threshold Effect Concentration (MacDonald, et al., 2000).
USEPA R3 - USEPA Region 3 freshwater sediment screening values (USEPA, 2006).
USEPA R5 - USEPA Region 5 ecological screening levels for sediment (USEPA, 2003).

[a] See Attachment D for SEVs.

TABLE 4
EXPOSURE PARAMETERS FOR WILDLIFE RECEPTORS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Receptor Species	Average Body Weight (kg)	Food Ingestion Rate (kg_{dw}/day)	Dietary Assumptions (%; kg_{dw}/day)			Incidental Soil/Sediment Ingestion (%; kg_{dw}/day)	Water Ingestion Rate (L/day)
			Terrestrial Plants	Soil Invertebrates	Freshwater Benthic Invertebrates		
Birds							
Bobwhite quail *(Colinus virginianus)*	0.1751 [a]	0.0020 [b]	100% [c] 0.00204	--	--	6.1% [d] 0.00012	0.0228 [e]
American robin *(Turdus migratorius)*	0.0804 [a]	0.0119 [b]	--	100% [c] 0.0119	--	6.4% [d] 0.00076	0.0113 [e]
Marsh wren *(Cistothorus palustris)*	0.011 [a]	0.0029 [b]	--	--	100% [c] 0.0029	3.3% [d] 0.000094	0.0028 [e]
Mammals							
Meadow vole *(Microtus pennsylvanicus)*	0.0358 [a]	0.00174 [b]	100% [c] 0.00174	--	--	1.2% [d] 0.000021	0.0075 [e]
Short-tailed shrew *(Blarina brevicauda)*	0.0161 [a]	0.00143 [b]	--	100% [c] 0.0014	--	0.9% [d] 0.000013	0.0036 [e]
Raccoon *(Procyon lotor)*	5.636 [a]	0.1840 [b]	--	--	100% [c] 0.1840	9.4% [d] 0.017	0.4694 [e]

General Notes:
See individual organism notes for source, units, and conversion.
All receptors assumed to be present and actively foraging year-round in screening level evaluation (area use factor [AUF] and exposure duration [ED] set at 100%).

BW - Body Weight.
DW - Dry Weight.
FIR - Food Ingestion Rate.
Kg - Kilogram.
L/day - Liters per Day.

Notes for Bobwhite quail
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.078 g/g/day (USEPA, 1993) multiplied by average body weight of 0.1751 kg (USEPA, 1993) and 0.15 to convert to dry weight (grass ingestion).
[c] An exclusive terrestrial plant diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for mourning dove (USEPA, 2007a).
[e] Water ingestion rate of 0.13 L/day (USEPA, 1993) multiplied by average body weight.

Notes for American robin
[a] Average of adult body weights listed by USEPA (1993).
[b] Food ingestion rates were calculated from Nagy et al. (1999) for insectivorous birds as follows:
FIR (kJ/day)= (9.7*BW(g) $^{0.705}$) using average body weight of 0.0804 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18 kJ/g of dry matter for avian insectivores (Nagy et al., 1999) and then dividing by 1000.
[c] An exclusive soil invertebrate diet was selected.
[d] In the absence of data for the robin, the incidental soil ingestion rate is based on 50th percentile value for woodcock (USEPA, 2007a).
[e] Water ingestion rate of 0.14 L/day (USEPA, 1993) multiplied by average body weight.

TABLE 4
EXPOSURE PARAMETERS FOR WILDLIFE RECEPTORS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Notes for Marsh Wren
[a] Average of adult body weights listed by USEPA (1993).
[b] Food ingestion rate calculated using algorithm for insectivorous birds developed by Nagy, 2001 [FIR (g_{dw}/day) = 0.540*$BW^{0.705}$] using average body weight.
[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.
[d] In the absence of data for the wren, the incidental soil ingestion rate is based on the mallard based on dietary similarities (USACHPPM, 2004).
[e] Water ingestion rate calculated using algorithm for all birds developed by Calder and Braun, 1983 [WIR (kg/day) = 0.059*$BW^{0.67}$] using average body weight.

Notes for Meadow vole
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.33 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0358 kg (USEPA, 1993) and 0.15 to convert to dry weight (grass ingestion).
[c] An exclusive terrestrial plant diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for vole (USEPA, 2007a).
[e] Maximum water ingestion rate of 0.21 L/day (USEPA, 1993) multiplied by average body weight.

Notes for Short-tailed shrew
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.555 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0161 kg (USEPA, 1993) and 0.16 to convert to dry weight (earthworm ingestion).
[c] An exclusive soil invertebrate diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for shrew (USEPA, 2007a).
[e] Water ingestion rate of 0.223 L/day (USEPA, 1993) multiplied by average body weight.

Notes for Raccoon
[a] Average of adult body weights listed by USEPA (1993; value is average of the average values from three studies).

[b] Food ingestion rate calculated using algorithm for carnivores developed by Nagy, et al. (1999) as follows:
FIR (kJ/day)= (2.23*BW(g) $^{0.85}$) using average body weight of 5.636 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18.7 kJ/g of dry matter for mammalian insectivores (Nagy et al., 1999) and then dividing by 1000.
[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.
[d] The incidental soil ingestion rate is based on the value identified by Beyer (1994) for raccoons.
[e] Water ingestion rate calculated using algorithm for all mammals developed by Calder and Braun, 1983 [WIR (kg/day) = 0.099*$BW^{0.90}$] using average body weight.

TABLE 5
SCREENING-LEVEL RISK ESTIMATES FOR PLANTS AND SOIL INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD	Maximum Detected Surface Soil Concentration	Soil Invertebrates		
			Soil Invertebrate SEV [a]	SEV Source	HQ
INORGANICS					
COBALT	37 : 37	24.2	50.0	CCME (residential/parkland)	0.48
MANGANESE	37 : 37	8600	450	Eco-SSL (inverts)	**19**
SELENIUM	25 : 37	6.4	4.1	Eco-SSL (inverts)	**1.6**
VANADIUM	37 : 37	47.0	42	TV	**1.1**
POLYCHLORINATED BIPHENYLS (PCBs)					
TOTAL AROCLORS	103 : 107	610	33	CCME (commercial)	**18.5**
PESTICIDES					
DIELDRIN	11 : 30	0.48	0.10	USEPA R4 (inverts)	**4.8**
ENDOSULFAN I	2 : 30	0.00044	0.000010	TV	**44**
ENDOSULFAN II	2 : 30	0.020	0.000010	TV	**2000**
ENDOSULFAN SULFATE	7 : 30	0.22	0.000010	TV	**22000**
ENDRIN	5 : 30	0.13	0.0250	USEPA R4 (inverts)	**5**
ENDRIN ALDEHYDE	1 : 30	0.017	0.025	USEPA R4 (inverts)	0.68
ENDRIN KETONE	25 : 30	3.0	0.025	USEPA R4 (inverts)	**120**
HEPTACHLOR EPOXIDE	3 : 30	0.087	0.004	USEPA R4 (inverts)	**22**
METHOXYCHLOR	6 : 30	1.6	0.0025	USEPA R4 (inverts)	**640**
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)					
1,1-BIPHENYL	9 : 41	0.64	0.03	USEPA R4 (inverts)	**21**
BIS(2-ETHYLHEXYL)PHTHALATE	3 : 41	0.61	0.23	USEPA R4 (inverts)	**2.7**
CARBAZOLE	1 : 41	0.76	0.16	USEPA R4 (inverts)	**4.8**
DIBENZOFURAN	1 : 41	0.62	0.16	USEPA R4 (inverts)	**3.9**
HPAH, TOTAL	26 : 37	57.0	18	Eco-SSL (inverts)	**3.2**
VOLATILE ORGANIC COMPOUNDS (VOCs)					
ACETONE	25 : 41	2.0	0.04	USEPA R4 (inverts)	**50**
CARBON DISULFIDE	2 : 4	0.038	0.005	USEPA R4 (inverts)	**7.6**
DICHLORODIFLUOROMETHANE	1 : 5	0.0010	NA		No SEV
METHYL ACETATE	1 : 4	0.037	NA		No SEV

Notes:
All results reported in milligrams per kilogram (mg/kg).
CCME - Canadian Council of Ministers of the Environment (2002; 2015). Values for environmental health selected.
COPC - Chemical of Potential Concern.
Eco-SSL - Ecological Soil Screening Level. Derived by USEPA according to USEPA guidance (2005a).
HPAH - High molecular weight PAH.
HQ - Hazard Quotient (EPC/SEV).
NA - Not available/applicable.
ORNL - Oak Ridge National Laboratory (Efroymson, et al., 1997a and b).
PAH - Polycyclic Aromatic Hydrocarbon.
SEV - Screening Ecotoxicity Value.
TV - Target Value (Dutch standards presented in Buchman, 2008).
USEPA - United States Environmental Protection Agency.
USEPA R4 - USEPA Region 4 recommended ecological screening values for soil (USEPA, 2001).

[a] SEVs for terrestrial plants and soil invertebrates presented in Attachment D.
[b] Average of soil pH measurements is 6.0 SU. See Attachment A for data (24 samples collected).

TABLE 5
SCREENING-LEVEL RISK ESTIMATES FOR PLANTS AND SOIL INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD	Maximum Detected Surface Soil Concentration	Terrestrial Plants		
			Plant SEV [a]	SEV Source	HQ
INORGANICS					
COBALT	37 : 37	24.2	13	Eco-SSL (plants)	**1.9**
MANGANESE	37 : 37	8600	220	Eco-SSL (plants)	**39**
SELENIUM	25 : 37	6.4	0.52	Eco-SSL (plants)	**12**
VANADIUM	37 : 37	47.0	2.0	ORNL (plants)	**24**
POLYCHLORINATED BIPHENYLS (PCBs)					
TOTAL AROCLORS	103 : 107	610	40	ORNL (plants)	**15.3**
PESTICIDES					
DIELDRIN	11 : 30	0.48	10	USEPA R4 (plants)	0.048
ENDOSULFAN I	2 : 30	0.00044	0.000010	TV	**44**
ENDOSULFAN II	2 : 30	0.020	0.000010	TV	**2000**
ENDOSULFAN SULFATE	7 : 30	0.22	0.000010	TV	**22000**
ENDRIN	5 : 30	0.13	0.0034	USEPA R4 (plants)	**38**
ENDRIN ALDEHYDE	1 : 30	0.017	0.0034	USEPA R4 (plants)	**5.0**
ENDRIN KETONE	25 : 30	3.0	0.0034	USEPA R4 (plants)	**882**
HEPTACHLOR EPOXIDE	3 : 30	0.087	0.4000	USEPA R4 (plants)	0.22
METHOXYCHLOR	6 : 30	1.6	NA		No SEV
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)					
1,1-BIPHENYL	9 : 41	0.64	60	ORNL (plants)	0.011
BIS(2-ETHYLHEXYL)PHTHALATE	3 : 41	0.61	NA		No SEV
CARBAZOLE	1 : 41	0.76	NA		No SEV
DIBENZOFURAN	1 : 41	0.62	6.1	USEPA R4 (plants)	0.10
HPAH, TOTAL	26 : 37	57.0	NA		No SEV
VOLATILE ORGANIC COMPOUNDS (VOCs)					
ACETONE	25 : 41	2.0	NA		No SEV
CARBON DISULFIDE	2 : 4	0.038	NA		No SEV
DICHLORODIFLUOROMETHANE	1 : 5	0.0010	NA		No SEV
METHYL ACETATE	1 : 4	0.037	NA		No SEV

Notes:
All results reported in milligrams per kilogram (mg/kg).
CCME - Canadian Council of Ministers of the Environment (2002; 2015). Values for environmental health select
COPC - Chemical of Potential Concern.
Eco-SSL - Ecological Soil Screening Level. Derived by USEPA according to USEPA guidance (2005a).
HPAH - High molecular weight PAH.
HQ - Hazard Quotient (EPC/SEV).
NA - Not available/applicable.
ORNL - Oak Ridge National Laboratory (Efroymson, et al., 1997a and b).
PAH - Polycyclic Aromatic Hydrocarbon.
SEV - Screening Ecotoxicity Value.
TV - Target Value (Dutch standards presented in Buchman, 2008).
USEPA - United States Environmental Protection Agency.
USEPA R4 - USEPA Region 4 recommended ecological screening values for soil (USEPA, 2001).

[a] SEVs for terrestrial plants and soil invertebrates presented in Attachment D.
[b] Average of soil pH measurements is 6.0 SU. See Attachment A for data (24 samples collected).

TABLE 6
SCREENING-LEVEL RISK ESTIMATES FOR FRESHWATER AQUATIC COMMUNITY
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	Maximum Detected Surface Water Concentration	Selected Surface Water SEV [a]	SEV Source	HQ
INORGANICS - DISSOLVED				
BARIUM	14	4.0	USEPA R3	**3.4**
IRON	3570	1000	USEPA AWQC	**3.6**
MANGANESE	1120	120	USEPA R3	**9.3**
INORGANICS - TOTAL RECOVERABLE				
ALUMINUM	1590	87	USEPA AWQC	**18.3**
BARIUM	21	4.0	USEPA R3	**5.2**
CADMIUM	2.1	0.29	USEPA AWQC [b]	**7.3**
IRON	6480	1000	USEPA AWQC	**6.5**
MANGANESE	1190	120	USEPA R3	**9.9**
SILVER	0.11	NA		No SEV
POLYCHLORINATED BIPHENYLS (PCBS)				
TOTAL AROCLORS	0.38	0.014	USEPA AWQC	**27.1**
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)				
BENZO[A]ANTHRACENE	0.065	0.018	USEPA R3	**3.6**
BENZO[A]PYRENE	0.076	0.015	USEPA R3	**5.1**
BENZO[K]FLUORANTHENE	0.052	0.015	USEPA R3 [c]	**3.5**
INDENO[1,2,3-CD]PYRENE	0.16	0.015	USEPA R3	**10.7**
VOLATILE ORGANIC COMPOUNDS (VOCs)				
TOLUENE	5.1	2.0	USEPA R3	**2.6**

Notes:
All screening values reported in micrograms per liter (ug/L).
AWQC - Ambient Water Quality Criteria (chronic values; USEPA, 2014).
COPC - Chemical of Potential Concern.
NA - Not available/applicable.
SEV - Screening Ecotoxicity Value.
USEPA - United States Environmental Protection Agency.
USEPA R3 - USEPA Region 3 freshwater screening values (USEPA, 2006b).

[a] See Attachment D for SEVs.
[b] Value is hardness dependent. The site specific average hardness value of 111 mg/L CaCO3 was used in the calculation.
[c] Value for benzo(a)pyrene used as a surrogate due to structural similarities (high molecular weight polycyclic aromatic hydrocarbons).

TABLE 7
SCREENING-LEVEL RISK ESTIMATES FOR FRESHWATER BENTHIC INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD	Maximum Detected Surface Sediment Concentration	Selected Sediment SEV [a]	SEV Source	HQ
INORGANICS					
ARSENIC	16 : 16	19	9.8	MacDonald (TEC)	**1.9**
BARIUM	16 : 16	89	48	NOAA SQuiRT (Marine; AET)	**1.9**
BERYLLIUM	16 : 16	0.84	NA		No SEV
COPPER	16 : 16	108	32	MacDonald (TEC)	**3.4**
IRON	16 : 16	25600	20000	USEPA R3	**1.3**
MANGANESE	16 : 16	714	460	USEPA R3	**1.6**
MERCURY	16 : 16	0.32	0.18	MacDonald (TEC)	**1.8**
NICKEL	16 : 16	35	23	MacDonald (TEC)	**1.5**
SELENIUM	8 : 16	5.5	2.0	USEPA R3	**2.8**
SILVER	14 : 16	2.3	1.0	USEPA R3	**2.3**
THALLIUM	15 : 16	0.30	NA		No SEV
ZINC	16 : 16	198	121	MacDonald (TEC)	**1.6**
POLYCHLORINATED BIPHENYLS (PCBs)					
TOTAL AROCLORS	15 : 16	2.1	0.060	MacDonald (TEC)	**35.1**
PESTICIDES					
4,4-DDD	6 : 16	0.043	0.0049	MacDonald (TEC)	**8.8**
4,4-DDE	7 : 16	0.0061	0.0032	MacDonald (TEC)	**1.9**
4,4-DDT	7 : 16	0.043	0.0042	MacDonald (TEC)	**10**
DIELDRIN	2 : 16	0.0078	0.0019	MacDonald (TEC)	**4.1**
ENDOSULFAN SULFATE	2 : 16	0.035	0.0054	USEPA R3	**6.5**
ENDRIN ALDEHYDE	1 : 16	0.0072	0.0022	MacDonald (TEC)	**3.2**
ENDRIN KETONE	10 : 16	0.29	0.0022	MacDonald (TEC)	**131**
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)					
2,4-DINITROTOLUENE	3 : 16	0.15	0.042	USEPA R3	**3.6**
BIS(2-ETHYLHEXYL)PHTHALATE	5 : 16	2.9	0.18	USEPA R3	**16.1**
CARBAZOLE	1 : 16	1.2	NA		No SEV
DIBENZOFURAN	1 : 16	0.79	0.42	USEPA R3	**1.9**
PAH, TOTAL	16 : 16	43	1.6	MacDonald (TEC)	**26.7**

TABLE 7
SCREENING-LEVEL RISK ESTIMATES FOR FRESHWATER BENTHIC INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD	Maximum Detected Surface Sediment Concentration	Selected Sediment SEV [a]	SEV Source	HQ
VOLATILE ORGANIC COMPOUNDS (VOCs)					
ACETONE	14 : 16	3.0	0.0087	ORNL SCV	**345**
CIS-1,2-DICHLOROETHENE	1 : 16	0.0060	NA		No SEV
METHYL CYCLOHEXANE	1 : 16	0.0028	NA		No SEV
TOLUENE	14 : 16	0.31	0.050	ORNL SCV	**6.2**

Notes:
All results reported in milligrams per kilogram (mg/kg).
AET - Apparent Effect Threshold.
COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
HQ - Hazard Quotient (EPC/SEV)
NA - Not available/applicable.
NOAA SQuiRT - National Oceanic and Atmospheric Administration Screening Quick Reference Tables (Buchman, 2008).
ORNL SCV - Oak Ridge National Laboratory Secondary Chronic Value; sediment screening value derived using EqP approach (Jones, et al., 1997).
PAH - Polycyclic Aromatic Hydrocarbon.
SEV - Screening Ecotoxicity Value.
TEC - Threshold Effect Concentration (MacDonald, et al., 2000).
USEPA R3 - USEPA Region 3 freshwater sediment screening values (USEPA, 2006).

[a] See Attachment D for SEVs.

TABLE 8
SUMMARY OF SCREENING-LEVEL FOOD WEB RISK ESTIMATES - TERRESTRIAL EXPOSURE AREAS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	MATC-based HQs - Maximum Concentrations			
COPC	**Bobwhite Quail**	**American Robin**	**Meadow Vole**	**Short-tailed Shrew**
ARSENIC	0.0047	0.10	0.014	0.062
CADMIUM	0.0031	**4.2**	0.016	**3.3**
CHROMIUM, TOTAL	0.0078	**1.6**	0.0092	0.50
COPPER	0.010	0.23	0.018	0.070
LEAD	0.0071	**1.7**	0.0048	0.29
MERCURY	0.086	**2.7**	0.095	0.44
NICKEL	0.0037	0.48	0.018	0.61
SELENIUM	0.10	**101**	0.64	**96.5**
SILVER	0.000019	0.0062	0.000011	0.0015
ZINC	0.0062	**2.8**	0.017	**1.2**
Organics				
LPAH, TOTAL	0.0034	**1.1**	0.00035	0.027
HPAH, TOTAL	0.022	**3.5**	0.091	**2.7**
TOTAL AROCLORS	0.87	**403**	**2.9**	**627**
4,4-DDD	0.000010	0.023	0.000012	0.012
4,4-DDT	0.00073	**1.3**	0.00065	0.65
ALDRIN	0.00000051	0.0025	0.00000032	0.00085
DIELDRIN	0.011	**4.2**	0.071	**4.5**
ENDOSULFAN I	0.000000047	0.0000014	0.000011	0.000051
ENDOSULFAN II	0.0000022	0.000063	0.00050	0.0023
ENDOSULFAN SULFATE	0.000024	0.00069	0.0055	0.025
ENDRIN	0.0045	**11.5**	0.0011	0.77
ENDRIN ALDEHYDE	0.00059	**1.5**	0.00014	0.10
ENDRIN KETONE	0.10	**265**	0.025	**17.9**
HEPTACHLOR EPOXIDE	NC	NC	0.00083	0.21
METHOXYCHLOR	0.000024	0.011	0.00077	0.097

Notes:
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
Potential risk is calculated using the maximum detected concentrations and MATC-based TRVs.
HQs above 1 are bolded and highlighted. COPCs with HQs above 1 in the screening level evaluation were retained for the COPC refinement stage.
MATC-based TRVs represent the geometric mean of the NOAEL- and LOAEL-based TRVs.

COPC - Chemical of Potential Concern.
HPAH - High molecular weight PAH.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effect Level.
LPAH - Low molecular weight PAH.
MATC - Maximum Allowable Toxicant Concentration.
NC - Not Calculated. Avian TRV not available.
NOAEL - No Observed Adverse Effect Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
TRV - Toxicity Reference Value.

TABLE 9
SUMMARY OF SCREENING-LEVEL FOOD WEB RISK ESTIMATES - WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	MATC-based HQs - Maximum Concentrations	
COPC	**Marsh Wren**	**Raccoon**
Inorganics		
ARSENIC	0.28	0.068
CADMIUM	0.038	0.0067
CHROMIUM, TOTAL	0.19	0.018
COPPER	**3.9**	0.27
LEAD	0.084	0.0047
MERCURY	**5.0**	0.18
NICKEL	0.43	0.13
SELENIUM	**12.5**	**2.4**
SILVER	0.23	0.012
ZINC	0.98	0.088
Organics		
LPAH, TOTAL	0.020	0.00026
HPAH, TOTAL	0.044	0.019
TOTAL AROCLORS	0.88	0.19
4,4-DDD	0.0013	0.00023
4,4-DDE	0.00055	0.000071
4,4-DDT	0.0016	0.00026
DIELDRIN	0.00058	0.00024
ENDOSULFAN I	0.00000043	0.0000065
ENDOSULFAN II	0.0000076	0.00012
ENDOSULFAN SULFATE	0.000020	0.00031
ENDRIN ALDEHYDE	0.0041	0.00010
ENDRIN KETONE	0.16	0.0042

Notes:
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
Potential risk is calculated using the maximum detected concentrations and MATC-based TRVs.
HQs above 1 are bolded and highlighted. COPCs with HQs above 1 in the screening level evaluation were retained for the COPC refinement stage.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

COPC - Chemical of Potential Concern.
HPAH - High molecular weight PAH.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effect Level.
LPAH - Low molecular weight PAH.
MATC - Maximum Allowable Toxicant Concentration.
NC - Not Calculated. Avian TRV not available.
NOAEL - No Observed Adverse Effect Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
TRV - Toxicity Reference Value.

TABLE 10

SUMMARY OF COPCS AND RECEPTORS WITH
SCREENING-LEVEL HQs > 1

ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

	SOIL							
ANALYTE	**COPC**	**FOD**	**Soil Invertebrates**	**Terrestrial Plants**	**Bobwhite Quail**	**American Robin**	Meadow Vole	**Short-tailed Shrew**
INORGANICS								
ALUMINUM	--	37 : 37	[a]	[a]	--	--	--	--
ARSENIC	--	37 : 37	--	--	--	--	--	--
BARIUM	--	37 : 37	--	--	--	--	--	--
BERYLLIUM	--	37 : 37	--	--	--	--	--	--
CADMIUM	--	37 : 37	--	--	--	**HQ > 1**	--	**HQ > 1**
CHROMIUM, TOTAL	--	47 : 48	--	--	--	**HQ > 1**	--	--
COBALT	X	37 : 37	--	**HQ > 1**	--	--	--	--
COPPER	--	37 : 37	--	--	--	--	--	--
IRON	--	37 : 37	[a]	[a]	--	--	--	--
LEAD	--	37 : 37	--	--	--	**HQ > 1**	--	--
MANGANESE	X	37 : 37	**HQ > 1**	**HQ > 1**	--	--	--	--
MERCURY	--	29 : 37	--	--	--	**HQ > 1**	--	--
NICKEL	--	36 : 37	--	--	--	--	--	--
SELENIUM	X	25 : 37	**HQ > 1**	**HQ > 1**	--	**HQ > 1**	--	**HQ > 1**
SILVER	--	37 : 37	--	--	--	--	--	--
THALLIUM	--	37 : 37	--	--	--	--	--	--
VANADIUM	X	37 : 37	**HQ > 1**	**HQ > 1**	--	--	--	--
ZINC	--	37 : 37	--	--	--	**HQ > 1**	--	**HQ > 1**
POLYCHLORINATED BIPHENYLS (PCBs)								
TOTAL AROCLORS	X	103 : 107	**HQ > 1**	**HQ > 1**	--	**HQ > 1**	**HQ > 1**	**HQ > 1**
PESTICIDES								
4,4-DDD	--	1 : 30	--	--	--	--	--	--
4,4-DDE	--	0 : 30	--	--	--	--	--	--
4,4-DDT	--	10 : 30	--	--	--	**HQ > 1**	--	--
DDT, TOTAL	--	0 : 12	--	--	--	--	--	--
DIELDRIN	X	11 : 30	**HQ > 1**	--	--	**HQ > 1**	--	**HQ > 1**
ENDOSULFAN I	X	2 : 30	**HQ > 1**	**HQ > 1**	--	--	--	--
ENDOSULFAN II	X	2 : 30	**HQ > 1**	**HQ > 1**	--	--	--	--
ENDOSULFAN SULFATE	X	7 : 30	**HQ > 1**	**HQ > 1**	--	--	--	--
ENDRIN	X	5 : 30	**HQ > 1**	**HQ > 1**	--	**HQ > 1**	--	--
ENDRIN ALDEHYDE	X	1 : 30	--	**HQ > 1**	--	**HQ > 1**	--	--
ENDRIN KETONE	X	25 : 30	**HQ > 1**	**HQ > 1**	--	**HQ > 1**	--	**HQ > 1**
HEPTACHLOR EPOXIDE	X	3 : 30	**HQ > 1**	--	--	--	--	--
METHOXYCHLOR	X	6 : 30	**HQ > 1**	No SEV	--	--	--	--

TABLE 10

SUMMARY OF COPCS AND RECEPTORS WITH
SCREENING-LEVEL HQs > 1

ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

	SOIL							
ANALYTE	**COPC**	**FOD**	**Soil Invertebrates**	**Terrestrial Plants**	**Bobwhite Quail**	**American Robin**	Meadow Vole	**Short-tailed Shrew**
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)								
1,1-BIPHENYL	X	9 : 41	**HQ > 1**	--	--	--	--	--
1,4-DIOXANE	--	0 : 37	--	--	--	--	--	--
2,4-DINITROTOLUENE	--	0 : 41	--	--	--	--	--	--
BENZO[A]ANTHRACENE	--	0 : 4	--	--	--	--	--	--
BENZO[A]PYRENE	--	0 : 4	--	--	--	--	--	--
BENZO[K]FLUORANTHENE	--	0 : 4	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	X	3 : 41	**HQ > 1**	No SEV	--	--	--	--
CARBAZOLE	X	1 : 41	**HQ > 1**	No SEV	--	--	--	--
DIBENZOFURAN	X	1 : 41	**HQ > 1**	--	--	--	--	--
INDENO[1,2,3-CD]PYRENE	--	0 : 4	--	--	--	--	--	--
NAPHTHALENE	--	0 : 4	--	--	--	--	--	--
HPAH, TOTAL	X	26 : 37	**HQ > 1**	No SEV	--	**HQ > 1**	--	**HQ > 1**
LPAH, TOTAL	--	9 : 37	--	--	--	**HQ > 1**	--	--
PHENANTHRENE	--	0 : 4	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (VOCs)								
1,1,1-TRICHLOROETHANE	--	1 : 42	--	--	--	--	--	--
ACETONE	X	25 : 41	**HQ > 1**	No SEV	--	--	--	--
CARBON DISULFIDE	X	2 : 4	**HQ > 1**	No SEV	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	2 : 42	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	X	1 : 5	No SEV	No SEV	--	--	--	--
METHYL ACETATE	X	1 : 4	No SEV	No SEV	--	--	--	--
METHYL CYCLOHEXANE	X	0 : 41	--	--	--	--	--	--
TOLUENE	--	4 : 41	--	--	--	--	--	--

Notes:
Analyte listed if it was retained as a COPC in at least one medium.
EN - Essential Nutrient
No SEV - No screening ecological value (SEV) identified for the receptor and COPC.
X - COPC in the specified medium.
-- - not detected and/or not retained as a COPC.
+ - not evaluated in this medium.
COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
HPAH - High Molecular Weight.
LPAH - Low Molecular Weight.
HQ - Hazard Quotient.
[a] Selected SEV is based on the pH of soil. COPC not retained.
Average of soil pH measurements is 6.0 SU. See Attachment A and Table 1.

TABLE 10

SUMMARY OF COPCS AND RECEPTORS WITH
SCREENING-LEVEL HQs > 1

ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

	SURFACE WATER						SEDIMENT				
	Dissolved			Total							
ANALYTE	COPC	FOD	Aquatic Community	COPC	FOD	Aquatic Community	COPC	FOD	Benthic Invertebrates	Marsh Wren	Raccoon
INORGANICS											
ALUMINUM	--	11 : 14	--	X	11 : 14	**HQ > 1**	--	16 : 16	--	--	--
ARSENIC	--	9 : 14	--	--	9 : 14	--	X	16 : 16	**HQ > 1**	--	--
BARIUM	X	13 : 14	**HQ > 1**	X	14 : 14	**HQ > 1**	X	16 : 16	**HQ > 1**	--	--
BERYLLIUM	--	0 : 14	--	--	1 : 14	--	X	16 : 16	No SEV	--	--
CADMIUM	--	1 : 14	--	X	6 : 14	**HQ > 1**	--	16 : 16	--	--	--
CHROMIUM, TOTAL	--	0 : 14	--	--	0 : 14	--	--	17 : 17	--	--	--
COBALT	--	14 : 14	--	--	14 : 14	--	--	16 : 16	--	--	--
COPPER	--	11 : 14	--	--	12 : 14	--	X	16 : 16	**HQ > 1**	**HQ > 1**	--
IRON	X	13 : 14	**HQ > 1**	X	14 : 14	**HQ > 1**	X	16 : 16	**HQ > 1**	--	--
LEAD	--	1 : 14	--	--	8 : 14	--	--	16 : 16	--	--	--
MANGANESE	X	14 : 14	**HQ > 1**	X	14 : 14	**HQ > 1**	X	16 : 16	**HQ > 1**	--	--
MERCURY	--	5 : 14	--	--	0 : 14	--	X	16 : 16	**HQ > 1**	**HQ > 1**	--
NICKEL	--	12 : 14	--	--	12 : 14	--	X	16 : 16	**HQ > 1**	--	--
SELENIUM	--	7 : 14	--	--	5 : 14	--	X	8 : 16	**HQ > 1**	**HQ > 1**	**HQ > 1**
SILVER	--	0 : 14	--	X	3 : 14	No SEV	X	14 : 16	**HQ > 1**	--	--
THALLIUM	--	0 : 14	--	--	1 : 14	--	X	15 : 16	No SEV	--	--
VANADIUM	--	0 : 14	--	--	0 : 14	--	--	16 : 16	--	--	--
ZINC	--	7 : 14	--	--	9 : 14	--	X	16 : 16	**HQ > 1**	--	--
POLYCHLORINATED BIPHENYLS (PCBs)											
TOTAL AROCLORS	+	+	+	X	1 : 6	**HQ > 1**	X	15 : 16	**HQ > 1**	--	--
PESTICIDES											
4,4-DDD	+	+	+	+	+	+	X	6 : 16	**HQ > 1**	--	--
4,4-DDE	+	+	+	+	+	+	X	7 : 16	**HQ > 1**	--	--
4,4-DDT	+	+	+	+	+	+	X	7 : 16	**HQ > 1**	--	--
DDT, TOTAL	+	+	+	+	+	+	X	4 : 8	**HQ > 1**	+	+
DIELDRIN	+	+	+	+	+	+	X	2 : 16	**HQ > 1**	--	--
ENDOSULFAN I	+	+	+	+	+	+	--	1 : 16	--	--	--
ENDOSULFAN II	+	+	+	+	+	+	--	1 : 16	--	--	--
ENDOSULFAN SULFATE	+	+	+	+	+	+	X	2 : 16	**HQ > 1**	--	--
ENDRIN	+	+	+	+	+	+	--	0 : 16	--	--	--
ENDRIN ALDEHYDE	+	+	+	+	+	+	X	1 : 16	**HQ > 1**	--	--
ENDRIN KETONE	+	+	+	+	+	+	X	10 : 16	**HQ > 1**	--	--
HEPTACHLOR EPOXIDE	+	+	+	+	+	+	--	0 : 16	--	--	--
METHOXYCHLOR	+	+	+	+	+	+	--	0 : 16	--	--	--

TABLE 10

SUMMARY OF COPCS AND RECEPTORS WITH
SCREENING-LEVEL HQs > 1

ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

	SURFACE WATER						SEDIMENT				
	Dissolved			Total							
ANALYTE	COPC	FOD	Aquatic Community	COPC	FOD	Aquatic Community	COPC	FOD	Benthic Invertebrates	Marsh Wren	Raccoon
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)											
1,1-BIPHENYL	+	+	+	--	1 : 14	--	--	2 : 16	--	--	--
1,4-DIOXANE	+	+	+	--	0 : 14	--	--	1 : 16	No SEV	--	--
2,4-DINITROTOLUENE	+	+	+	--	0 : 14	--	X	3 : 16	**HQ > 1**	--	--
BENZO[A]ANTHRACENE	+	+	+	X	1 : 14	**HQ > 1**	X	14 : 16	**HQ > 1**	--	--
BENZO[A]PYRENE	+	+	+	X	1 : 14	**HQ > 1**	X	15 : 16	**HQ > 1**	--	--
BENZO[K]FLUORANTHENE	+	+	+	X	1 : 14	**HQ > 1**	X	7 : 16	**HQ > 1**	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	+	+	+	--	0 : 14	--	X	5 : 16	**HQ > 1**	--	--
CARBAZOLE	+	+	+	X	0 : 14	--	X	1 : 16	No SEV	--	--
DIBENZOFURAN	+	+	+	--	1 : 14	--	X	1 : 16	**HQ > 1**	--	--
INDENO[1,2,3-CD]PYRENE	+	+	+	X	4 : 14	**HQ > 1**	X	13 : 16	**HQ > 1**	--	--
NAPHTHALENE	+	+	+	--	1 : 14	--	X	7 : 16	**HQ > 1**	--	--
HPAH, TOTAL	+	+	+	X	4 : 14	--	+	15 : 16	+	+	+
LPAH, TOTAL	+	+	+	X	1 : 14	--	+	14 : 16	+	+	+
PHENANTHRENE	+	+	+	--	1 : 14	--	X	10 : 16	**HQ > 1**	--	--
VOLATILE ORGANIC COMPOUNDS (VOCs)											
1,1,1-TRICHLOROETHANE	+	+	+	--	0 : 14	--	X	0 : 16	--	--	--
ACETONE	+	+	+	--	6 : 14	--	X	14 : 16	**HQ > 1**	--	--
CARBON DISULFIDE	+	+	+	+	+	+	+	+	+	+	+
CIS-1,2-DICHLOROETHENE	+	+	+	--	0 : 14	--	X	1 : 16	No SEV	--	--
DICHLORODIFLUOROMETHANE	+	+	+	+	+	+	+	+	+	+	+
METHYL ACETATE	+	+	+	+	+	+	+	+	+	--	--
METHYL CYCLOHEXANE	+	+	+	X	0 : 14	--	X	1 : 16	No SEV	--	--
TOLUENE	+	+	+	X	5 : 14	**HQ > 1**	X	14 : 16	**HQ > 1**	--	--

Notes:
Analyte listed if it was retained as a COPC in at least one medium.
EN - Essential Nutrient
No SEV - No screening ecological value (SEV) identified for the receptor and COPC.
X - COPC in the specified medium.
-- - not detected and/or not retained as a COPC.
+ - not evaluated in this medium.
COPC - Chemical of Potential Concern.
FOD - Frequency of Detection.
HPAH - High Molecular Weight.
LPAH - Low Molecular Weight.
HQ - Hazard Quotient.
[a] Selected SEV is based on the pH of soil. COPC not retained.
Average of soil pH measurements is 6.0 SU. See Attachment A and Table 1.

TABLE 11
REFINED RISK ESTIMATES FOR PLANTS AND SOIL INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC		FOD	Refined Maximum Soil EPC	Average Soil EPC	Soil Invertebrates			
					Soil Invertebrate SEV [a]	SEV Source	Maximum HQ	Average HQ
INORGANICS								
COBALT		37 : 37	13.2	11.2	50.0	CCME (residential/parkland)	0.26	0.22
MANGANESE		37 : 37	1821	824	450	Eco-SSL (inverts)	**4.0**	**1.8**
SELENIUM	[c]	25 : 37	1.2	0.46	4.1	Eco-SSL (inverts)	0.30	0.11
VANADIUM	[c]	37 : 37	35.3	33.5	42	TV	0.84	0.80
POLYCHLORINATED BIPHENYLS (PCBs)								
TOTAL AROCLORS		103 : 107	68.9	17.8	33.0	CCME (commercial)	**2.1**	0.54
PESTICIDES								
DIELDRIN		11 : 30	0.105	0.026	0.10	USEPA R4 (inverts)	**1.1**	0.26
ENDOSULFAN I		2 : 30	0.00044	0.00035	0.000010	TV	**44**	**35**
ENDOSULFAN II		2 : 30	0.020	0.013	0.000010	TV	**2000**	**1300**
ENDOSULFAN SULFATE		7 : 30	0.054	0.0145	0.000010	TV	**5440**	**1450**
ENDRIN		5 : 30	0.13	0.034	0.025	USEPA R4 (inverts)	**5.2**	**1.4**
ENDRIN ALDEHYDE	[b]	1 : 30	0.017	0.017	0.025	USEPA R4 (inverts)	0.68	0.68
ENDRIN KETONE		25 : 30	1.03	0.28	0.025	USEPA R4 (inverts)	**41.3**	**11.1**
HEPTACHLOR EPOXIDE		3 : 30	0.087	0.032	0.0040	USEPA R4 (inverts)	**21.8**	**8.0**
METHOXYCHLOR		6 : 30	0.20	0.088	0.0025	USEPA R4 (inverts)	**78.0**	**35.3**
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)								
1,1-BIPHENYL		9 : 41	0.0998	0.0216	0.03	USEPA R4 (inverts)	**3.3**	0.72
BIS(2-ETHYLHEXYL)PHTHALATE		3 : 41	0.61	0.33	0.23	USEPA R4 (inverts)	**2.7**	**1.4**
CARBAZOLE	[b]	1 : 41	0.76	0.76	0.16	USEPA R4 (inverts)	**4.8**	**4.8**
DIBENZOFURAN	[b]	1 : 41	0.62	0.62	0.16	USEPA R4 (inverts)	**3.9**	**3.9**
HPAH, TOTAL		26 : 37	11.4	1.7	18.0	Eco-SSL (inverts)	0.63	0.095
VOLATILE ORGANIC COMPOUNDS (VOCs)								
ACETONE		25 : 41	0.43	0.17	0.040	USEPA R4 (inverts)	**10.8**	**4.3**
CARBON DISULFIDE		2 : 4	0.038	0.023	0.0050	USEPA R4 (inverts)	**7.6**	**4.6**
DICHLORODIFLUOROMETHANE		1 : 5	0.0010	0.0010	NA		No SEV	No SEV
METHYL ACETATE		1 : 4	0.037	0.037	NA		No SEV	No SEV

Notes:
All results reported in milligrams per kilogram (mg/kg).

CCME - Canadian Council of Ministers of the Environment (2002; 2015). Values for environmental health selected.
COPC - Chemical of Potential Concern.
Eco-SSL - Ecological Soil Screening Level. Derived by USEPA according to USEPA guidance (2005a).
EPC - Exposure Point Concentration (see Attachment I for details).
FOD - Frequency of Detection.
HPAH - High molecular weight PAH.
HQ - Hazard Quotient (EPC/SEV).
NA - Not available/applicable.
ORNL - Oak Ridge National Laboratory (Efroymson, et al., 1997a and b).
PAH - Polycyclic Aromatic Hydrocarbon.
SEV - Screening Ecotoxicity Value.
TV - Target Value (Dutch standards presented in Buchman, 2008).
USEPA - United States Environmental Protection Agency.
USEPA R4 - USEPA Region 4 recommended ecological screening values for soil (USEPA, 2001).

[a] SEVs for terrestrial plants and soil invertebrates presented in Attachment D.

[b] Eliminated as a COPC due to low FOD (< 5% detected with at least 20 samples).

[c] COPC is consistent with background conditions based on statistical and/or graphical displays (see Appendix C of the RI).

TABLE 11
REFINED RISK ESTIMATES FOR PLANTS AND SOIL INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC		FOD	Refined Maximum Soil EPC	Average Soil EPC	Terrestrial Plants			
					Plant SEV [a]	SEV Source	Maximum HQ	Average HQ
INORGANICS								
COBALT		37 : 37	13.2	11.2	13	Eco-SSL (plants)	1.0	0.86
MANGANESE		37 : 37	1821	824	220	Eco-SSL (plants)	**8.3**	**3.7**
SELENIUM	[c]	25 : 37	1.2	0.46	0.52	Eco-SSL (plants)	**2.4**	0.88
VANADIUM	[c]	37 : 37	35.3	33.5	2	ORNL (plants)	**18**	**17**
POLYCHLORINATED BIPHENYLS (PCBs)								
TOTAL AROCLORS		103 : 107	68.9	17.8	40	ORNL (plants)	**1.7**	0.45
PESTICIDES								
DIELDRIN		11 : 30	0.105	0.026	10	USEPA R4 (plants)	0.0105	0.0026
ENDOSULFAN I		2 : 30	0.00044	0.00035	0.000010	TV	**44**	**35**
ENDOSULFAN II		2 : 30	0.020	0.013	0.000010	TV	**2000**	**1300**
ENDOSULFAN SULFATE		7 : 30	0.054	0.0145	0.000010	TV	**5440**	**1450**
ENDRIN		5 : 30	0.13	0.034	0.0034	USEPA R4 (plants)	**38**	**10**
ENDRIN ALDEHYDE	[b]	1 : 30	0.017	0.017	0.0034	USEPA R4 (plants)	**5.0**	**5.0**
ENDRIN KETONE		25 : 30	1.03	0.28	0.0034	USEPA R4 (plants)	**304**	**82**
HEPTACHLOR EPOXIDE		3 : 30	0.087	0.032	0.40	USEPA R4 (plants)	0.22	0.080
METHOXYCHLOR		6 : 30	0.20	0.088	NA		No SEV	No SEV
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)								
1,1-BIPHENYL		9 : 41	0.0998	0.0216	60	ORNL (plants)	0.0017	0.00036
BIS(2-ETHYLHEXYL)PHTHALATE		3 : 41	0.61	0.33	NA		No SEV	No SEV
CARBAZOLE	[b]	1 : 41	0.76	0.76	NA		No SEV	No SEV
DIBENZOFURAN	[b]	1 : 41	0.62	0.62	6.1	USEPA R4 (plants)	0.10	0.10
HPAH, TOTAL		26 : 37	11.4	1.7	NA		No SEV	No SEV
VOLATILE ORGANIC COMPOUNDS (VOCs)								
ACETONE		25 : 41	0.43	0.17	NA		No SEV	No SEV
CARBON DISULFIDE		2 : 4	0.038	0.023	NA		No SEV	No SEV
DICHLORODIFLUOROMETHANE		1 : 5	0.0010	0.0010	NA		No SEV	No SEV
METHYL ACETATE		1 : 4	0.037	0.037	NA		No SEV	No SEV

Notes:
All results reported in milligrams per kilogram (mg/kg).

CCME - Canadian Council of Ministers of the Environment (2002; 2015). Values for environmental health selected.
COPC - Chemical of Potential Concern.
Eco-SSL - Ecological Soil Screening Level. Derived by USEPA according to USEPA guidance (2005a).
EPC - Exposure Point Concentration (see Attachment I for details).
FOD - Frequency of Detection.
HPAH - High molecular weight PAH.
HQ - Hazard Quotient (EPC/SEV).
NA - Not available/applicable.
ORNL - Oak Ridge National Laboratory (Efroymson, et al., 1997a and b).
PAH - Polycyclic Aromatic Hydrocarbon.
SEV - Screening Ecotoxicity Value.
TV - Target Value (Dutch standards presented in Buchman, 2008).
USEPA - United States Environmental Protection Agency.
USEPA R4 - USEPA Region 4 recommended ecological screening values for soil (USEPA, 2001).

[a] SEVs for terrestrial plants and soil invertebrates presented in Attachment D.

[b] Eliminated as a COPC due to low FOD (< 5% detected with at least 20 samples).

[c] COPC is consistent with background conditions based on statistical and/or graphical displays (see Appendix C of the RI).

TABLE 12
REFINED RISK ESTIMATES FOR FRESHWATER AQUATIC COMMUNITY
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD	Refined Maximum Surface Water EPC	Average Surface Water EPC	Selected Acute Surface Water SEV [a]	SEV Source	Maximum HQ	Average HQ
INORGANICS - DISSOLVED							
BARIUM [d]	13 : 14	8.5	4.0	110	ORNL SAV	0.077	0.036
IRON [d]	13 : 14	1593	673	NA		No SEV	No SEV
MANGANESE [d]	14 : 14	786	363	2300	ORNL SAV	0.34	0.16
INORGANICS - TOTAL RECOVERABLE							
ALUMINUM [c]	11 : 14	1007	255	750	USEPA AWQC	**1.3**	0.34
BARIUM [c]	14 : 14	14	8.1	110	ORNL SAV	0.13	0.074
CADMIUM [c]	6 : 14	1.8	0.24	2.4	USEPA AWQC [b]	0.76	0.102
IRON [c]	14 : 14	3151	1750	NA		No SEV	No SEV
MANGANESE [c]	14 : 14	848	407	2300	USEPA R3	0.37	0.18
SILVER [c]	3 : 14	0.11	0.093	3.8	USEPA AWQC	0.029	0.024
POLYCHLORINATED BIPHENYLS (PCBS)							
TOTAL AROCLORS	1 : 6	0.38	0.38	NA		No SEV	No SEV
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)							
BENZO[A]ANTHRACENE	1 : 14	0.065	0.065	0.49	ORNL SAV	0.13	0.13
BENZO[A]PYRENE	1 : 14	0.076	0.076	0.24	ORNL SAV	0.32	0.32
BENZO[K]FLUORANTHENE	1 : 14	0.052	0.052	0.24	ORNL SAV	0.22	0.22
INDENO[1,2,3-CD]PYRENE	4 : 14	0.16	0.14	0.24	ORNL SAV	0.67	0.58
VOLATILE ORGANIC COMPOUNDS (VOCs)							
TOLUENE	5 : 14	5.1	1.7	120	ORNL SAV	0.043	0.014

Notes:
All screening values reported in micrograms per liter (ug/L).
AWQC - Ambient Water Quality Criteria (USEPA, 2014).
COPC - Chemical of Potential Concern.
NA - Not available/applicable.
ORNL SAV - Oak Ridge National Laboratory Secondary Acute Value (Suter and Tsao, 1996).
SEV - Screening Ecotoxicity Value.
USEPA - United States Environmental Protection Agency.
USEPA R3 - USEPA Region 3 freshwater screening values (USEPA, 2006b).

[a] See Attachment D for SEVs.
[b] Value is hardness dependent. The site specific average hardness value of 111 mg/L CaCO3 was used in the calculation.
[c] Refined maximum and average EPC are within range of background surface water concentrations.
[d] Average EPC is within range of background surface water concentrations.

TABLE 13
REFINED RISK ESTIMATES FOR FRESHWATER BENTHIC INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD	Refined Maximum Surface Sediment EPC	Average Surface Sediment EPC	Selected Sediment SEV [a]	SEV Source	Maximum HQ	Average HQ
INORGANICS							
ARSENIC [c]	16 : 16	8.3	6.6	33	MacDonald (PEC)	0.25	0.20
BARIUM [b]	16 : 16	54	43	NA		No SEV	No SEV
BERYLLIUM [b]	16 : 16	0.54	0.43	NA		No SEV	No SEV
COPPER	16 : 16	57	43	149	MacDonald (PEC)	0.38	0.29
IRON [c]	16 : 16	17382	15300	40000	NOAA SQuiRT (SEL)	0.43	0.38
MANGANESE [d]	16 : 16	459	393	1100	NOAA SQuiRT (SEL)	0.42	0.36
MERCURY [d]	16 : 16	0.14	0.088	1.1	MacDonald (PEC)	0.13	0.083
NICKEL [c]	16 : 16	21	17	49	MacDonald (PEC)	0.43	0.36
SELENIUM [c]	8 : 16	2.2	0.95	NA		No SEV	No SEV
SILVER	14 : 16	1.2	0.51	72.0	NOAA SQuiRT (UET)	0.017	0.0071
THALLIUM	15 : 16	0.18	0.10	NA		No SEV	No SEV
ZINC	16 : 16	111	80	459	MacDonald (PEC)	0.24	0.17
POLYCHLORINATED BIPHENYLS (PCBs)							
TOTAL AROCLORS	15 : 16	0.88	0.61	0.68	MacDonald (PEC)	**1.3**	0.90
PESTICIDES							
4,4-DDD	6 : 16	0.012	0.0065	0.028	MacDonald (PEC)	0.43	0.23
4,4-DDE	7 : 16	0.0023	0.0015	0.031	MacDonald (PEC)	0.072	0.049
4,4-DDT	7 : 16	0.019	0.0071	0.063	MacDonald (PEC)	0.31	0.11
DIELDRIN	2 : 16	0.0078	0.0075	0.062	MacDonald (PEC)	0.13	0.12
ENDOSULFAN SULFATE	2 : 16	0.035	0.021	NA		No SEV	No SEV
ENDRIN ALDEHYDE	1 : 16	0.0072	0.0072	0.21	MacDonald (PEC)	0.035	0.035
ENDRIN KETONE	10 : 16	0.11	0.068	0.21	MacDonald (PEC)	0.52	0.33
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)							
1,4-DIOXANE	1 : 16	0.013	0.013	NA		No SEV	No SEV
2,4-DINITROTOLUENE	3 : 16	0.15	0.065	NA		No SEV	No SEV
BIS(2-ETHYLHEXYL)PHTHALATE	5 : 16	2.9	1.3	12.0	NOAA SQuiRT (UET)	0.24	0.11
CARBAZOLE	1 : 16	1.2	1.2	NA		No SEV	No SEV
DIBENZOFURAN	1 : 16	0.79	0.79	81.6	NOAA SQuiRT (UET)	0.010	0.010
PAH, TOTAL	16 : 16	10	3.8	23	MacDonald (PEC)	0.45	0.17

TABLE 13
REFINED RISK ESTIMATES FOR FRESHWATER BENTHIC INVERTEBRATES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD	Refined Maximum Surface Sediment EPC	Average Surface Sediment EPC	Selected Sediment SEV [a]	SEV Source	Maximum HQ	Average HQ
VOLATILE ORGANIC COMPOUNDS (VOCs)							
ACETONE	14 : 16	1.6	0.80	NA		No SEV	No SEV
CIS-1,2-DICHLOROETHENE	1 : 16	0.0060	0.0060	NA		No SEV	No SEV
METHYL CYCLOHEXANE	1 : 16	0.0028	0.0028	NA		No SEV	No SEV
TOLUENE	14 : 16	0.14	0.046	NA		No SEV	No SEV

Notes:
All results reported in milligrams per kilogram (mg/kg).
COPC - Chemical of Potential Concern.
EPC - Exposure Point Concentration.
FOD - Frequency of Detection.
HQ - Hazard Quotient (EPC/SEV)
NA - Not available/applicable.
NOAA SQuiRT - National Oceanic and Atmospheric Administration Screening Quick Reference Tables (Buchman, 2008).
PCB - Polychlorinated Biphenyl.
PEC - Probable Effect Concentration (MacDonald, et al., 2000).
SEL - Severe Effect Level.
SEV - Screening Ecotoxicity Value.
UET - Upper Effect Threshold (value adjusted to reflect average wetland TOC of 16%).

[a] See Attachment D for SEVs.
[b] Refined maximum and average EPC are within range of background sediment concentrations.
[c] Average EPC is within range of background sediment concentrations.

TABLE 14
SUMMARY OF REFINED FOOD WEB RISK ESTIMATES - TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	NOAEL-based HQs - Refined Maximum EPCs			LOAEL-based HQs - Refined Maximum EPCs		
COPC	**American Robin**	**Meadow Vole**	**Short-tailed Shrew**	**American Robin**	**Meadow Vole**	**Short-tailed Shrew**
Inorganics						
CADMIUM [a]	**1.5**	nCOPC	**1.7**	0.34	nCOPC	0.19
CHROMIUM, TOTAL	**1.2**	nCOPC	nCOPC	0.20	nCOPC	nCOPC
LEAD [a]	0.042	nCOPC	nCOPC	0.0015	nCOPC	nCOPC
MERCURY [a]	1.0	nCOPC	nCOPC	0.10	nCOPC	nCOPC
SELENIUM [a]	**18.7**	nCOPC	**22.8**	**6.6**	nCOPC	**4.9**
ZINC	**2.0**	nCOPC	**1.1**	0.77	nCOPC	0.27
Organics						
LPAH, TOTAL	0.31	nCOPC	nCOPC	0.031	nCOPC	nCOPC
HPAH, TOTAL	**1.1**	nCOPC	**2.1**	0.11	nCOPC	0.03
TOTAL AROCLORS	**72.0**	1.0	**112.1**	**7.2**	0.102	**11.2**
4,4-DDT	0.60	nCOPC	nCOPC	0.050	nCOPC	nCOPC
DIELDRIN	**1.6**	nCOPC	**4.6**	0.13	nCOPC	0.054
ENDRIN	**18.2**	nCOPC	nCOPC	**1.8**	nCOPC	nCOPC
ENDRIN ALDEHYDE	**2.4**	nCOPC	nCOPC	0.24	nCOPC	nCOPC
ENDRIN KETONE	**144**	nCOPC	**9.7**	**14.4**	nCOPC	0.97

	NOAEL-based HQs - Average EPCs			LOAEL-based HQs - Average EPCs		
Inorganics						
CADMIUM [a]	1.0	nCOPC	**1.1**	0.23	nCOPC	0.13
CHROMIUM, TOTAL	**1.1**	nCOPC	nCOPC	0.18	nCOPC	nCOPC
LEAD [a]	0.037	nCOPC	nCOPC	0.0013	nCOPC	nCOPC
MERCURY [a]	0.46	nCOPC	nCOPC	0.046	nCOPC	nCOPC
SELENIUM [a]	**8.7**	nCOPC	**10.6**	**3.1**	nCOPC	**2.3**
ZINC	**2.0**	nCOPC	1.0	0.76	nCOPC	0.26
Organics						
LPAH, TOTAL	0.071	nCOPC	nCOPC	0.0071	nCOPC	nCOPC
HPAH, TOTAL	0.17	nCOPC	0.32	0.017	nCOPC	0.0051
TOTAL AROCLORS	**18.7**	0.26	**29.2**	**1.9**	0.026	**2.9**
4,4-DDT	0.21	nCOPC	nCOPC	0.018	nCOPC	nCOPC
DIELDRIN	0.40	nCOPC	**1.1**	0.032	nCOPC	0.013
ENDRIN	**4.7**	nCOPC	nCOPC	0.47	nCOPC	nCOPC
ENDRIN ALDEHYDE	**2.4**	nCOPC	nCOPC	0.24	nCOPC	nCOPC
ENDRIN KETONE	**38.8**	nCOPC	**2.6**	**3.9**	nCOPC	0.26

Notes:
[a] COPC is consistent with background conditions based on statistical and/or graphical displays (see Appendix C of the RI).
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).
Potential risk is calculated using the refined maximum and average EPCs and NOAEL- and LOAEL-based TRVs.
HQs above 1 are bolded and highlighted.

COPC - Chemical of Potential Concern.
HPAH - High molecular weight PAH.
HQ - Hazard Quotient.
LOAEL - Lowest Observed Adverse Effect Level.
LPAH - Low molecular weight PAH.
NC - Not Calculated. Avian TRV not available.
nCOPC - Not a COPC for this media/receptor combinaion.
NOAEL - No Observed Adverse Effect Level.
TRV - Toxicity Reference Value.

TABLE 15
SUMMARY OF REFINED FOOD WEB RISK ESTIMATES - WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC		NOAEL-based HQs - Refined Maximum EPCs		LOAEL-based HQs - Refined Maximum EPCs	
		Marsh Wren	Raccoon	Marsh Wren	Raccoon
Inorganics					
COPPER		**3.0**	nCOPC	0.35	nCOPC
MERCURY	[b]	**3.4**	nCOPC	0.34	nCOPC
SELENIUM	[a]	**4.3**	0.071	**1.5**	0.015

COPC		NOAEL-based HQs - Average EPCs		LOAEL-based HQs - AverageEPCs	
		Marsh Wren	Raccoon	Marsh Wren	Raccoon
Inorganics					
COPPER		**2.3**	nCOPC	0.26	nCOPC
MERCURY	[b]	**2.2**	nCOPC	0.22	nCOPC
SELENIUM	[a]	**1.8**	0.030	0.64	0.0066

Notes:
[a] Refined maximum and average EPC are within range of background sediment concentrations.
[b] Average EPC is within range of background sediment concentrations.
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).
Potential risk is calculated using the refined maximum and average EPCs and NOAEL- and LOAEL-based TRVs.
HQs above 1 are bolded and highlighted.

COPC - Chemical of Potential Concern.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
MATC - Maximum Allowable Toxicant Concentration.
nCOPC - Not a COPC for this media/receptor combination.
NOAEL - No Observed Adverse Effect Level.
TRV - Toxicity Reference Value.

TABLE 16
SUMMARY OF COPCS AND RECEPTORS WITH TIER 2, STEP 3a HQs > 1 - TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	SOIL									
			Soil Invertebrates		Terrestrial Plants		American Robin		Short-tailed Shrew	
COPC	COPC	FOD	Refined Maximum EPC	Average EPC	Refined Maximum EPC	Average EPC	Refined Maximum EPC	Average EPC	Refined Maximum EPC	Average EPC
INORGANICS										
MANGANESE	X	37 : 37	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	--	--	--	--
SELENIUM [a]	X	25 : 37	--	--	**HQ > 1**	--	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**
VANADIUM [a]	X	37 : 37	--	--	**HQ > 1**	**HQ > 1**	--	--	--	--
POLYCHLORINATED BIPHENYLS (PCBs)										
TOTAL AROCLORS	X	103 : 107	**HQ > 1**	--	**HQ > 1**	--	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**
PESTICIDES										
DIELDRIN	X	11 : 30	**HQ > 1**	--	--	--	--	--	--	--
ENDOSULFAN I	X	2 : 30	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	--	--	--	--
ENDOSULFAN II	X	2 : 30	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	--	--	--	--
ENDOSULFAN SULFATE	X	7 : 30	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	--	--	--	--
ENDRIN	X	5 : 30	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	--	--	--
ENDRIN ALDEHYDE [b]	X	1 : 30	--	--	**HQ > 1**	**HQ > 1**	--	--	--	--
ENDRIN KETONE	X	25 : 30	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	**HQ > 1**	--	--
HEPTACHLOR EPOXIDE	X	3 : 30	**HQ > 1**	**HQ > 1**	--	--	--	--	--	--
METHOXYCHLOR	X	6 : 30	**HQ > 1**	**HQ > 1**	--	--	--	--	--	--
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)										
1,1-BIPHENYL	X	9 : 41	**HQ > 1**	--	--	--	--	--	--	--
BIS(2-ETHYLHEXYL)PHTHALATE	X	3 : 41	**HQ > 1**	**HQ > 1**	--	--	--	--	--	--
CARBAZOLE [b]	X	1 : 41	**HQ > 1**	**HQ > 1**	--	--	--	--	--	--
DIBENZOFURAN [b]	X	1 : 41	**HQ > 1**	**HQ > 1**	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS (VOCs)										
ACETONE	X	25 : 41	**HQ > 1**	**HQ > 1**	--	--	--	--	--	--
CARBON DISULFIDE	X	2 : 4	**HQ > 1**	**HQ > 1**	--	--	--	--	--	--

Notes:
COPC listed if HQ was above 1 in one of the Step 3a evaluations summarized in Tables 11 and 14.
Findings reflect results of screening with soil SEVs and LOAEL-based TRVs for wildlife.
No LOAEL-based HQs > 1 were calculated for the meadow vole or bobwhite quail so receptors are not listed on this table.

[a] COPC is consistent with background conditions based on statistical and/or graphical displays (see Appendix C of the RI).
[b] - FOD in soil is less than or equal to 5% with at least 20 samples analyzed.

X - COPC in the specified medium.
-- - not detected and/or not retained as a COPC.
COPC - Chemical of Potential Concern.
EPC - Exposure Point Concentration.
FOD - Frequency of Detection.
HQ - Hazard Quotient.
LOAEL - Lowest Observed Adverse Effect Level.
SEV - Screening Ecological Value.
TRV - Toxicity Reference Value.

TABLE 17
SUMMARY OF COPCS AND RECEPTORS WITH TIER 2, STEP 3a HQs > 1 - WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	SURFACE WATER							
	Dissolved				Total			
			Aquatic Community				Aquatic Community	
COPC	COPC	FOD	Refined Maximum EPC	Average EPC	COPC	FOD	Refined Maximum EPC	Average EPC
INORGANICS								
ALUMINUM [a]	--	11 : 14	--	--	X	11 : 14	**HQ > 1**	--
SELENIUM [a]	--	7 : 14	--	--	--	5 : 14	--	--
POLYCHLORINATED BIPHENYLS (PCBs)								
TOTAL AROCLORS	--	--	--	--	X	1 : 6	--	--

Notes:

COPC listed if HQ was above 1 in one of the Step 3a evaluations summarized in Tables 12, 13 and 15. for sediment and water and LOAEL-based TRVs for wildlife.

[a] COPC is consistent with background conditions based on graphical displays (see Appendix C of the RI).

X - COPC in the specified medium.
-- - not detected and/or not retained as a COPC.
COPC - Chemical of Potential Concern.
EPC - Exposure Point Concentration.
FOD - Frequency of Detection.
HQ - Hazard Quotient.
LOAEL - Lowest Observed Adverse Effect Level.
SEV - Screening Ecological Value.
TRV - Toxicity Reference Value.

TABLE 17
SUMMARY OF COPCS AND RECEPTORS WITH TIER 2, STEP 3a HQs > 1 - WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

		SEDIMENT					
				Benthic Invertebrates			
COPC		COPC	FOD	Refined Maximum EPC	Average EPC	Marsh Wren	Raccoon
INORGANICS							
ALUMINUM	[a]	--	16 : 16	--	--	--	--
SELENIUM	[a]	X	8 : 16	--	--	**HQ > 1**	--
POLYCHLORINATED BIPHENYLS (PCBs)							
TOTAL AROCLORS		X	15 : 16	**HQ > 1**	--	--	--

Notes:

COPC listed if HQ was above 1 in one of the Step 3a evaluations summarized in Tables 12, 13 and 15. for sediment and water and LOAEL-based TRVs for wildlife.

[a] COPC is consistent with background conditions based on graphical displays (see Appendix C of the RI).

X - COPC in the specified medium.
-- - not detected and/or not retained as a COPC.
COPC - Chemical of Potential Concern.
EPC - Exposure Point Concentration.
FOD - Frequency of Detection.
HQ - Hazard Quotient.
LOAEL - Lowest Observed Adverse Effect Level.
SEV - Screening Ecological Value.
TRV - Toxicity Reference Value.

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FIGURES

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Fire Training Area

Machias Bay

Little Machias Bay

Legend

Property Boundary

Map Location

N

0 900 1,800

Feet

1 in = 1,800 ft

Drawn:	AC	April 2017
Approved:	CA	April 2017
Project #:	60282029	

FIGURE 1

Fire Training Area (FTA) Location
FTA ERA
NCTAMS LANT DET
Cutler, Maine

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Legend

Sampled Media

- Sediment/Surface Water
- Soil Boring
- Approximate Soil Confirmation Samples (AGVIQ, 2015)
- Restored Wetland Area - Sand Wedge
- Enhanced Wetland Area
- Removal Areas (AGVIQ, 2015)
- Site 1 Boundary

FTA-SB-200
FTA-SED-08
FTA-SW-08
FTA-SB-201
FTA-SB-219
FTA-SB-301
FTA-SED-07
FTA-SW-07
FTA-SW-06
FTA-SB-202
FTA-SB-305
FTA-SB-218
FTA-SED-05
FTA-SW-05
FTA-SB-217
FTA-SB-300
FTA-SB-203
FTA-SED-04
FTA-SW-04
FTA-SED-03
FTA-SW-03
FTA-SB-216
FTA-SED-01
FTA-SW-01
FTA-SW-02
DDA-NE-13I
FTA-SB-204
FTA-AREAA-01
FTA-AREAA-02
FTA-SB-215
DDA-NW-10G
DDA-NW-10Q
DDA-NE-10D
FTA-AREAB-02
FTA-SB-205
DDA-NW-9M
DDA-NW-9B
DDA-NW-8R
FTA-SB-209
FTA-AREAB-01
DDA-NW-6R
DDA-NW-6F
DDA-NE-6D
FTA-AREAC-01
DDA-NE-5E
FTA-SB-214
DDA-NW-4Y
FTA-SB-212
DDA-NW-4R
DDA-NW-3R
FTA-SB-210
DDA-NW-4D
DDA-NE-3E
DDA-NW-2P
FTA-SB-211
DDA-NW-2D
A31-SB03
DDA-E-1E
FTA-AREAF-01
FTA-ANOM4-SO-SURF
FTA-SB-213
DDA-SW-3G
FTA-AREAH-01
FTA-SB-220
FTA-AREAD-02
DDA-SE-5B
FTA-SB-208

See Figure 3.

Map Location

Drawn:	BP April 2017
Approved:	CA April 2017
Project #:	60282029

N

0 25 50

Feet

FIGURE 2

FTA Sample Locations
FTA ERA
NCTAMS LANT DET
Cutler, Maine

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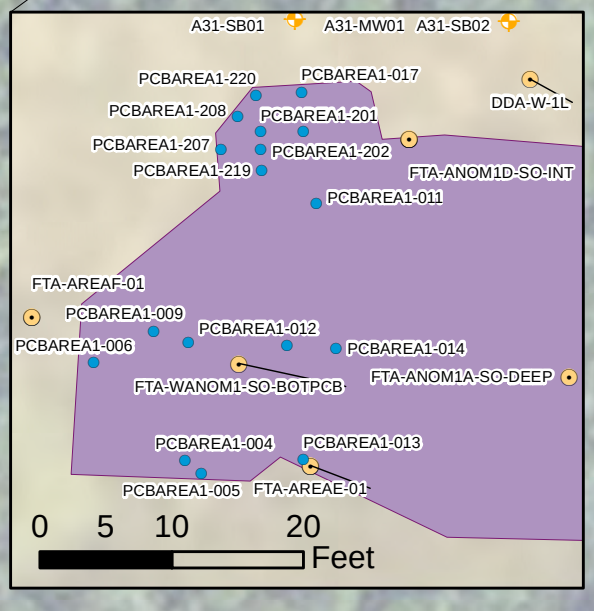
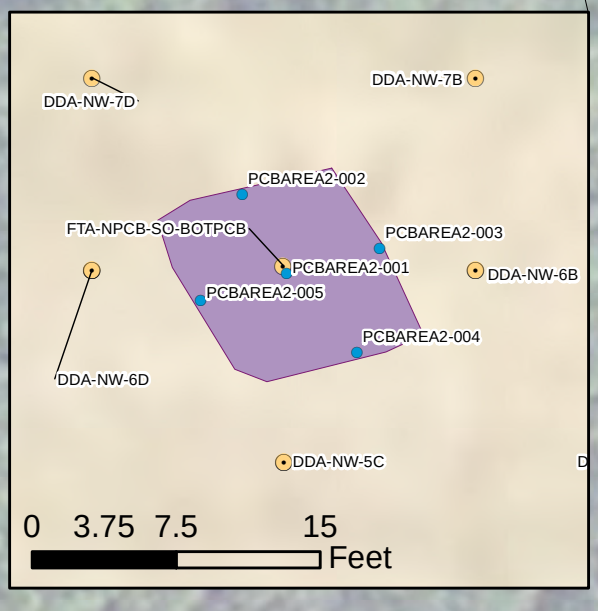
Legend

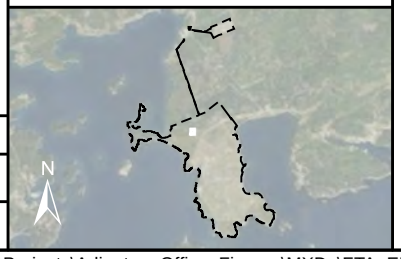
- Soil Boring
- Sediment/Surface Water
- Approximate Soil Confirmation Samples (AGVIQ, 2015)
- Enhanced Wetland Area
- Removal Areas (AGVIQ, 2015)
- Soil Exposure Area 1

FTA-MW-218
FTA-SB-217
FTA-SW-03
FTA-SED-03
FTA-SB-216
FTA-SED-01
FTA-SW-01
DDA-NE-13I
FTA-AREAA-01
FTA-AREAA-02
FTA-SB-215
DDA-NW-10Q
DDA-NW-10G
DDA-NW-10E
DDA-NE-10D
FTA-AREAB-02
DDA-NW-9M
FTA-SB-209
DDA-NW-9B
FTA-SB-206
FTA-SB-206
DDA-NW-7E
DDA-NW-8R
DDA-NE-8B
FTA-AREAB-01
FTA-AREAG-01
FTA-AREAI-01
PCBAREA2-001
DDA-NW-7B
PCBAREA2-002
PCBAREA2-003
DDA-NW-6R
DDA-NW-6F
DDA-NE-6D
FTA-AREAC-01
DDA-NW-5G
DDA-NE-5E
PCBAREA2-005
PCBAREA2-004
DDA-NW-4Y
DDA-NW-4D
FTA-SB-212
DDA-NW-4R
FTA-SB-210
FTA-SB-212
DDA-NW-3R
DDA-NW-3F
DDA-NW-3E
DDA-NE-3E
FTA-AREAG-03
PCBAREA1-010
DDA-NW-2P
DDA-NW-2D
DDA-NE-2I
FTA-SB-211
PCBAREA1-220
A31-SB01
PCBAREA1-017
DDA-W-1G
DDA-W-1F
A31-SB03
DDA-E-1E
PCBAREA1-207
PCBAREA1-219
DDA-SW-2F
PCBAREA1-011
DDA-SW-3G
FTA-ANOM4-SO-SURF
FTA-AREAH-01
FTA-AREAH-01
FTA-SB-220
PCBAREA1-006
FTA-SB-213
FTA-AREAD-02
DDA-SE-5B
PCBAREA1-005
PCBAREA1-013
FTA-ANOM1E-SO-SURF
FTA-AREAD-01
FTA-ANOM1D-SO-SURF
FTA-SB-208
PCBAREA1-014





Map Location



N

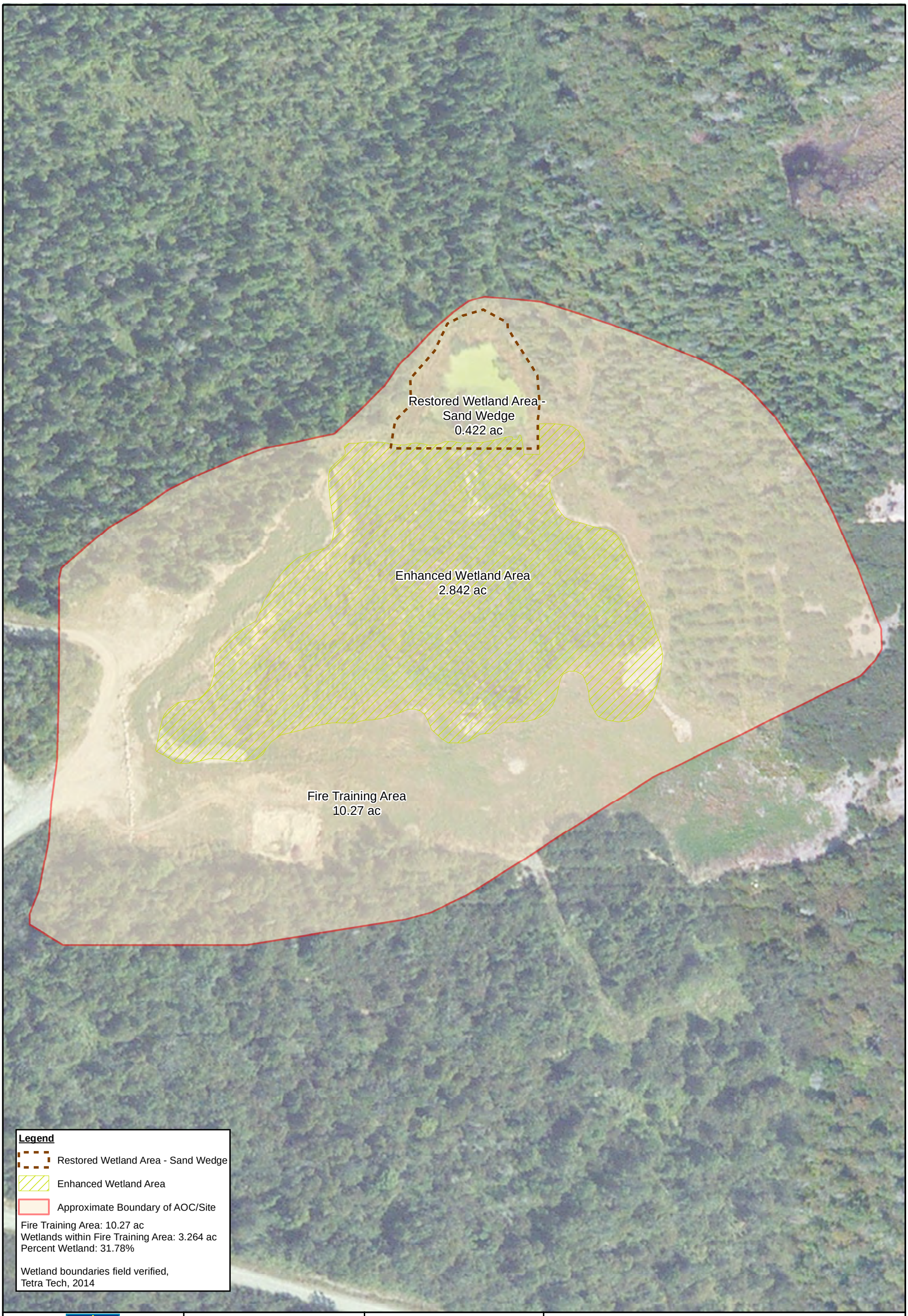
0 15 30
Feet

Drawn: AC April 2017
Approved: TC April 2017
Project #: 60282029

FIGURE 3

FTA Sample Locations
FTA ERA
NCTAMS LANT DET
Cutler, Maine

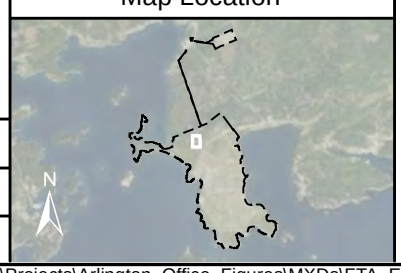
Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\FTA_ERA\Figure_3_FTA_Sample_Locations.mxd



NAVFAC

Drawn:	BP	April 2017
Approved:	MD	April 2017
Project #:	60282029	

Map Location



N

0 50 100

Feet

FIGURE 4

FTA Wetlands
FTA ERA
NCTAMS LANT DET
Cutler, Maine

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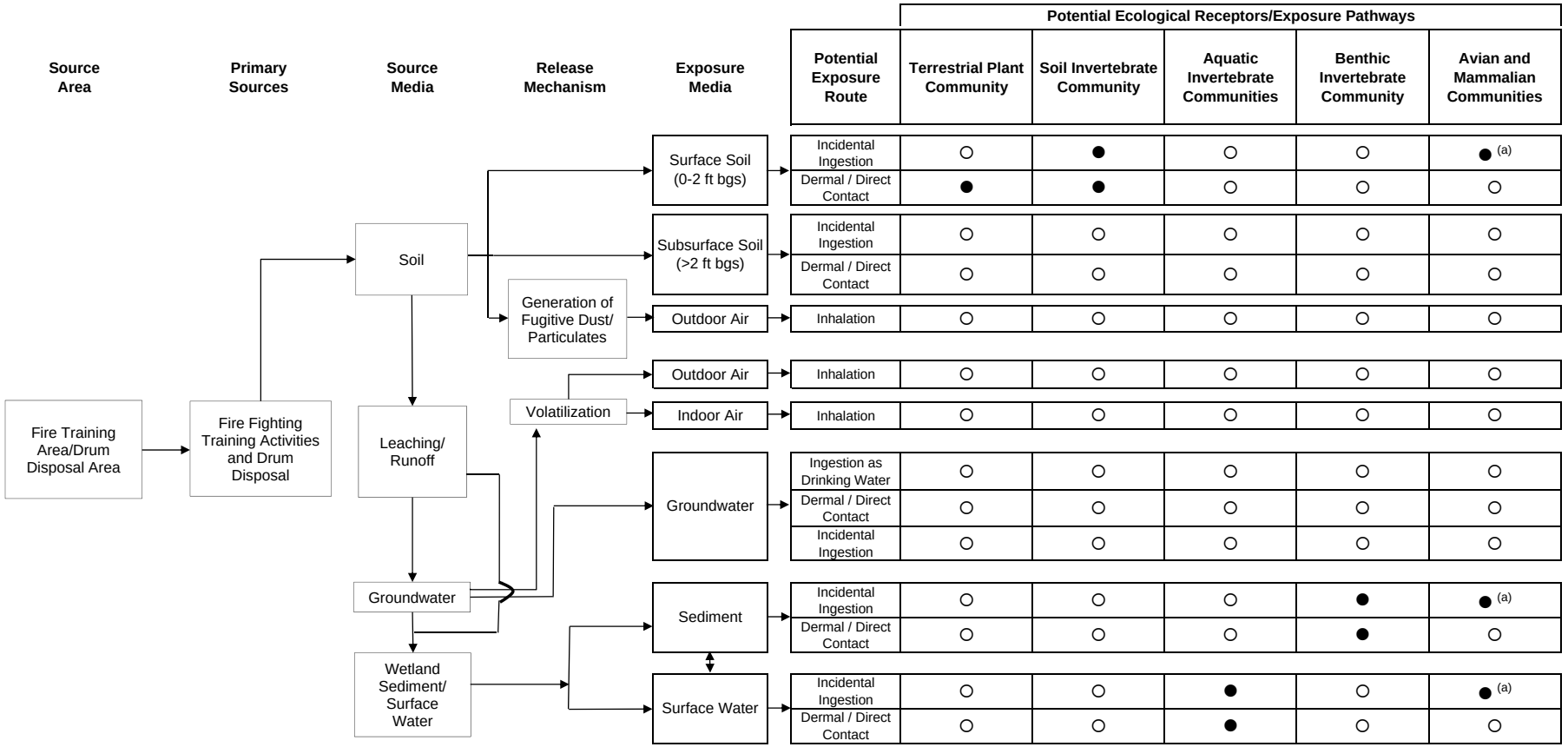
FIGURE 5
Ecological Conceptual Site Model
Fire Training Area
NCTAMS LANT DET
Cutler, Maine



Notes:
● Potentially complete pathway.
○ Pathway considered to be incomplete or insignificant.
ft bgs - feet below ground surface.
(a) Bioaccumulation pathways also assumed to be potentially complete.

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ATTACHMENT A

ANALYTICAL DATA CONSIDERED IN THE ECOLOGICAL RISK ASSESSMENT

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ATTACHMENT A TABLE 1
SAMPLE SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Facility Code	Location Group	Location ID	Sample Date	Sample ID	Sample Type	Depth Interval	Depth Interval Category
SITE 00001	SITE 00001	A31-SB01	10/26/2007	A31-SO-SB01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	A31-SB02	10/26/2007	A31-SO-SB02-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	A31-SB03	10/26/2007	A31-SO-SB03-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	A31-SB04	10/26/2007	A31-SO-SB04-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-ANOM1C-SO-SURF	9/25/2013	FTA-ANOM1C-SO-SURF	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-ANOM1D-SO-SURF	9/25/2013	FTA-ANOM1D-SO-SURF-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-ANOM1D-SO-SURF	9/25/2013	FTA-ANOM1D-SO-SURF	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-ANOM1E-SO-SURF	9/26/2013	FTA-ANOM1E-SO-SURF	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-ANOM4-SO-SURF	9/25/2013	FTA-ANOM4-SO-SURF	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAA-01	6/17/2014	FTA-AREAA-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAA-02	6/17/2014	FTA-AREAA-02-0002-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAA-02	6/17/2014	FTA-AREAA-02-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAA-02	11/2/2016	FTA-AREAA-02-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAB-01	6/17/2014	FTA-AREAB-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAB-02	6/17/2014	FTA-AREAB-02-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAB-02	11/2/2016	FTA-AREAB-02-SS-D-110216	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAB-02	11/2/2016	FTA-AREAB-02-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAC-01	6/17/2014	FTA-AREAC-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAD-01	6/19/2014	FTA-AREAD-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAD-02	6/18/2014	FTA-AREAD-02-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAF-01	6/19/2014	FTA-AREAF-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAG-01	6/18/2014	FTA-AREAG-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAG-02	6/18/2014	FTA-AREAG-02-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAG-03	6/18/2014	FTA-AREAG-03-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAH-01	6/18/2014	FTA-AREAH-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-AREAI-01	6/17/2014	FTA-AREAI-01-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-200	11/8/2012	FTA-SB-200-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-201	11/13/2012	FTA-SB-201-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-201	11/2/2016	FTA-SB-201-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-202	11/7/2012	FTA-SB-202-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-203	11/7/2012	FTA-SB-203-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-203	11/2/2016	FTA-SB-203-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-204	11/8/2012	FTA-SB-204-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-204	11/2/2016	FTA-SB-204-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-205	11/8/2012	FTA-SB-205-0002-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-205	11/8/2012	FTA-SB-205-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-205	11/2/2016	FTA-SB-205-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-206	11/6/2012	FTA-SB-206-0002-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-206	11/6/2012	FTA-SB-206-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-208	11/6/2012	FTA-SB-208-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-208	11/2/2016	FTA-SB-208-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-209	11/6/2012	FTA-SB-209-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-210	11/6/2012	FTA-SB-210-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-211	11/6/2012	FTA-SB-211-0002-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-211	11/6/2012	FTA-SB-211-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-212	11/5/2012	FTA-SB-212-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-212	11/2/2016	FTA-SB-212-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-213	11/5/2012	FTA-SB-213-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-214	11/5/2012	FTA-SB-214-0002-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-214	11/5/2012	FTA-SB-214-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-214	11/1/2016	FTA-SB-214-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-215	11/7/2012	FTA-SB-215-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-215	11/2/2016	FTA-SB-215-SS-D-110216	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-215	11/2/2016	FTA-SB-215-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-216	11/6/2012	FTA-SB-216-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-217	11/7/2012	FTA-SB-217-0002-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-217	11/7/2012	FTA-SB-217-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-218	11/7/2012	FTA-SB-218-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-219	11/8/2012	FTA-SB-219-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-220	11/6/2012	FTA-SB-220-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-220	11/2/2016	FTA-SB-220-SS-N-110216	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-300	11/7/2012	FTA-SB-300-0002-D	FD	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-300	11/7/2012	FTA-SB-300-0002	N	0 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-301	11/8/2012	FTA-SB-301-0102	N	1 - 2 ft	Surface
SITE 00001	SITE 00001	FTA-SB-305	11/7/2012	FTA-SB-305-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-E-1E	7/15/2011	DDA-E-01E-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-N-5A	8/20/2010	DDA-N-5A-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-10D	7/15/2011	DDA-NE-10D-SO-0002-D	FD	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-10D	7/15/2011	DDA-NE-10D-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-13I	7/15/2011	DDA-NE-13I-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-2I	7/14/2011	DDA-NE-02I-SO-0002-D	FD	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-2I	7/14/2011	DDA-NE-02I-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-3E	7/13/2011	DDA-NE-3E-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-5C	8/19/2010	DDA-NE-5C-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-5D	8/20/2010	DDA-NE-5D-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-5E	7/13/2011	DDA-NE-05E-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-6C	8/20/2010	DDA-NE-6C-SO-0002	N	0 - 2 ft	Surface

ATTACHMENT A TABLE 1
SAMPLE SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Facility Code	Location Group	Location ID	Sample Date	Sample ID	Sample Type	Depth Interval	Depth Interval Category
SITE 00005	SITE 00005	DDA-NE-6D	8/20/2010	DDA-NE-6D-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-7D	7/12/2011	DDA-NE-07D-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-7I	7/15/2011	DDA-NE-07I-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NE-8B	7/13/2011	DDA-NE-08B-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-10E	7/14/2011	DDA-NW-10E-SO-0004	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-10G	7/14/2011	DDA-NW-10G-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-10Q	7/14/2011	DDA-NW-10Q-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-2D	8/19/2010	DDA-NW-2D-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-2F	8/18/2010	DDA-NW-2F-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-2G	8/20/2010	DDA-NW-2G-SO-0002-D	FD	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-2G	8/20/2010	DDA-NW-2G-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-2P	7/12/2011	DDA-NW-02P-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-3E	8/20/2010	DDA-NW-3E-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-3F	8/18/2010	DDA-NW-3F-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-3R	7/14/2011	DDA-NW-03R-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-4D	8/19/2010	DDA-NW-4D-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-4F	8/18/2010	DDA-NW-4F-SO-0001	N	0 - 1 ft	Surface
SITE 00005	SITE 00005	DDA-NW-4F	8/18/2010	DDA-NW-4F-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-4R	7/14/2011	DDA-NW-4R-0002-D	FD	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-4R	7/14/2011	DDA-NW-4R-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-4Y	7/15/2011	DDA-NW-04Y-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-5C	8/20/2010	DDA-NW-5C-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-5F	8/17/2010	DDA-NW-5F-SO-0001	N	0 - 1 ft	Surface
SITE 00005	SITE 00005	DDA-NW-5F	8/17/2010	DDA-NW-5F-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-5G	8/20/2010	DDA-NW-5G-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6B	8/17/2010	DDA-NW-6B-SO-0001	N	0 - 1 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6D	8/17/2010	DDA-NW-6D-SO-0001-D	FD	0 - 1 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6D	8/17/2010	DDA-NW-6D-SO-0001	N	0 - 1 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6E	8/17/2010	DDA-NW-6E-SO-0001-D	FD	0 - 1 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6E	8/17/2010	DDA-NW-6E-SO-0001	N	0 - 1 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6F	8/20/2010	DDA-NW-6F-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6R	7/14/2011	DDA-NW-06R-SO-0002-D	FD	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-6R	7/14/2011	DDA-NW-06R-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-7B	8/20/2010	DDA-NW-7B-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-7E	8/20/2010	DDA-NW-7E-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-8R	7/14/2011	DDA-NW-08R-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-9B	7/12/2011	DDA-NW-09B-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-9E	7/12/2011	DDA-NW-9E-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-NW-9M	7/13/2011	DDA-NW-09M-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-SE-5B	7/12/2011	DDA-SE-05B-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-SW-2F	8/20/2010	DDA-SW-2F-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-SW-2I	7/13/2011	DDA-SW-02I-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-SW-3G	7/13/2011	DDA-SW-03G-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-W-1F	8/18/2010	DDA-W-1F-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	DDA-W-1G	8/20/2010	DDA-W-1G-SO-0002	N	0 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-003	9/18/2013	PCBAREA1-003	N	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-003	9/18/2013	PCBAREA1-093	FD	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-004	9/18/2013	PCBAREA1-004	N	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-005	9/18/2013	PCBAREA1-005	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-006	9/18/2013	PCBAREA1-006	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-009	9/18/2013	PCBAREA1-009	N	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-010	9/19/2013	PCBAREA1-010	N	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-011	9/19/2013	PCBAREA1-011	N	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-012	9/19/2013	PCBAREA1-012	N	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-013	9/19/2013	PCBAREA1-013	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-014	9/19/2013	PCBAREA1-014	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-017	9/19/2013	PCBAREA1-017	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-207	9/27/2013	PCBAREA1-207	N	1.5 - 1.5 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-208	9/27/2013	PCBAREA1-208	N	1.5 - 1.5 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-219	9/27/2013	PCBAREA1-219	N	1.5 - 1.5 ft	Surface
SITE 00005	SITE 00005	PCBAREA1-220	9/27/2013	PCBAREA1-220	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA2-001	9/18/2013	PCBAREA2-001	N	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA2-001	9/18/2013	PCBAREA2-091	FD	2 - 2 ft	Surface
SITE 00005	SITE 00005	PCBAREA2-002	9/18/2013	PCBAREA2-002	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA2-003	9/18/2013	PCBAREA2-003	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA2-004	9/18/2013	PCBAREA2-004	N	1 - 1 ft	Surface
SITE 00005	SITE 00005	PCBAREA2-005	9/18/2013	PCBAREA2-005	N	1 - 1 ft	Surface

Notes:
FD - Field duplicate.
ft - feet.
N - Normal sample.

ATTACHMENT A TABLE 2
SAMPLE SUMMARY TABLES - SEDIMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Facility Code	Location Group	Location ID	Sample Date	Sample ID	Sample Type	Depth Interval
SITE 00001	SITE 00001	FTA-SED-01	11/27/2012	FTA-SED-01-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-01	6/19/2014	FTA-SD-01-000.5	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-02	11/27/2012	FTA-SED-02-0005-D	FD	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-02	11/27/2012	FTA-SED-02-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-02	6/19/2014	FTA-SD-02-000.5	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-03	11/27/2012	FTA-SED-03-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-03	6/19/2014	FTA-SD-03-000.5	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-04	11/27/2012	FTA-SED-04-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-04	6/21/2014	FTA-SD-04-000.5	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-05	11/27/2012	FTA-SED-05-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-05	6/20/2014	FTA-SD-05-000.5	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-06	11/27/2012	FTA-SED-06-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-06	6/19/2014	FTA-SD-06-000.5-D	FD	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-06	6/19/2014	FTA-SD-06-000.5	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-07	11/28/2012	FTA-SED-07-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-07	6/19/2014	FTA-SD-07-000.5	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-07	11/2/2016	FTA-SED-07-N-110216	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-08	11/28/2012	FTA-SED-08-0005	N	0 - 0.5 ft
SITE 00001	SITE 00001	FTA-SED-08	6/19/2014	FTA-SD-08-000.5	N	0 - 0.5 ft

Notes:
FD - Field duplicate.
ft - feet.
N - Normal sample.

ATTACHMENT A TABLE 3
SAMPLE SUMMARY TABLES - SURFACE WATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Facility Code	Location Group	Location ID	Sample Date	Sample ID	Sample Type
SITE 00001	SITE 00001	FTA-SW-01	11/27/2012	FTA-SW01-112712	N
SITE 00001	SITE 00001	FTA-SW-01	6/19/2014	FTA-SW-01-061914	N
SITE 00001	SITE 00001	FTA-SW-02	11/27/2012	FTA-SW02-112712-D	FD
SITE 00001	SITE 00001	FTA-SW-02	11/27/2012	FTA-SW02-112712	N
SITE 00001	SITE 00001	FTA-SW-02	6/19/2014	FTA-SW-02-061914	N
SITE 00001	SITE 00001	FTA-SW-03	11/27/2012	FTA-SW03-112712	N
SITE 00001	SITE 00001	FTA-SW-03	6/19/2014	FTA-SW-03-061914	N
SITE 00001	SITE 00001	FTA-SW-04	11/27/2012	FTA-SW04-112712	N
SITE 00001	SITE 00001	FTA-SW-05	11/27/2012	FTA-SW05-112712	N
SITE 00001	SITE 00001	FTA-SW-06	11/27/2012	FTA-SW06-112712	N
SITE 00001	SITE 00001	FTA-SW-06	6/19/2014	FTA-SW-06-061914-D	FD
SITE 00001	SITE 00001	FTA-SW-06	6/19/2014	FTA-SW-06-061914	N
SITE 00001	SITE 00001	FTA-SW-07	11/28/2012	FTA-SW07-112812	N
SITE 00001	SITE 00001	FTA-SW-07	6/19/2014	FTA-SW-07-061914	N
SITE 00001	SITE 00001	FTA-SW-08	11/28/2012	FTA-SW08-112812	N
SITE 00001	SITE 00001	FTA-SW-08	6/19/2014	FTA-SW-08-061914	N

Notes:
FD - Field duplicate.
N - Normal sample.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	A31-SB01	A31-SB02	A31-SB03	A31-SB04	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	FTA-ANOM1E-SO-SURF	FTA-ANOM4-SO-SURF
			Sample Date	10/26/2007	10/26/2007	10/26/2007	10/26/2007	9/25/2013	9/25/2013	9/25/2013	9/26/2013	9/25/2013
			Sample ID	A31-SO-SB01-0002	A31-SO-SB02-0002	A31-SO-SB03-0002	A31-SO-SB04-0002	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-SURF-D	FTA-ANOM1D-SO-SURF	FTA-ANOM1E-SO-SURF	FTA-ANOM4-SO-SURF
			Sample Type Code	N	N	N	N	N	FD	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg					18600	16700	13000	19700	14900
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg					0.17 J	0.08 J	0.08 J	0.16 J	0.09 J
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg					11.3 J	8.3 J	7.1 J	11.3 J	9.8 J
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg					48.3	29.4	18.8	52.7	23.4
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg					0.74 J	0.6	0.49	0.87	0.52
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg					0.09	0.08	0.08	0.1	0.1
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg					2260	3150	2420	2270	2650
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg					28.3 J	21 J	34.4 J	30.1 J	25.5 J
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg									
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg					11.6	11.8	10.6	11.8	11.7
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg					24.2	24.8	23.5	25.2	25.3
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg					26800	24400	23200	28400	24300
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg					12.9 J	18.5 J	10.9 J	13.6 J	13.8 J
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg					6910	6760	7500	7260	7290
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg					519	822 J	473 J	584	503
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg					0.02 J	0.007 J	0.006 J	0.01 J	0.01 J
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg					27.4 J	22.5 J	23.8 J	29.1 J	23.6 J
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg					2330 J	1060 J	783 J	2790 J	1030 J
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg					0.31 J	0.23 J	0.13 J	0.18 J	0.19 J
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg					0.05 J	0.08	0.03 J	0.06 J	0.06 J
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg					132 J	135	90.7 J	157	113
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg					0.12	0.09	0.06 J	0.14	0.08
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg					40.5 J	30 J	32.4 J	43.3 J	34.8 J
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg					60.5 J	58.7 J	46.2 J	60.6 J	52.4 J
FFTA_RA_SO_Other	PH	-9	SU					8.1	7.1	8.6	6.9	7.4
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT	86	94	93	92	86	94	94	84	90
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 U	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 U	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg					< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 U	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 U	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 U	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg					0.97	0.58	0.59	0.075	1.8
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 U	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 U	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 U	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg					< 0.00095 UJ	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg					< 0.0018 U	< 0.0017 U	< 0.0017 UJ	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg					< 0.0095 U	< 0.0088 U	< 0.0088 UJ	< 0.0086 U	< 0.0093 U
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg					0.97	0.58	0.59	0.075	1.8
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg					< 0.018 U	< 0.017 U	< 0.017 U	< 0.017 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg					< 0.00095 U	< 0.00088 U	< 0.00088 UJ	< 0.00086 U	< 0.00093 U
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg					< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg					< 0.057 UJ	< 0.051 UJ	< 0.052 UJ	< 0.058 UJ	< 0.051 UJ
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.38 UJ	< 0.35 UJ	< 0.36 UJ	< 0.36 U	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.012 UJ	< 0.01 UJ
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg					< 0.057 U	< 0.051 U	< 0.052 U	< 0.058 U	< 0.051 U
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.96 U	< 0.88 U	< 0.88 U	< 0.88 U	< 0.7 U	< 0.63 U	< 0.65 U	< 0.72 U	< 0.63 U
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.057 U	< 0.051 U	< 0.052 U	< 0.058 U	< 0.051 U
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 UJ	< 0.25 UJ	< 0.26 UJ	< 0.29 UJ	< 0.25 UJ
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.96 UJ	< 0.88 UJ	< 0.88 UJ	< 0.88 UJ	< 0.086 UJ	< 0.076 U	< 0.079 UJ	< 0.088 U	< 0.077 U
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.057 U	< 0.051 U	< 0.052 U	< 0.058 U	< 0.051 U
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.96 U	< 0.88 U	< 0.88 U	< 0.88 U	< 0.7 U	< 0.63 U	< 0.65 U	< 0.72 U	< 0.63 U
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	UR	< 0.01 U	< 0.01 UJ	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.96 U	< 0.88 U	< 0.88 U	< 0.88 U	< 0.7 U	< 0.63 U	< 0.65 U	< 0.72 U	< 0.63 U
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.96 U	< 0.88 U	< 0.88 U	< 0.88 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.12 U	< 0.1 U
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	A31-SB01	A31-SB02	A31-SB03	A31-SB04	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	FTA-ANOM1E-SO-SURF	FTA-ANOM4-SO-SURF
			Sample Date	10/26/2007	10/26/2007	10/26/2007	10/26/2007	9/25/2013	9/25/2013	9/25/2013	9/26/2013	9/25/2013
			Sample ID	A31-SO-SB01-0002	A31-SO-SB02-0002	A31-SO-SB03-0002	A31-SO-SB04-0002	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-SURF-D	FTA-ANOM1D-SO-SURF	FTA-ANOM1E-SO-SURF	FTA-ANOM4-SO-SURF
			Sample Type Code	N	N	N	N	N	FD	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.057 UJ	< 0.051 UJ	< 0.052 UJ	< 0.058 UJ	< 0.051 UJ
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.96 U	< 0.88 U	< 0.88 U	< 0.88 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.96 U	< 0.88 U	< 0.88 U	< 0.88 U	< 0.7 U	< 0.63 U	< 0.65 U	< 0.72 U	< 0.63 U
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.38 UJ	< 0.35 UJ	< 0.36 UJ	< 0.36 UJ	< 0.28 UJ	< 0.25 UJ	< 0.26 UJ	< 0.29 UJ	< 0.25 UJ
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg					< 0.011 UJ	< 0.01 U	0.0037 J	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg					< 0.011 UJ	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg					< 0.011 UJ	< 0.01 U	0.0072 J	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.057 U	< 0.051 U	< 0.052 U	< 0.058 U	< 0.051 U
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg					< 0.011 UJ	< 0.01 U	< 0.01 UJ	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.057 U	< 0.051 U	< 0.052 U	< 0.058 U	< 0.051 U
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg					< 0.011 UJ	< 0.01 U	< 0.01 UJ	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg					< 0.011 U	0.0027 J	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.012 U	< 0.01 U
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.96 U	< 0.88 U	< 0.88 U	< 0.88 U	< 0.057 U	< 0.051 U	< 0.052 U	< 0.058 U	< 0.051 U
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg	< 0.38 U	< 0.35 U	< 0.36 U	< 0.36 U	< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg					< 0.28 U	< 0.25 U	< 0.26 U	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg					< 0.28 U	< 0.25 U	0.011	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg					< 0.28 U	< 0.26 U	0.0027	< 0.29 U	< 0.25 U
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg					< 0.28 U	0.0027	0.011	< 0.29 U	< 0.25 U
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg					< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.23 UJ	< 0.19 U
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg					< 0.16 UJ	< 0.16 U	< 0.16 U	< 0.18 UJ	< 0.15 U
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg					< 0.16 U	< 0.16 U	< 0.16 U	< 0.18 U	< 0.15 U
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg					< 0.2 U	< 0.2 U	< 0.2 U	< 0.23 U	< 0.19 U
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg					< 0.2 U	< 0.2 U	< 0.2 U	< 0.23 U	< 0.19 U
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg					< 16 UJ	< 16 U	< 16 U	< 18 UJ	17 J
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg					< 19 UJ	< 19 U	< 18 U	< 22 U	< 19 U
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg					< 19 U	< 19 U	< 18 U	< 22 U	< 19 U
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg	21	< 5.3 UJ	65 J	15 J					
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg	0.36 J	0.33 J	0.66 J	0.39 J					
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	0.00085 J	< 0.0028 U
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	A31-SB01	A31-SB02	A31-SB03	A31-SB04	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	FTA-ANOM1E-SO-SURF	FTA-ANOM4-SO-SURF
			Sample Date	10/26/2007	10/26/2007	10/26/2007	10/26/2007	9/25/2013	9/25/2013	9/25/2013	9/26/2013	9/25/2013
			Sample ID	A31-SO-SB01-0002	A31-SO-SB02-0002	A31-SO-SB03-0002	A31-SO-SB04-0002	FTA-ANOM1C-SO-SURF	FTA-ANOM1D-SO-SURF-D	FTA-ANOM1D-SO-SURF	FTA-ANOM1E-SO-SURF	FTA-ANOM4-SO-SURF
			Sample Type Code	N	N	N	N	N	FD	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	0.004 J	0.002 J	< 0.007 U	< 0.005 U	0.0025 J	0.00096 J	0.0022 J	0.001 J	0.0018 J
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	0.00085 J	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg	0.023 J	< 0.025 UJ	< 0.034 UJ	0.012 J					
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.035 U	< 0.025 U	< 0.034 U	< 0.025 U	< 0.011 UJ	< 0.01 U	< 0.01 U	< 0.014 U	< 0.014 U
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg	< 0.035 U	< 0.025 UJ	< 0.034 UJ	< 0.025 UJ					
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg	0.18 J	< 0.025 UJ	< 0.034 UJ	0.13 J	< 0.093 U	< 0.054 U	0.13 J	< 0.06 U	< 0.11 U
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg	< 0.007 U	< 0.005 UJ	< 0.007 UJ	< 0.005 UJ					
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg	0.038	0.008	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0042 UJ	< 0.0042 U	< 0.0042 U	< 0.0055 U	< 0.0055 U
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0042 UJ	< 0.0042 U	< 0.0042 U	< 0.0055 U	< 0.0055 U
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	0.0019 J
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg	< 0.007 U	< 0.005 U	0.001 J	< 0.005 U					
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 UJ	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.014 U	< 0.01 U	< 0.014 U	< 0.01 U	< 0.0042 UJ	< 0.0042 U	< 0.0042 U	< 0.0055 U	< 0.0055 U
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg	< 0.007 UJ	< 0.005 UJ	0.037 J	< 0.005 UJ					
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.035 U	< 0.025 U	< 0.034 U	< 0.025 U	< 0.011 UJ	< 0.01 U	< 0.01 U	< 0.014 U	< 0.014 U
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.007 U	< 0.005 UJ	< 0.007 UJ	< 0.005 UJ	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	< 0.0028 U
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0021 UJ	< 0.0021 U	< 0.0021 U	< 0.0028 U	0.0078
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U					
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.007 U	< 0.005 U	< 0.007 U	< 0.005 U	< 0.0042 UJ	< 0.0042 U	< 0.0042 U	< 0.0055 U	< 0.0055 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg					< 0.0064 UJ	< 0.0062 U	< 0.0062 U	< 0.0082 U	< 0.0082 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.014 U	< 0.01 U	< 0.014 U	< 0.01 U	< 0.0042 U	< 0.0042 U	< 0.0042 U	< 0.0055 U	< 0.0055 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-AREAA-01	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAB-01	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01
			Sample Date	6/17/2014	6/17/2014	6/17/2014	11/2/2016	6/17/2014	6/17/2014	11/2/2016	11/2/2016	11/2/2016	6/17/2014
			Sample ID	FTA-AREAA-01-0002	FTA-AREAA-02-0002-D	FTA-AREAA-02-0002	FTA-AREAA-02-SS-N-110216	FTA-AREAB-01-0002	FTA-AREAB-02-0002	FTA-AREAB-02-SS-D-110216	FTA-AREAB-02-SS-N-110216		FTA-AREAC-01-0002
			Sample Type Code	N	FD	N	N	N	N	FD	N		N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft		0 - 2 ft
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg	11500	11700	10200		13200	13600				12800
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg	0.059 J	0.063 J	0.04 J		0.057 J	0.079 J				0.067 J
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg	6.33 J	7.07 J	6.01 J		7.4 J	7.85 J				8.31 J
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg	24.4 J	18 J	26.9 J		22.9 J	29.6 J				20.9 J
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg	0.546 J	0.503 J	0.36 J		0.397 J	0.463 J				0.443 J
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg	0.0721 J	0.0654 J	0.049 J		0.126 J	0.166 J				0.0799 J
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg	2510	2920	2510		2880	2700				2560
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	24.9 J	23.3 J	61.2 J	23.2 J	26.6 J	32.1 J	29.8 J	23.6 J		22.9 J
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg				23			30	24		
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg				< 0.74 U			< 0.69 U	< 0.72 U		
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg	8.97 J	9.5 J	8.39 J		10.4 J	10.6 J				11.8 J
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg	20.5 J	19 J	18.9 J		22.6 J	20.1 J				24 J
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg	19100	21600	19500		22400	24200				25000
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg	11 J	8.72 J	86.2 J		10.5 J	10.8 J				13.6 J
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg	6000	6760	6990		7010	7560				6150
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg	365	503	393		685	481				548
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg	0.0078 J	0.01 J	0.0052 J		0.011 J	0.012 J				0.0049 J
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg	23.4 J	21.4 J	24.9 J		25.6 J	26.3 J				25 J
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg	950 J	642 J	472 J		738 J	1120 J				889 J
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg	< 0.23 U	< 0.23 U	0.13 J		0.056 J	0.068 J				0.1 J
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg	0.03 J	0.029 J	0.02 J		0.042 J	0.043 J				0.042 J
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg	149 J	117 J	84.1 J		122 J	103 J				154 J
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg	0.0766 J	0.052 J	0.053 J		0.067 J	0.0822 J				0.0666 J
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg	27.6 J	31 J	30.9 J		28.6 J	39.6 J				28.8 J
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg	44 J	46.8 J	39.6 J		48 J	51.2 J				51.6 J
FFTA_RA_SO_Other	PH	-9	SU										
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT	91	91	91		90	88				91
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.00033 UJ	< 0.00032 U	< 0.00036 UJ		< 0.00031 UJ	< 0.00034 UJ				< 0.00033 UJ
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.00033 UJ	< 0.00032 U	< 0.00036 UJ		< 0.00031 UJ	< 0.00034 UJ				< 0.00033 UJ
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.00033 UJ	0.073 J	< 0.0036 UJ		0.15 J	0.41 J				< 0.00033 UJ
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0016 U	< 0.016 U	< 0.0016 U		< 0.035 U	< 0.076 U				< 0.0017 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0016 U	< 0.016 U	< 0.0016 U		< 0.035 U	< 0.076 U				< 0.0017 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0018 U	< 0.019 U	< 0.0019 U		< 0.042 U	< 0.089 U				< 0.002 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0016 U	< 0.016 U	< 0.0016 U		< 0.035 U	< 0.076 U				< 0.0017 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0016 U	< 0.016 U	< 0.0016 U		< 0.035 U	< 0.076 U				< 0.0017 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0016 U	< 0.016 U	< 0.0016 U		< 0.035 U	< 0.076 U				< 0.0017 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.12	1.4 J	0.58 J		3.1	11				0.11
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0016 U	< 0.016 U	< 0.0016 U		< 0.035 U	< 0.076 U				< 0.0017 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0016 U	< 0.016 U	< 0.0016 U		< 0.035 U	< 0.076 U				< 0.0017 U
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg	0.0026 J	0.026 J	0.0083 J		0.045 J	0.13 J				0.0018 J
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		0.00026 J	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.00033 UJ	0.02 J	< 0.00036 UJ		< 0.00031 UJ	< 0.00034 UJ				< 0.00033 UJ
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	0.0025 J	< 0.032 UJ	0.015 J		0.15 J	0.22 J				0.0061 J
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.00033 UJ	< 0.00032 UJ	< 0.00036 UJ		< 0.00031 UJ	< 0.00034 UJ				< 0.00033 UJ
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.00033 UJ	< 0.00032 U	< 0.00036 UJ		< 0.00031 UJ	< 0.00034 UJ				< 0.00033 UJ
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.01 J	0.13 J	0.058 J		0.29 J	0.79 J				0.013 J
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	0.012 J	0.32 J	0.1 J		0.61 J	1.6 J				0.03 J
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg										
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RAtotAroclors	mg/kg	0.12	1.4	0.58		3.1	11				0.11
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.0033 UJ	< 0.0032 U	< 0.0036 UJ		< 0.0031 UJ	< 0.0034 UJ				< 0.0033 UJ
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00017 UJ	< 0.00016 U	< 0.00018 UJ		< 0.00016 UJ	< 0.00018 UJ				< 0.00017 UJ
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U				< 0.01 U
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U				< 0.01 U
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.053 UJ	< 0.049 UJ	< 0.046 UJ		< 0.052 UJ	< 0.055 UJ				< 0.051 UJ
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.01 UJ	< 0.0098 UJ	< 0.0093 UJ		< 0.01 UJ	< 0.011 UJ				< 0.01 UJ
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U				< 0.051 U
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.65 U	< 0.6 U	< 0.57 U		< 0.64 U	< 0.68 U				< 0.63 U
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U				< 0.051 U
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U				< 0.25 U
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U				< 0.25 U
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	UR	UR	UR		UR	UR				UR
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U				< 0.01 U
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U				< 0.01 U
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U				< 0.01 U
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U				< 0.051 U
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U				< 0.25 U
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U				< 0.051 U
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.65 U	< 0.6 U	< 0.57 U		< 0.64 U	< 0.68 U				< 0.63 U
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U				< 0.25 U
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U				< 0.051 U
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U				< 0.01 U
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.65 U	< 0.6 U	< 0.57 U		< 0.64 U	< 0.68 U				< 0.63 U
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.1 U	< 0.098 U	< 0.093 U		< 0.1 U	< 0.11 U				< 0.1 U
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U				< 0.25 U
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U				< 0.25 U

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-AREAA-01	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAB-01	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01
			Sample Date	6/17/2014	6/17/2014	6/17/2014	11/2/2016	6/17/2014	6/17/2014	11/2/2016	11/2/2016	6/17/2014
			Sample ID	FTA-AREAA-01-0002	FTA-AREAA-02-0002-D	FTA-AREAA-02-0002	FTA-AREAA-02-SS-N-110216	FTA-AREAB-01-0002	FTA-AREAB-02-0002	FTA-AREAB-02-SS-D-110216	FTA-AREAB-02-SS-N-110216	FTA-AREAC-01-0002
			Sample Type Code	N	FD	N	N	N	N	FD	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U			< 0.051 U
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.65 U	< 0.6 U	< 0.57 U		< 0.64 U	< 0.68 U			< 0.63 U
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		0.0046 J	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg									
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.26 UJ	< 0.24 UJ	< 0.23 UJ		< 0.26 UJ	< 0.27 UJ			< 0.25 UJ
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		0.019 J	0.011 J			0.0022 J
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		0.015 J	0.0095 J			< 0.01 U
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		0.022	< 0.011 U			0.0028 J
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	0.15 J	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U			< 0.051 U
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U			< 0.051 U
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	0.0051 J			< 0.01 U
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.26 UJ	< 0.24 UJ	< 0.23 UJ		< 0.26 UJ	< 0.27 UJ			< 0.25 UJ
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		0.015 J	0.01 J			0.0021 J
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.01 UJ	< 0.0098 UJ	< 0.0093 UJ		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.01 U	< 0.0098 U	< 0.0093 U		< 0.01 U	< 0.011 U			< 0.01 U
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.053 U	< 0.049 U	< 0.046 U		< 0.052 U	< 0.055 U			< 0.051 U
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		< 0.26 U	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		0.071	0.031			0.0071
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		0.0046	< 0.27 U			< 0.25 U
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.26 U	< 0.24 U	< 0.23 U		0.076	0.031			0.0071
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	< 15 U	< 16 U	< 12 U		13 J	42			< 15 U
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 29 U	< 24 U	< 22 U		< 39 U	< 21 U			< 22 U
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 29 U	< 24 U	< 22 U		< 39 U	< 21 U			< 22 U
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ			< 0.0021 U
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ			< 0.0021 U
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-AREAA-01	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAA-02	FTA-AREAB-01	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAB-02	FTA-AREAC-01
			Sample Date	6/17/2014	6/17/2014	6/17/2014	11/2/2016	6/17/2014	6/17/2014	11/2/2016	11/2/2016	6/17/2014	6/17/2014
			Sample ID	FTA-AREAA-01-0002	FTA-AREAA-02-0002-D	FTA-AREAA-02-0002	FTA-AREAA-02-SS-N-110216	FTA-AREAB-01-0002	FTA-AREAB-02-0002	FTA-AREAB-02-SS-D-110216	FTA-AREAB-02-SS-N-110216	FTA-AREAC-01-0002	
			Sample Type Code	N	FD	N	N	N	N	FD	N	N	
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	0.00072 J				< 0.0021 U
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg										
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg										
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg										
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg										
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg										
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.012 U	< 0.0078 U	< 0.01 U		< 0.01 U	< 0.011 UJ				< 0.01 U
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg										
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg	< 0.056 U	< 0.077 U	0.087		< 0.061 U	0.099 J				< 0.033 U
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg										
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg										
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg										
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg										
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.005 U	< 0.0031 U	< 0.0041 U		< 0.0041 U	< 0.0044 UJ				< 0.0042 U
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.005 U	< 0.0031 U	< 0.0041 U		< 0.0041 U	< 0.0044 UJ				< 0.0042 U
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg										
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg										
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg										
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg										
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.005 U	< 0.0031 U	< 0.0041 U		< 0.0041 U	< 0.0044 UJ				< 0.0042 U
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg										
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.012 U	< 0.0078 U	< 0.01 U		< 0.01 U	< 0.011 UJ				< 0.01 U
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0025 U	< 0.0016 U	< 0.002 U		< 0.002 U	< 0.0022 UJ				< 0.0021 U
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.005 U	< 0.0031 U	< 0.0041 U		< 0.0041 U	< 0.0044 UJ				< 0.0042 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0075 U	< 0.0046 U	< 0.0062 U		< 0.0062 U	< 0.0065 UJ				< 0.0062 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.005 U	< 0.0031 U	< 0.0041 U		< 0.0041 U	< 0.0044 U				< 0.0042 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-AREAD-01	FTA-AREAD-02	FTA-AREAF-01	FTA-AREAG-01	FTA-AREAG-02	FTA-AREAG-03	FTA-AREAH-01	FTA-AREAI-01
			Sample Date	6/19/2014	6/18/2014	6/19/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/17/2014
			Sample ID	FTA-AREAD-01-0002	FTA-AREAD-02-0002	FTA-AREAF-01-0002	FTA-AREAG-01-0002	FTA-AREAG-02-0002	FTA-AREAG-03-0002	FTA-AREAH-01-0002	FTA-AREAI-01-0002
			Sample Type Code	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units								
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg	14200	14200	9720	12900	11800	14500	13700	13400
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg	0.099 J	0.061 J	0.078 J	0.057 J	< 0.046 U	0.078 J	0.078 J	0.054 J
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg	9.61 J	8.5 J	7.63 J	6.82 J	5.74 J	8.29 J	9.78 J	5.82 J
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg	32 J	31.2 J	16 J	21 J	23.7 J	39.7 J	24.6 J	15.3 J
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg	0.544 J	0.537 J	0.377 J	0.43 J	0.404 J	0.639 J	0.458 J	0.444 J
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg	0.0817 J	0.0814 J	0.05 J	0.0825 J	0.0826 J	0.084 J	0.0787 J	0.0784 J
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg	1720	2470	2370	3120	3600	2090	2330	2700
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	28 J	27.6 J	18.4 J	30.6 J	19.5 J	28 J	24.6 J	39 J
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg								
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg								
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg	10.2 J	11.2 J	8.09 J	11.5 J	8.47 J	11.1 J	11.2 J	12.5 J
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg	20.2 J	18.7 J	16.6 J	23.1 J	21.6 J	20.4 J	20.4 J	21.6 J
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg	22500	22800	18000	22700	21200	22000	23300	23900
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg	16.7 J	9.47 J	10.9 J	10.7 J	8.01 J	12 J	12.5 J	10.4 J
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg	6150	6380	4770	7370	6270	5910	6090	8780
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg	392	497	386	507	432	461	509	534
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg	< 0.017 U	< 0.018 U	< 0.015 U	0.0043 J	0.011 J	0.0049 J	< 0.014 U	< 0.015 U
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg	23.4 J	26.1 J	17.7 J	23.8 J	17.9 J	25 J	23.5 J	32.2 J
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg	897 J	1380 J	755 J	821 J	1000 J	1700 J	1040 J	546 J
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg	< 0.27 U	0.22 J	< 0.21 U	0.21 J	0.2 J	0.331 J	0.309 J	< 0.26 U
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg	0.038 J	0.027 J	0.033 J	0.026 J	0.044 J	0.038 J	0.031 J	0.029 J
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg	87 J	101 J	104 J	178 J	276 J	165 J	96.5 J	90.2 J
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg	0.078 J	0.0891 J	0.057 J	0.072 J	0.0774 J	0.113 J	0.0808 J	0.0597 J
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg	36.8 J	33.2 J	23.2 J	37.1 J	35.4 J	33.7 J	33 J	35.9 J
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg	53 J	47 J	35.6 J	49.9 J	46.5 J	52.8 J	50 J	49 J
FFTA_RA_SO_Other	PH	-9	SU								
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT	87	88	92	95	90	90	91	97
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.00034 UJ	< 0.00036 UJ	< 0.00027 U	< 0.00032 UJ	< 0.00034 UJ	< 0.0036 U	0.0092 J	< 0.0003 U
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.00034 UJ	< 0.00036 UJ	< 0.00027 U	< 0.00032 UJ	< 0.00034 UJ	< 0.0036 U	< 0.00036 UJ	< 0.0003 U
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg	0.0056 J	0.0032 J	0.011	0.023 J	< 0.00034 UJ	0.76 J	0.039 J	0.021 J
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00018 UJ	< 0.00018 UJ	0.00016 J	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0018 U	< 0.0018 U	< 0.0014 U	< 0.0016 UJ	< 0.018 U	< 0.18 U	< 0.0018 U	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0018 U	< 0.0018 U	< 0.0014 U	< 0.0016 UJ	< 0.018 U	< 0.18 U	< 0.0018 U	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0021 U	< 0.0022 U	< 0.0016 U	< 0.0019 UJ	< 0.021 U	< 0.22 U	< 0.0022 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0018 U	< 0.0018 U	< 0.0014 U	< 0.0016 UJ	< 0.018 U	< 0.18 U	< 0.0018 U	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0018 U	< 0.0018 U	< 0.0014 U	< 0.0016 UJ	< 0.018 U	< 0.18 U	< 0.0018 U	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0018 U	< 0.0018 U	< 0.0014 U	< 0.0016 UJ	< 0.018 U	< 0.18 U	< 0.0018 U	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.083 J	0.052	0.24 J	0.33 J	1.2	15	0.57	0.48
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0018 U	< 0.0018 U	< 0.0014 U	< 0.0016 UJ	< 0.018 U	< 0.18 U	< 0.0018 U	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0018 U	< 0.0018 U	< 0.0014 U	< 0.0016 UJ	< 0.018 U	< 0.18 U	< 0.0018 U	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.00034 UJ	0.0018 J	0.0018	< 0.00032 UJ	0.034 J	0.48 J	0.024 J	0.006
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	0.00044 J	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.00034 UJ	< 0.00036 UJ	< 0.00027 U	< 0.00032 UJ	< 0.00034 UJ	< 0.0036 U	< 0.00036 UJ	0.0058
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.00034 UJ	< 0.00036 UJ	< 0.00027 U	0.01 J	< 0.00034 UJ	< 0.0036 U	< 0.00036 UJ	0.011 J
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.00034 UJ	0.0005 J	< 0.00027 UJ	< 0.00032 UJ	0.0076 J	0.13 J	0.0056 J	0.024 J
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.00034 UJ	< 0.00036 UJ	0.017 J	< 0.00032 UJ	< 0.00034 UJ	< 0.0036 U	< 0.00036 UJ	< 0.0003 U
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.01 J	0.0011 J	0.013 J	0.045 J	0.024 J	0.32 J	0.017 J	0.044 J
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	0.0044 J	0.087 J	0.0031 J	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0018 UJ	< 0.0018 UJ	< 0.0014 U	< 0.0016 UJ	< 0.0018 UJ	0.064 J	< 0.0018 UJ	< 0.0015 U
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg								
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.083	0.052	0.24	0.33	1.2	15	0.57	0.48
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.0034 UJ	< 0.0036 UJ	< 0.0027 U	< 0.0032 UJ	< 0.0034 UJ	< 0.036 U	< 0.0036 UJ	< 0.003 U
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00018 UJ	< 0.00018 UJ	< 0.00014 U	< 0.00016 UJ	< 0.00018 UJ	< 0.0018 U	< 0.00018 UJ	< 0.00015 U
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	0.0016 J	0.0019 J	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 UJ
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.0095 UJ	< 0.011 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ	< 0.01 UJ
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	0.0032 J	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.58 U	< 0.65 U	< 0.61 U	< 0.64 U	< 0.64 U	< 0.62 U	< 0.63 U	< 0.63 U
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	0.0035 J	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	UR	UR	UR	UR	UR	UR	UR	UR
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.58 U	< 0.65 U	< 0.61 U	< 0.64 U	< 0.64 U	< 0.62 U	< 0.63 U	< 0.63 U
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.0095 U	UR	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.58 U	< 0.65 U	< 0.61 U	< 0.64 U	< 0.64 U	< 0.62 U	< 0.63 U	< 0.63 U
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.095 U	< 0.11 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-AREAD-01	FTA-AREAD-02	FTA-AREAF-01	FTA-AREAG-01	FTA-AREAG-02	FTA-AREAG-03	FTA-AREAH-01	FTA-AREAI-01
			Sample Date	6/19/2014	6/18/2014	6/19/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/17/2014
			Sample ID	FTA-AREAD-01-0002	FTA-AREAD-02-0002	FTA-AREAF-01-0002	FTA-AREAG-01-0002	FTA-AREAG-02-0002	FTA-AREAG-03-0002	FTA-AREAH-01-0002	FTA-AREAI-01-0002
			Sample Type Code	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units								
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.047 U	< 0.053 UJ	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.58 U	< 0.65 U	< 0.61 U	< 0.64 U	< 0.64 U	< 0.62 U	< 0.63 U	< 0.63 U
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	0.027	0.0094 J	< 0.0015 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg								
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	0.0021 J	0.002 J	0.0014 J	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.24 UJ	< 0.26 UJ	< 0.25 UJ	< 0.26 UJ	< 0.26 UJ	< 0.25 UJ	< 0.25 UJ	< 0.25 UJ
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.0095 U	0.0023 J	< 0.01 U	0.085	0.046	0.013 J	< 0.01 U	0.002 J
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	0.058	0.038	0.011 J	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.0095 U	0.003 J	< 0.01 U	0.092	0.058	0.016 J	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.24 U	< 0.26 UJ	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 UJ	< 0.25 U
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	0.087 J	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.24 UJ	< 0.26 UJ	< 0.25 UJ	< 0.26 UJ	< 0.26 UJ	< 0.25 UJ	< 0.25 UJ	< 0.25 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	0.2 J	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	0.0025 J	0.0083 J	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 UJ
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	< 0.0095 U	0.0029 J	< 0.01 U	0.069	0.052	0.015 J	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	0.008 J	0.0029 J	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 UJ
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.0095 U	< 0.011 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.047 U	< 0.053 U	< 0.05 U	< 0.052 U	< 0.052 U	< 0.051 U	< 0.051 U	< 0.051 U
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	0.16 J	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	< 0.26 U	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	0.16 J	< 0.26 U	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	< 0.24 U	0.0082	< 0.25 U	0.75	0.19	0.055	< 0.25 U	0.0020
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.24 U	< 0.26 U	< 0.25 U	0.20	0.012	< 0.25 U	< 0.25 U	< 0.25 U
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	< 0.24 U	0.0082	< 0.25 U	0.95	0.21	0.055	< 0.25 U	0.0020
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg								
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg								
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg								
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg								
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg								
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg								
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg								
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg								
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg								
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg								
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg								
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg								
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg								
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg								
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg								
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg								
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg								
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg								
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg								
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg								
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	< 16 UJ	< 15 UJ	< 16 U	10 J	< 15 UJ	< 15 UJ	9.4 J	< 12 U
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 21 U	< 27 U	< 17 U	< 25 U	< 20 U	< 27 U	< 23 U	< 26 U
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 21 U	< 27 U	< 17 U	< 25 U	< 20 U	< 27 U	< 23 U	< 26 U
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg								
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg								
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg								

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-AREAD-01	FTA-AREAD-02	FTA-AREAF-01	FTA-AREAG-01	FTA-AREAG-02	FTA-AREAG-03	FTA-AREAH-01	FTA-AREAI-01
			Sample Date	6/19/2014	6/18/2014	6/19/2014	6/18/2014	6/18/2014	6/18/2014	6/18/2014	6/17/2014
			Sample ID	FTA-AREAD-01-0002	FTA-AREAD-02-0002	FTA-AREAF-01-0002	FTA-AREAG-01-0002	FTA-AREAG-02-0002	FTA-AREAG-03-0002	FTA-AREAH-01-0002	FTA-AREAI-01-0002
			Sample Type Code	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units								
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	0.00095 J	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg								
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg								
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg								
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg								
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg								
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.01 UJ	< 0.0099 UJ	< 0.0099 U	< 0.0074 UJ	< 0.01 UJ	< 0.0084 UJ	< 0.0095 UJ	< 0.0082 U
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg								
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg	0.059 J	0.078 J	0.038	0.046 J	0.1 J	0.037 J	0.042 J	< 0.037 U
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg								
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg								
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg								
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg								
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0042 UJ	< 0.004 UJ	< 0.004 U	< 0.003 UJ	< 0.0042 UJ	< 0.0034 UJ	< 0.0038 UJ	< 0.0033 U
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0042 UJ	< 0.004 UJ	< 0.004 U	< 0.003 UJ	< 0.0042 UJ	< 0.0034 UJ	< 0.0038 UJ	< 0.0033 U
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg								
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg								
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg								
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg								
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0042 UJ	< 0.004 UJ	< 0.004 U	< 0.003 UJ	< 0.0042 UJ	< 0.0034 UJ	< 0.0038 UJ	< 0.0033 U
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg								
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.01 UJ	< 0.0099 UJ	< 0.0099 U	< 0.0074 UJ	< 0.01 UJ	< 0.0084 UJ	< 0.0095 UJ	< 0.0082 U
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	0.0029 J	< 0.0016 U
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg								
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0021 UJ	< 0.002 UJ	< 0.002 U	< 0.0015 UJ	< 0.0021 UJ	< 0.0017 UJ	< 0.0019 UJ	< 0.0016 U
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg								
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0042 UJ	< 0.004 UJ	< 0.004 U	< 0.003 UJ	< 0.0042 UJ	< 0.0034 UJ	< 0.0038 UJ	< 0.0033 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0063 UJ	< 0.0059 UJ	< 0.0059 U	< 0.0044 UJ	< 0.0063 UJ	< 0.005 UJ	< 0.0057 UJ	< 0.005 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0042 U	< 0.004 U	< 0.004 U	< 0.003 U	< 0.0042 U	< 0.0034 U	< 0.0038 U	< 0.0033 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-200	FTA-SB-201	FTA-SB-201	FTA-SB-202	FTA-SB-203	FTA-SB-203	FTA-SB-204	FTA-SB-204	FTA-SB-205
			Sample Date	11/8/2012	11/13/2012	11/2/2016	11/7/2012	11/7/2012	11/2/2016	11/8/2012	11/2/2016	11/8/2012
						FTA-SB-201-SS-N-			FTA-SB-203-SS-N-		FTA-SB-204-SS-N-	
			Sample ID	FTA-SB-200-0002	FTA-SB-201-0002	110216	FTA-SB-202-0002	FTA-SB-203-0002	110216	FTA-SB-204-0002	110216	FTA-SB-205-0002-D
			Sample Type Code	N	N	N	N	N	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg	4320 J	5870 J		12700	15000		15100		14200
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg	0.43 J	0.72 J		0.08 J	0.08 J		0.09 J		0.17 J
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg	5.6 J	6.6 J		8.2	7.3		7.3 J		9 J
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg	114 J	53.9 J		20.5	41.4		29.3 J		33 J
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg	0.48 J	0.89 J		0.27 J	0.33 J		0.47		0.56
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg	0.72 J	1.3 J		0.09	0.09		0.08		0.08
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg	22300 J	22700 J		1520	3170		2910		2940
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	< 10.6 U	27.8 J	18.7 J	21 J	37.3 J	24.7 J	26.4 J	20.8 J	26.1 J
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg			R			25		21	
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg			R			< 0.31 U		< 0.38 U	
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg	9.8 J	24.2 J		7.7	11.8		12.1		10.5
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg	17.6 J	29 J		11.4	23.6		24.6 J		23.7 J
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg	6840 J	9160 J		19800	22000		23100 J		24900 J
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg	16.8 J	16.3 J		12 J	11 J		10.8 J		11.3 J
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg	2760 J	3400 J		4660	8140		6960 J		6950 J
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg	2680 J	8600 J		628	503		602		522
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg	0.21 J	0.13 J		0.04	0.01 J		0.01 J		0.02 J
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg	< 8.9 U	15.3 J		13.5	29.1		27.1		24.4
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg	< 536 U	670 J		568 J	751 J		907 J		1720 J
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg	< 4 U	6.4 J		< 0.4 U	< 0.33 U		< 0.35 U		< 0.24 U
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg	0.12 J	0.1 J		0.04 J	0.04 J		0.03 J		0.04 J
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg	< 167 U	194 J		< 66.4 U	< 132 U		208 J		133 J
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg	0.07 J	0.09 J		0.08 J	0.06 J		0.07 J		0.1
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg	17.8 J	18.9 J		28.2	35.6		32.1		34.4
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg	40.7 J	47.7 J		43.6	48.1		56.2 J		50.1 J
FFTA_RA_SO_Other	PH	-9	SU	5.8	5.5		5	5.4		5.5		
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT	14	15		72	94		90		87
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.06 UJ	< 0.057 UJ		< 0.01 U	< 0.0082 U		< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.06 UJ	< 0.057 UJ		< 0.01 U	< 0.0082 U		< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.071 UJ	< 0.067 UJ		< 0.012 U	< 0.0097 U		< 0.011 U		< 0.0092 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.06 UJ	< 0.057 UJ		< 0.01 U	< 0.0082 U		< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.06 UJ	< 0.057 UJ		< 0.01 U	< 0.0082 U		< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.06 UJ	< 0.057 UJ		< 0.01 U	< 0.0082 U		< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.58 J	0.87 J		< 0.01 U	< 0.0082 U		0.1		0.019 J
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.06 UJ	< 0.057 UJ		< 0.01 U	< 0.0082 U		< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.06 UJ	< 0.057 UJ		< 0.01 U	< 0.0082 U		< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg							< 0.00092 U		< 0.00079 UJ
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg							< 0.0018 U		< 0.0015 U
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg							0.014 J		0.0021 J
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg							< 0.0092 U		< 0.0079 U
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg	0.58 J	0.87 J		< 0.0102 U	< 0.00837 U		0.1		0.019 J
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.58	0.87		< 0.012 U	< 0.0097 U		0.10		0.019
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg							< 0.018 U		< 0.015 U
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg							< 0.00092 U		< 0.00079 U
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	0.017 J	< 0.056 UJ		< 0.013 U	0.64		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.33 UJ	< 0.28 UJ		< 0.063 U	< 0.045 U		< 0.054 U		< 0.055 U
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.33 UJ	< 0.28 UJ		< 0.063 U	< 0.045 U		< 0.054 U		< 0.055 U
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 4 UJ	< 3.4 UJ		< 0.78 U	< 0.55 U		< 0.66 U		< 0.68 U
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.33 UJ	< 0.28 UJ		< 0.063 U	< 0.045 U		< 0.054 U		< 0.055 U
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.49 UJ	< 0.42 UJ		< 0.095 UJ	< 0.067 UJ		< 0.08 UJ		< 0.083 UJ
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.33 UJ	< 0.28 UJ		< 0.063 U	< 0.045 U		< 0.054 U		< 0.055 U
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	2.1		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 4 UJ	< 3.4 UJ		< 0.78 U	< 0.55 U		< 0.66 U		< 0.68 U
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 UJ		UR		< 0.011 UJ
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 4 UJ	< 3.4 UJ		< 0.78 U	< 0.55 U		< 0.66 U		< 0.68 U
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.66 UJ	< 0.56 UJ		< 0.13 U	< 0.089 U		< 0.11 U		< 0.11 U
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-200	FTA-SB-201	FTA-SB-201	FTA-SB-202	FTA-SB-203	FTA-SB-203	FTA-SB-204	FTA-SB-204	FTA-SB-205
			Sample Date	11/8/2012	11/13/2012	11/2/2016	11/7/2012	11/7/2012	11/2/2016	11/8/2012	11/2/2016	11/8/2012
						FTA-SB-201-SS-N-110216			FTA-SB-203-SS-N-110216		FTA-SB-204-SS-N-110216	
			Sample ID	FTA-SB-200-0002	FTA-SB-201-0002		FTA-SB-202-0002	FTA-SB-203-0002		FTA-SB-204-0002		FTA-SB-205-0002-D
			Sample Type Code	N	N	N	N	N	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.33 UJ	< 0.28 UJ		< 0.063 UJ	< 0.045 U		UR		< 0.055 U
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 UJ		< 0.011 UJ		< 0.011 U
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 4 UJ	< 3.4 UJ		< 0.78 U	< 0.55 U		< 0.66 U		< 0.68 U
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	0.47		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	< 0.066 UJ	0.021 J		0.037	0.069		0.0069 J		< 0.011 U
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.066 UJ	< 0.056 UJ		0.026	0.037		0.0053 J		< 0.011 U
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	0.038		0.0093 J		< 0.011 U
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.33 UJ	0.031 J		< 0.063 U	< 0.045 U		< 0.054 U		< 0.055 UJ
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	0.17 J		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.066 UJ	< 0.056 UJ		0.0062 J	< 0.0089 UJ		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.33 UJ	< 0.28 UJ		< 0.063 U	< 0.045 U		< 0.054 U		< 0.055 U
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	0.1 J		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	0.77		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.082 J	0.05 J		0.022 J	0.017 J		0.0097 J		0.0056 J
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	0.12		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.066 UJ	< 0.056 UJ		< 0.013 U	< 0.0089 U		< 0.011 U		< 0.011 U
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.33 UJ	< 0.28 UJ		< 0.063 U	< 0.045 U		< 0.054 U		< 0.055 U
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	1.6		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg	< 1.6 UJ	< 1.4 UJ		< 0.31 U	< 0.22 U		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg	< 1.6 UJ	< 1.4 UJ		0.17 J	0.42		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	0.082	0.071		0.26	0.85		0.031		0.0056
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 1.6 U	< 1.4 U		< 0.31 U	5.1		< 0.26 U		< 0.28 U
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	0.082	0.071		0.26	5.9		0.031		0.0056
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-200	FTA-SB-201	FTA-SB-201	FTA-SB-202	FTA-SB-203	FTA-SB-203	FTA-SB-204	FTA-SB-204	FTA-SB-205
			Sample Date	11/8/2012	11/13/2012	11/2/2016	11/7/2012	11/7/2012	11/2/2016	11/8/2012	11/2/2016	11/8/2012
			Sample ID	FTA-SB-200-0002	FTA-SB-201-0002	FTA-SB-201-SS-N-110216	FTA-SB-202-0002	FTA-SB-203-0002	FTA-SB-203-SS-N-110216	FTA-SB-204-0002	FTA-SB-204-SS-N-110216	FTA-SB-205-0002-D
			Sample Type Code	N	N	N	N	N	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.028 UJ	0.014 J		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.14 UJ	< 0.12 UJ		< 0.015 U	< 0.0098 U		< 0.012 UJ		< 0.015 U
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg	1.4 J	2 J		0.2	0.056		< 0.11 U		< 0.071 U
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		0.0014 J		< 0.003 U
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.055 UJ	< 0.048 UJ		< 0.006 U	< 0.0039 U		< 0.0049 U		< 0.006 U
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.055 UJ	< 0.048 UJ		< 0.006 U	< 0.0039 U		< 0.0049 UJ		< 0.006 UJ
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.028 UJ	0.014 J		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		0.008 J		< 0.003 U
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.055 UJ	< 0.048 UJ		< 0.006 U	< 0.0039 U		< 0.0049 UJ		< 0.006 U
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.14 UJ	< 0.12 UJ		< 0.015 U	< 0.0098 U		< 0.012 U		< 0.015 U
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg	< 0.028 UJ	< 0.024 UJ		0.0048 J	< 0.002 U		0.016 J		< 0.003 U
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 U		< 0.003 U
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.028 UJ	< 0.024 UJ		< 0.003 U	< 0.002 U		< 0.0024 UJ		< 0.003 U
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.055 UJ	< 0.048 UJ		< 0.006 U	< 0.0039 U		< 0.0049 U		< 0.006 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.082 UJ	< 0.072 UJ		< 0.009 U	< 0.0058 U		< 0.0074 UJ		< 0.009 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.055 U	< 0.048 U		< 0.006 U	< 0.0039 U		< 0.0049 U		< 0.006 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-205	FTA-SB-205	FTA-SB-206	FTA-SB-206	FTA-SB-208	FTA-SB-208	FTA-SB-209	FTA-SB-210	FTA-SB-211
			Sample Date	11/8/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012
			Sample ID	FTA-SB-205-0002	FTA-SB-205-SS-N-110216	FTA-SB-206-0002-D	FTA-SB-206-0002	FTA-SB-208-0002	FTA-SB-208-SS-N-110216	FTA-SB-209-0002	FTA-SB-210-0002	FTA-SB-211-0002-D
			Sample Type Code	N	N	FD	N	N	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg	15400		13600	12800	17000		13300	17800	16400
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg	0.16 J		0.17	0.07 J	0.08 J		0.06 J	0.09 J	0.11
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg	14 J		7.5	8.1	4.9 J		6	9.8 J	11.7
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg	30.6 J		25.8	24.9	18		15.1	39.5	36.3
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg	0.56		0.39 J	0.42 J	0.36 J		0.33 J	0.67	0.68
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg	0.07 J		0.13	0.11	0.06 J		0.09	0.13	0.1
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg	3640		3640	3310	1470		2990	3590	2810
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	32.6 J	22.0 J	33.7	27.4	26.2 J	23.4 J	33.4	37.5 J	30.3
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg		22				23			
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg		< 0.32 U				< 1.6 U			
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg	12.4		11.8	11.5	6.8		12.3	15.2	13.4
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg	21.3 J		25.1	26.9	7.1		23.5	31.7	27.6
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg	24700 J		23000	22500	23400		24400	32000	29400
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg	10.4 J		12.9	12.2	9 J		10.6	13.6 J	12.2
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg	7870 J		7780	7200	4460		9690	9460	7500
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg	520		492	504	476		476	686	596
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg	0.02 J		0.03 J	< 0.02 U	0.05		0.006 J	< 0.018 U	0.006 J
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg	26.9		33.1	24	15.6		30.7	31.6	28.2
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg	1660 J		947	958	549 J		691	1960 J	1900
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg	< 0.28 U		0.32 J	0.31 J	0.8 J		0.33 J	0.34 J	0.27 J
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg	0.03 J		0.09 J	0.08 J	0.04 J		0.04 J	0.05 J	0.04 J
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg	120 J		133 J	118 J	103 J		139 J	417 J	159
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg	0.08 J		0.07 J	0.07 J	0.09 J		0.07 J	0.11 J	0.11
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg	37.8		42.8	37.6	42.7		38.7	47	45.4
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg	57.6 J		59.6	57.4	38.5		46.8	72	59.7
FFTA_RA_SO_Other	PH	-9	SU	6.5			6.5	4.9		6.4	6	
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT	88		87	84	82		94	89	90
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0094 U		< 0.17 U	< 0.2 U	< 0.01 U		< 0.09 U	< 0.0089 U	< 0.24 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0094 U		< 0.17 U	< 0.2 U	< 0.01 U		< 0.09 U	< 0.0089 U	< 0.24 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.011 U		< 0.2 U	< 0.24 U	< 0.012 U		< 0.11 U	< 0.01 U	< 0.28 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0094 U		< 0.17 U	< 0.2 U	< 0.01 U		< 0.09 U	< 0.0089 U	< 0.24 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0094 U		< 0.17 U	< 0.2 U	< 0.01 U		< 0.09 U	< 0.0089 U	< 0.24 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0094 U		< 0.17 UJ	2.6 J	< 0.01 U		< 0.09 U	< 0.0089 U	8.3 J
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.076 J		14	12 J	0.015 J		8.7	1.9	36 J
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.0094 U		< 0.17 U	< 0.2 U	< 0.01 U		< 0.09 U	< 0.0089 U	< 0.24 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.0094 U		< 0.17 U	< 0.2 U	< 0.01 U		< 0.09 U	< 0.0089 U	< 0.24 U
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00094 UJ		< 0.00083 UJ	< 0.00099 UJ	< 0.001 UJ		< 0.00086 UJ	< 0.00089 UJ	< 0.00095 UJ
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0018 U		< 0.0016 U	< 0.0019 U	< 0.002 U		< 0.0017 U	< 0.0017 U	< 0.0018 U
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.0088 J		2.4 J	1.5 J	0.0015 J		0.99 J	0.24 J	4.3 J
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0094 U		< 0.0083 U	< 0.0099 U	< 0.01 U		< 0.0086 U	< 0.0089 U	< 0.0095 U
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg	0.076 J		14 J	14.6 J	0.015 J		8.7	1.9	44.3 J
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.076		14	15	0.015		8.7	1.9	44
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.018 U		< 0.016 U	< 0.019 U	< 0.02 U		< 0.017 U	< 0.017 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00094 U		< 0.00083 U	< 0.00099 U	< 0.001 U		< 0.00086 U	< 0.00089 U	< 0.00095 U
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		0.0054 J	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.051 U		< 0.057 U	< 0.055 U	< 0.058 UJ		< 0.05 U	< 0.053 U	< 0.054 U
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 UJ		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.051 U		< 0.057 U	< 0.055 U	< 0.058 U		< 0.05 U	< 0.053 U	< 0.054 U
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.63 U		< 0.7 U	< 0.67 U	< 0.71 U		< 0.61 U	< 0.65 U	< 0.66 U
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.051 U		< 0.057 U	< 0.055 U	< 0.058 U		< 0.05 U	< 0.053 U	< 0.054 U
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.077 UJ		< 0.086 UJ	< 0.082 UJ	< 0.087 UJ		< 0.075 UJ	< 0.079 UJ	< 0.08 UJ
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.051 U		< 0.057 U	< 0.055 U	< 0.058 U		< 0.05 U	< 0.053 U	< 0.054 U
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.63 U		< 0.7 U	< 0.67 U	< 0.71 U		< 0.61 U	< 0.65 U	< 0.66 UJ
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.01 UJ		< 0.011 UJ	< 0.011 UJ	UR		< 0.01 UJ	< 0.01 UJ	< 0.011 UJ
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.63 U		< 0.7 U	< 0.67 U	< 0.71 U		< 0.61 U	< 0.65 U	< 0.66 U
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.1 U		< 0.11 U	< 0.11 U	< 0.12 U		< 0.1 U	< 0.1 U	< 0.11 U
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-205	FTA-SB-205	FTA-SB-206	FTA-SB-206	FTA-SB-208	FTA-SB-208	FTA-SB-209	FTA-SB-210	FTA-SB-211
			Sample Date	11/8/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012
			Sample ID	FTA-SB-205-0002	FTA-SB-205-SS-N-110216	FTA-SB-206-0002-D	FTA-SB-206-0002	FTA-SB-208-0002	FTA-SB-208-SS-N-110216	FTA-SB-209-0002	FTA-SB-210-0002	FTA-SB-211-0002-D
			Sample Type Code	N	N	FD	N	N	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.051 U		< 0.057 U	< 0.055 U	< 0.058 UJ		< 0.05 U	< 0.053 U	< 0.054 U
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 UJ		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.63 U		< 0.7 UJ	< 0.67 UJ	< 0.71 UJ		< 0.61 UJ	< 0.65 UJ	< 0.66 U
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		0.076 J	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		0.087 J	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.25 U		< 0.28 UJ	< 0.27 UJ	< 0.29 UJ		< 0.25 UJ	< 0.26 UJ	< 0.27 UJ
FFTA_RA_SO_SVOCs	BENZO(A)ANTHRACENE	56-55-3	mg/kg	< 0.01 U		0.021 J	0.022 J	< 0.012 U		0.17	0.1	0.0034 J
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.01 U		0.018 J	0.019 J	< 0.012 UJ		0.12	0.081	< 0.011 U
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.003 J		0.034	0.03	< 0.012 U		0.2	0.14	0.0045 J
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	0.093 J	< 0.27 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.051 UJ		< 0.057 U	< 0.055 U	< 0.058 UJ		< 0.05 U	0.0052 J	< 0.054 UJ
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		0.17 J	0.11 J	< 0.27 U
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.01 U		0.0048 J	0.0048 J	< 0.012 U		0.028	0.02 J	< 0.011 U
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.051 U		< 0.057 U	< 0.055 U	< 0.058 U		< 0.05 U	< 0.053 U	< 0.054 U
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		0.39	0.21 J	< 0.27 U
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.01 U		< 0.011 U	0.004 J	< 0.012 U		< 0.01 U	< 0.01 U	0.0083 J
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 UJ		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	INDENO(1,2,3-CD)PYRENE	193-39-5	mg/kg	0.0055 J		0.024	0.023	< 0.012 U		0.12	0.095	0.0064 J
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		0.017 J	0.0043 J	< 0.011 U
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.01 U		< 0.011 U	< 0.011 U	< 0.012 U		< 0.01 U	< 0.01 U	< 0.011 U
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.051 U		< 0.057 U	< 0.055 U	< 0.058 U		< 0.05 U	< 0.053 U	< 0.054 U
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		0.33 J	0.13 J	< 0.27 U
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		< 0.25 U	< 0.26 U	< 0.27 U
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		0.27 J	0.13 J	< 0.27 U
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	0.0085		0.10	0.099	< 0.29 U		1.5	0.98	0.014
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.25 U		< 0.28 U	< 0.27 U	< 0.29 U		0.51	0.13	< 0.27 U
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	0.0085		0.10	0.099	< 0.29 U		2.0	1.1	0.014
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO(1,2,3-CD)PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANI	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 U	< 0.0024 U
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-205	FTA-SB-205	FTA-SB-206	FTA-SB-206	FTA-SB-208	FTA-SB-208	FTA-SB-209	FTA-SB-210	FTA-SB-211
			Sample Date	11/8/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012	11/2/2016	11/6/2012	11/6/2012	11/6/2012
			Sample ID	FTA-SB-205-0002	FTA-SB-205-SS-N-110216	FTA-SB-206-0002-D	FTA-SB-206-0002	FTA-SB-208-0002	FTA-SB-208-SS-N-110216	FTA-SB-209-0002	FTA-SB-210-0002	FTA-SB-211-0002-D
			Sample Type Code	N	N	FD	N	N	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 U	< 0.0024 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 U	< 0.0024 U
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	0.0011 J
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 U	< 0.0024 U
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	0.00069 J
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.0089 U		< 0.014 U	< 0.014 U	< 0.014 U		< 0.0096 U	< 0.012 U	< 0.012 U
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg	< 0.031 U		0.058	0.059	0.29		0.12	< 0.089 U	0.13
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 U	< 0.0024 U
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0036 U		< 0.0055 U	< 0.0055 U	< 0.0055 U		< 0.0038 U	< 0.005 U	< 0.0049 U
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0036 U		< 0.0055 U	< 0.0055 U	< 0.0055 U		< 0.0038 U	< 0.005 U	< 0.0049 U
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0036 U		< 0.0055 U	< 0.0055 U	< 0.0055 U		< 0.0038 U	< 0.005 UJ	< 0.0049 U
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 U	< 0.0024 U
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.0089 U		< 0.014 U	< 0.014 U	< 0.014 U		< 0.0096 U	< 0.012 U	< 0.012 U
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0018 U		< 0.0028 U	< 0.0028 U	< 0.0028 U		< 0.0019 U	< 0.0025 UJ	< 0.0024 U
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0036 U		< 0.0055 U	< 0.0055 U	< 0.0055 U		< 0.0038 U	< 0.005 U	< 0.0049 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0053 U		< 0.0082 U	< 0.0082 U	< 0.0082 U		< 0.0058 U	< 0.0074 UJ	< 0.0074 U
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0036 U		< 0.0055 U	< 0.0055 U	< 0.0055 U		< 0.0038 U	< 0.005 U	< 0.0049 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-211	FTA-SB-212	FTA-SB-212	FTA-SB-213	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-215	FTA-SB-215
			Sample Date	11/6/2012	11/5/2012	11/2/2016	11/5/2012	11/5/2012	11/5/2012	11/1/2016	11/7/2012	11/2/2016
			Sample ID	FTA-SB-211-0002	FTA-SB-212-0002	FTA-SB-212-SS-N-110216	FTA-SB-213-0002	FTA-SB-214-0002-D	FTA-SB-214-0002	FTA-SB-214-SS-N-110216	FTA-SB-215-0002	FTA-SB-215-SS-D-110216
			Sample Type Code	N	N	N	N	FD	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg	17100	14400		11700	13000	13500		15100	
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg	0.1	0.07 J		0.09 J	0.05 J	0.18 J		0.1 J	
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg	10.1	7.1 J		9 J	6.1 J	7 J		7.6	
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg	35.7	25.7		21.8	17.4	16.7		28.9	
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg	0.66	0.51		0.48	0.41 J	0.47		0.35 J	
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg	0.12	0.19		0.08 J	0.09	0.08		0.1	
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg	3270	3170		1680	3480	3260		2690	
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	37.1	27.7 J	29.0 J	21.8 J	32.7 J	41.4 J	19.5 J	27.6 J	32.9 J
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg			29				20		33
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg			< 0.32 U				< 0.33 U		< 0.32 U
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg	14.3	15.1		11.5	10.3	12.2		9.6	
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg	30.9	22.4		21.2	18.9	27.3		21.6	
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg	31000	24200		19200	20700	27300		22300	
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg	13.6	11.2 J		11.4 J	10.2 J	10.4 J		12.5 J	
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg	8420	7680		5040	7500	8860		6910	
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg	666	508		470	474	576		498	
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg	< 0.019 U	0.007 J		< 0.018 U	< 0.013 U	< 0.016 U		0.03 J	
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg	30.3	29.5		21.1	23	28.7		21.5	
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg	1740	1290 J		949 J	760 J	791 J		1000 J	
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg	0.25 J	0.23 J		0.21 J	0.19 J	0.24 J		< 0.45 U	
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg	0.05 J	0.02 J		0.05 J	0.03 J	0.03 J		0.05 J	
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg	180	324 J		96.2 J	159 J	118 J		< 145 U	
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg	0.12	0.08 J		0.08 J	0.06 J	0.06 J		0.09 J	
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg	45.8	36.7		27.5	30.4	36.6		38.6	
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg	64	69.1		43.3	44.8	47		50.8	
FFTA_RA_SO_Other	PH	-9	SU	6	6.2		5		6		5.4	
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT	80	91		90	95	92		89	
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 U	
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 U	
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 U	
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.097 U	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.097 U	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.11 U	< 0.011 U		< 0.0096 U	< 0.0099 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.097 U	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.097 U	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	3.2 J	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	13 J	0.32		0.054	0.71	0.6		1.1	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.097 U	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.097 U	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.00097 UJ	< 0.00092 UJ		< 0.00082 UJ	< 0.00084 UJ	< 0.00088 UJ		< 0.00093 UJ	
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 U	
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 U	
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 UJ	
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 U	
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0019 U	< 0.0018 U		< 0.0016 U	< 0.0016 U	< 0.0017 U		< 0.0018 U	
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	1.6 J	0.044 J		0.005 J	0.083 J	0.079 J		0.13 J	
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.0097 U	< 0.0092 U		< 0.0082 U	< 0.0084 U	< 0.0088 U		< 0.0093 U	
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg	16.2 J	0.32		0.054	0.71	0.6		1.1	
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	16	0.32		0.054	0.71	0.60		1.1	
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.019 U	< 0.018 U		< 0.016 U	< 0.016 U	< 0.017 U		< 0.018 U	
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.00097 U	< 0.00092 U		< 0.00082 U	< 0.00084 U	< 0.00088 U		< 0.00093 U	
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.011 U	0.0014 J		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.056 U	< 0.049 U		< 0.044 U	< 0.049 U	< 0.05 U		< 0.055 U	
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.056 U	< 0.049 U		< 0.044 U	< 0.049 U	< 0.05 U		< 0.055 U	
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.69 U	< 0.61 U		< 0.54 U	< 0.6 U	< 0.62 U		< 0.68 U	
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.056 U	< 0.049 U		< 0.044 U	< 0.049 U	< 0.05 U		< 0.055 U	
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.084 UJ	< 0.074 UJ		< 0.066 UJ	< 0.073 UJ	< 0.076 UJ		< 0.082 UJ	
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.056 U	< 0.049 U		< 0.044 U	< 0.049 U	< 0.05 U		< 0.055 U	
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.69 UJ	< 0.61 U		< 0.54 U	< 0.6 U	< 0.62 U		< 0.68 U	
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.69 U	< 0.61 U		< 0.54 U	< 0.6 U	< 0.62 U		< 0.68 U	
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.11 U	< 0.099 U		< 0.088 U	< 0.098 U	< 0.1 U		< 0.11 U	
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-211	FTA-SB-212	FTA-SB-212	FTA-SB-213	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-215	FTA-SB-215
			Sample Date	11/6/2012	11/5/2012	11/2/2016	11/5/2012	11/5/2012	11/5/2012	11/1/2016	11/7/2012	11/2/2016
						FTA-SB-212-SS-N-				FTA-SB-214-SS-N-		FTA-SB-215-SS-D-
			Sample ID	FTA-SB-211-0002	FTA-SB-212-0002	110216	FTA-SB-213-0002	FTA-SB-214-0002-D	FTA-SB-214-0002	110216	FTA-SB-215-0002	110216
			Sample Type Code	N	N	N	N	FD	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.056 U	< 0.049 U		< 0.044 U	< 0.049 U	< 0.05 U		< 0.055 UJ	
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.69 U	< 0.61 UJ		< 0.54 UJ	< 0.6 UJ	< 0.62 UJ		< 0.68 U	
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.011 U	0.001 J		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.28 UJ	< 0.24 UJ		< 0.22 UJ	< 0.24 UJ	< 0.25 UJ		< 0.27 U	
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.0035 J	0.027		< 0.0088 U	< 0.0098 U	< 0.01 U		0.024	
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	< 0.011 U	0.03		< 0.0088 U	< 0.0098 U	0.0042 J		0.024	
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.0044 J	0.047		< 0.0088 U	< 0.0098 U	< 0.01 U		0.037	
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.056 U	< 0.049 U		< 0.044 U	< 0.049 U	0.0044 J		0.0049 J	
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	< 0.011 U	0.0099 J		< 0.0088 U	< 0.0098 U	< 0.01 U		0.008 J	
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.056 U	< 0.049 U		< 0.044 U	< 0.049 U	< 0.05 U		< 0.055 U	
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	0.017 J	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.0069 J	0.048		< 0.0088 U	< 0.0098 U	< 0.01 U		0.031	
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.011 U	< 0.0099 U		< 0.0088 U	< 0.0098 U	< 0.01 U		< 0.011 U	
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.056 U	< 0.049 UJ		< 0.044 UJ	< 0.049 UJ	< 0.05 UJ		< 0.055 U	
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg	0.015	0.16		< 0.22 U	< 0.24 U	0.0042		0.12	
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg	< 0.28 U	< 0.24 U		< 0.22 U	< 0.24 U	< 0.25 U		< 0.27 U	
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg	0.015	0.16		< 0.22 U	< 0.24 U	0.0042		0.12	
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-211	FTA-SB-212	FTA-SB-212	FTA-SB-213	FTA-SB-214	FTA-SB-214	FTA-SB-214	FTA-SB-215	FTA-SB-215
			Sample Date	11/6/2012	11/5/2012	11/2/2016	11/5/2012	11/5/2012	11/5/2012	11/1/2016	11/7/2012	11/2/2016
			Sample ID	FTA-SB-211-0002	FTA-SB-212-0002	FTA-SB-212-SS-N-110216	FTA-SB-213-0002	FTA-SB-214-0002-D	FTA-SB-214-0002	FTA-SB-214-SS-N-110216	FTA-SB-215-0002	FTA-SB-215-SS-D-110216
			Sample Type Code	N	N	N	N	FD	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	0.0028 J	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	0.0033 J	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	0.0042 J	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	0.0024 J	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.011 U	< 0.012 U		< 0.012 U	< 0.011 U	< 0.012 U		< 0.011 U	
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg	0.15	< 0.021 U		< 0.16 U	< 0.035 U	< 0.012 U		0.14	
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0045 U	< 0.005 U		< 0.0046 U	< 0.0044 U	< 0.005 U		< 0.0042 U	
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0045 U	< 0.005 U		< 0.0046 U	< 0.0044 U	< 0.005 U		< 0.0042 U	
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		0.002 J	
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0045 U	< 0.005 U		< 0.0046 U	< 0.0044 U	< 0.005 U		< 0.0042 U	
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.011 U	< 0.012 U		< 0.012 U	< 0.011 U	< 0.012 U		< 0.011 U	
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		0.0032 J	
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0022 U	< 0.0025 U		< 0.0023 U	< 0.0022 U	< 0.0025 U		< 0.0021 U	
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0045 U	< 0.005 U		< 0.0046 U	< 0.0044 U	< 0.005 U		< 0.0042 U	
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0068 U	< 0.0075 U		< 0.0069 U	< 0.0065 U	< 0.0075 U		< 0.0064 U	
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0045 U	< 0.005 U		< 0.0046 U	< 0.0044 U	< 0.005 U		< 0.0042 U	

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-215	FTA-SB-216	FTA-SB-217	FTA-SB-217	FTA-SB-218	FTA-SB-219	FTA-SB-220	FTA-SB-220	FTA-SB-300	
			Sample Date	11/2/2016	11/6/2012	11/7/2012	11/7/2012	11/7/2012	11/8/2012	11/6/2012	11/2/2016	11/7/2012	
			Sample ID	FTA-SB-215-SS-N-110216	FTA-SB-216-0002	FTA-SB-217-0002-D	FTA-SB-217-0002	FTA-SB-218-0002	FTA-SB-219-0002	FTA-SB-220-0002	FTA-SB-220-SS-N-110216	FTA-SB-300-0002-D	
			Sample Type Code	N	N	FD	N	N	N	N	N	FD	
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg		8970	13300	11600	16600	8460	11600		
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg		0.1	0.06 J	0.06 J	0.06 J	0.09 J	0.06 J		
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg		5.3	7.3	6.5	5.5	3.6 J	4.6 J		
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg		27.3	27.2	20.4	11.7	33.6 J	18.6		
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg		0.28 J	0.38 J	0.32 J	0.26 J	0.63	0.38 J		
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg		0.13	0.06 J	0.06 J	0.04 J	0.37	0.07 J		
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg		5840	2240	1790	1740	3500	2360		
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	23.6 J	22	23.8 J	21.4 J	25.1 J	13.9 J	38.9 J	24.0 J	
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg	24							24	
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg	< 0.32 U							< 0.77 U	
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg		7.8	10.4	10.3	8.2	11.9	8.6		
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg		32.1	25.2	21.2	6.3	8 J	12.9		
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg		16400	19700	18000	19500	18300 J	17200		
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg		9.3	8.7 J	20.1 J	7.9 J	5.2 J	7.3 J		
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg		5170	6570	5400	5490	3310 J	6700		
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg		345	469	452	342	2220	315		
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg		0.03 J	0.01 J	0.01 J	0.04	0.04 J	0.005 J		
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg		17.9	22.4	20.5	18.3	7.1	21.9		
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg		850	823 J	627 J	436 J	583 J	732 J		
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg		0.4	< 0.27 U	< 0.27 U	< 0.35 U	2.4	0.28 J		
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg		0.22	0.04 J	0.05 J	0.03 J	0.03 J	0.02 J		
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg		118	< 100 U	< 73.8 U	< 61.2 U	110 J	91.7 J		
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg		0.06 J	0.07 J	0.07 J	0.05 J	0.1 J	0.05 J		
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg		24.8	28.6	28.9	28.4	34.2	28.8		
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg		63.2	38.5	35.1	34.5	39 J	38		
FFTA_RA_SO_Other	PH	-9	SU		7.1		5.4	4.5	5.7	5.8		
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT		84	89	90	80	44	88		88
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg		< 0.0097 U	< 0.0092 U	< 0.0094 U	< 0.01 U	< 0.018 U	< 0.0089 U		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg		< 0.0097 U	< 0.0092 U	< 0.0094 U	< 0.01 U	< 0.018 U	< 0.0089 U		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg		< 0.011 U	< 0.011 U	< 0.011 U	< 0.012 U	< 0.021 U	< 0.01 U		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg		< 0.0097 U	< 0.0092 U	< 0.0094 U	< 0.01 U	< 0.018 U	< 0.0089 U		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg		< 0.0097 U	< 0.0092 U	< 0.0094 U	< 0.01 U	< 0.018 U	< 0.0089 U		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg		< 0.0097 U	< 0.0092 U	< 0.0094 U	< 0.01 U	< 0.018 U	< 0.0089 U		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg		0.46	< 0.0092 U	< 0.0094 U	< 0.01 U	0.041	1.5		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg		< 0.0097 U	< 0.0092 U	< 0.0094 U	< 0.01 U	< 0.018 U	< 0.0089 U		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg		< 0.0097 U	< 0.0092 U	< 0.0094 U	< 0.01 U	< 0.018 U	< 0.0089 U		
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg		< 0.00097 UJ							
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg		< 0.0019 U							
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg		0.067 J							
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg		< 0.00097 U							
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg		< 0.0097 U							
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg		0.46	< 0.0094 U	< 0.00958 U	< 0.0102 U	0.041	1.5		
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg		0.46	< 0.011 U	< 0.011 U	< 0.012 U	0.041	1.5		
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg		< 0.019 U							
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg		< 0.00097 U							
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg		0.055	< 0.01 U	< 0.0099 U	0.0018 J	0.069	< 0.011 U		
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg		< 0.052 U	< 0.053 U	< 0.05 U	< 0.062 U	< 0.11 U	< 0.056 U		
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg		< 0.052 U	< 0.053 U	< 0.05 U	0.0041 J	< 0.11 U	< 0.056 U		
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg		< 0.64 U	< 0.65 U	< 0.61 U	< 0.77 U	< 1.4 U	< 0.68 U		
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg		< 0.052 U	< 0.053 U	< 0.05 U	< 0.062 U	< 0.11 U	< 0.056 U		
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg		< 0.078 UJ	< 0.079 UJ	< 0.074 UJ	< 0.094 UJ	< 0.16 UJ	< 0.084 UJ		
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg		< 0.052 U	< 0.053 U	< 0.05 U	< 0.062 U	< 0.11 U	< 0.056 U		
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg		0.21 J	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg		< 0.64 UJ	< 0.65 U	< 0.61 U	< 0.77 U	< 1.4 U	< 0.68 U		
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 UJ	< 0.011 UJ		
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg		< 0.64 U	< 0.65 U	< 0.61 U	< 0.77 U	< 1.4 U	< 0.68 U		
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg		< 0.1 U	< 0.1 U	< 0.099 U	< 0.12 U	< 0.22 U	< 0.11 U		
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-215	FTA-SB-216	FTA-SB-217	FTA-SB-217	FTA-SB-218	FTA-SB-219	FTA-SB-220	FTA-SB-220	FTA-SB-300	
			Sample Date	11/2/2016	11/6/2012	11/7/2012	11/7/2012	11/7/2012	11/8/2012	11/6/2012	11/2/2016	11/7/2012	
			Sample ID	FTA-SB-215-SS-N-110216	FTA-SB-216-0002	FTA-SB-217-0002-D	FTA-SB-217-0002	FTA-SB-218-0002	FTA-SB-219-0002	FTA-SB-220-0002	FTA-SB-220-SS-N-110216	FTA-SB-300-0002-D	
			Sample Type Code	N	N	FD	N	N	N	N	N	FD	
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg		< 0.052 U	< 0.053 UJ	< 0.05 UJ	< 0.062 UJ	< 0.11 U	< 0.056 U		
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg		< 0.64 UJ	< 0.65 U	< 0.61 U	< 0.77 U	< 1.4 U	< 0.68 UJ		
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg		1.7	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg		2.8	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	0.0019 J	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg		< 0.26 UJ	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 UJ		
FFTA_RA_SO_SVOCs	BENZO(A)ANTHRACENE	56-55-3	mg/kg		6.6	0.0034 J	0.002 J	0.0032 J	0.0074 J	< 0.011 U		
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg		4.3	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg		6.1	0.0045 J	0.0029 J	0.0048 J	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg		1.5	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg		2.3	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg		0.22 J	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	0.61		
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg		< 0.052 U	< 0.053 U	< 0.05 U	< 0.062 U	< 0.11 UJ	< 0.056 UJ		
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg		0.76	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg		6	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg		0.92 J	< 0.01 U	< 0.0099 U	0.0031 J	0.0044 J	< 0.011 U		
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg		0.62	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg		< 0.052 U	< 0.053 U	< 0.05 U	< 0.062 U	< 0.11 U	< 0.056 U		
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg		14	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg		1.3	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	INDENO(1,2,3-CD)PYRENE	193-39-5	mg/kg		4.7 J	0.0067 J	0.0052 J	0.008 J	0.018 J	< 0.011 U		
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg		0.16	< 0.01 U	< 0.0099 U	< 0.012 U	0.043 J	< 0.011 U		
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg		< 0.01 U	< 0.01 U	< 0.0099 U	< 0.012 U	< 0.022 U	< 0.011 U		
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg		< 0.052 U	< 0.053 U	< 0.05 U	< 0.062 U	< 0.11 U	< 0.056 U		
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg		9.3	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg		< 0.26 U	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg		11	< 0.26 U	< 0.24 U	< 0.31 U	< 0.54 U	< 0.28 U		
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg		57	0.015	0.010	0.019	0.030	< 0.28 U		
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg		15	< 0.26 U	< 0.24 U	< 0.31 U	0.043	< 0.28 U		
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg		73	0.015	0.010	0.019	0.073	< 0.28 U		
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO(1,2,3-CD)PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									< 14 U
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									< 24 U
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									< 24 U
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANI	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
			Location ID	FTA-SB-215	FTA-SB-216	FTA-SB-217	FTA-SB-217	FTA-SB-218	FTA-SB-219	FTA-SB-220	FTA-SB-220	FTA-SB-300
			Sample Date	11/2/2016	11/6/2012	11/7/2012	11/7/2012	11/7/2012	11/8/2012	11/6/2012	11/2/2016	11/7/2012
			Sample ID	FTA-SB-215-SS-N-110216	FTA-SB-216-0002	FTA-SB-217-0002-D	FTA-SB-217-0002	FTA-SB-218-0002	FTA-SB-219-0002	FTA-SB-220-0002	FTA-SB-220-SS-N-110216	FTA-SB-300-0002-D
			Sample Type Code	N	N	FD	N	N	N	N	N	FD
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg		< 0.014 U	< 0.01 U	< 0.018 U	< 0.012 U	< 0.04 UJ	< 0.0096 U		
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg		0.12	0.047	0.059	0.13	0.76 J	< 0.17 U		
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg		< 0.0055 U	< 0.004 U	< 0.007 U	< 0.005 U	< 0.016 UJ	< 0.0038 U		
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg		< 0.0055 U	< 0.004 U	< 0.007 U	< 0.005 U	< 0.016 UJ	< 0.0038 U		
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	0.011 J	< 0.0019 U		
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg		< 0.0055 U	< 0.004 U	< 0.007 U	< 0.005 U	< 0.016 UJ	< 0.0038 U		
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg		< 0.014 U	< 0.01 U	< 0.018 U	< 0.012 U	< 0.04 UJ	< 0.0096 U		
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg		< 0.0028 U	< 0.002 U	< 0.0035 U	< 0.0025 U	< 0.008 UJ	< 0.0019 U		
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg		< 0.0055 U	< 0.004 U	< 0.007 U	< 0.005 U	< 0.016 UJ	< 0.0038 U		
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg		< 0.0082 U	< 0.006 U	< 0.01 U	< 0.0075 U	< 0.024 UJ	< 0.0058 U		
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg		< 0.0055 U	< 0.004 U	< 0.007 U	< 0.005 U	< 0.016 U	< 0.0038 U		

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	FTA-SB-300	FTA-SB-301	FTA-SB-305	DDA-E-1E	DDA-N-5A	DDA-NE-10D	DDA-NE-10D	DDA-NE-13I	DDA-NE-2I
			Sample Date	11/7/2012	11/8/2012	11/7/2012	7/15/2011	8/20/2010	7/15/2011	7/15/2011	7/15/2011	7/14/2011
			Sample ID	FTA-SB-300-0002	FTA-SB-301-0102	FTA-SB-305-0002	DDA-E-01E-SO-0002	DDA-N-5A-SO-0002	DDA-NE-10D-SO-0002-D	DDA-NE-10D-SO-0002	DDA-NE-13I-SO-0002	DDA-NE-021-SO-0002-D
			Sample Type Code	N	N	N	N	N	FD	N	N	FD
			Depth Interval	0 - 2 ft	1 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg									
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg									
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg									
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg									
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg									
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg									
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg									
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg									
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg									
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg									
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg									
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg									
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg									
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg									
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg									
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg									
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg									
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg									
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg									
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg									
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg									
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg									
FFTA_RA_SO_Other	PH	-9	SU									
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT	88	81	78						
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg				< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg				< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg				< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg				< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg				< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg				< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.018 U	< 0.018 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg				3.45	0.599	10.6	7.4	0.469	0.192
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg				3.45	0.599	10.6	7.4	0.469	0.192
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg									
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg									
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg									
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg									
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg									
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg									
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
				Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
				Location ID	FTA-SB-300	FTA-SB-301	FTA-SB-305	DDA-E-1E	DDA-N-5A	DDA-NE-10D	DDA-NE-10D	DDA-NE-13I	DDA-NE-2I
				Sample Date	11/7/2012	11/8/2012	11/7/2012	7/15/2011	8/20/2010	7/15/2011	7/15/2011	7/15/2011	7/14/2011
				Sample ID	FTA-SB-300-0002	FTA-SB-301-0102	FTA-SB-305-0002	DDA-E-01E-SO-0002	DDA-N-5A-SO-0002	DDA-NE-10D-SO-0002-D	DDA-NE-10D-SO-0002	DDA-NE-13I-SO-0002	DDA-NE-02I-SO-0002-D
				Sample Type Code	N	N	N	N	N	FD	N	N	FD
				Depth Interval	0 - 2 ft	1 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg										
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg										
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg										
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg										
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg										
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg										
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg										
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg										
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg										
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg										
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg										
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg										
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg										
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg										
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg										
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg										
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg										
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg										
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg										
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg										
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg										
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg										
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg										
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg										
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg										
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg										
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg										
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg										
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg										
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg										
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg										
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg										
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg										
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg										
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg										
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg										
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg										
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg										
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg										
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg										
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg										
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg										
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg										
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg										
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg										
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	< 15 U	< 16 U	220							
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 21 U	< 24 U	< 30 U							
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 21 U	< 24 U	< 30 U							
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg										
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg										
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg										
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg										
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg										

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
				Location Group	SITE 00001	SITE 00001	SITE 00001	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
				Location ID	FTA-SB-300	FTA-SB-301	FTA-SB-305	DDA-E-1E	DDA-N-5A	DDA-NE-10D	DDA-NE-10D	DDA-NE-13I	DDA-NE-2I
				Sample Date	11/7/2012	11/8/2012	11/7/2012	7/15/2011	8/20/2010	7/15/2011	7/15/2011	7/15/2011	7/14/2011
				Sample ID	FTA-SB-300-0002	FTA-SB-301-0102	FTA-SB-305-0002	DDA-E-01E-SO-0002	DDA-N-5A-SO-0002	DDA-NE-10D-SO-0002-D	DDA-NE-10D-SO-0002	DDA-NE-13I-SO-0002	DDA-NE-02I-SO-0002-D
				Sample Type Code	N	N	N	N	N	FD	N	N	FD
				Depth Interval	0 - 2 ft	1 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg										
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg										
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg										
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg										
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg										
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg										
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg										
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg										
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg										
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg										
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg										
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg										
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg										
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg										
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg										
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg										
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg										
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg										
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg										
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg										
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg										
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg										
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg										
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg										
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg										
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg										
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg										
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg										
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg										
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg										
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg										
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg										
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg										
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg										
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg										
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg										
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg										
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg										
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg										
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg										
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg										
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg										
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg										
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg										
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg										
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg										
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg										
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg										
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg										

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NE-2I	DDA-NE-3E	DDA-NE-5C	DDA-NE-5D	DDA-NE-5E	DDA-NE-6C	DDA-NE-6D	DDA-NE-7D	DDA-NE-7I	
			Sample Date	7/14/2011	7/13/2011	8/19/2010	8/20/2010	7/13/2011	8/20/2010	8/20/2010	7/12/2011	7/15/2011	
			Sample ID	DDA-NE-02I-SO-0002	DDA-NE-3E-0002	DDA-NE-5C-SO-0002	DDA-NE-5D-SO-0002	DDA-NE-05E-SO-0002	DDA-NE-6C-SO-0002	DDA-NE-6D-SO-0002	DDA-NE-07D-SO-0002	DDA-NE-07I-SO-0002	
			Sample Type Code	N	N	N	N	N	N	N	N	N	
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg										
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg										
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg										
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg										
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg										
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg										
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg										
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg										
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg										
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg										
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg										
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg										
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg										
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg										
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg										
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg										
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg										
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg										
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg										
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg										
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg										
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg										
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg										
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg										
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg										
FFTA_RA_SO_Other	PH	-9	SU										
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT										
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg										
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg										
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg										
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg										
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg										
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg										
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.018 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U	< 0.02 U	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.169	2.67	16	1.83	1.36	0.303	1.64	68.1	2.24	
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg										
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg										
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg										
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg										
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg										
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg										
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg										
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg										
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg										
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg										
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg										
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg										
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg										
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg										
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg										
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg		2.67								
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.169	2.67	16	1.83	1.36	0.303	1.64	68.1	2.24	
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg										
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg										
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg										
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg										
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg										
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg										
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg										
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg										
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg										
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg										
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg										
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg										
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg										
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg										
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg										
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg										
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg										
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg										
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg										
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg										
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg										
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg										
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg										
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg										
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg										

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NE-2I	DDA-NE-3E	DDA-NE-5C	DDA-NE-5D	DDA-NE-5E	DDA-NE-6C	DDA-NE-6D	DDA-NE-7D	DDA-NE-7I	
			Sample Date	7/14/2011	7/13/2011	8/19/2010	8/20/2010	7/13/2011	8/20/2010	8/20/2010	7/12/2011	7/15/2011	
			Sample ID	DDA-NE-02I-SO-0002	DDA-NE-3E-0002	DDA-NE-5C-SO-0002	DDA-NE-5D-SO-0002	DDA-NE-05E-SO-0002	DDA-NE-6C-SO-0002	DDA-NE-6D-SO-0002	DDA-NE-07D-SO-0002	DDA-NE-07I-SO-0002	
			Sample Type Code	N	N	N	N	N	N	N	N	N	
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	
Analyte Group	Compound	CAS	Units										
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg										
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg										
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg										
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg										
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg										
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg										
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg										
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg										
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg										
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg										
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg										
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg										
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg										
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg										
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg										
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg										
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg										
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg										
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg										
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg										
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg										
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg										
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg										
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg										
FFTA_RA_SO_SVOCs	INDENO(1,2,3-CD)PYRENE	193-39-5	mg/kg										
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg										
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg										
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg										
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg										
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg										
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg										
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg										
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg										
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg										
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg										
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg										
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg										
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg										
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg										
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg										
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg										
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg										
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg										
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg										
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg										
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg										
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg										
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg										
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg										
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg										
FFTA_RA_SO_TPH	INDENO(1,2,3-CD)PYRENE	193-39-5	mg/kg										
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg										
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg										
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg										
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg										
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg										
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg										
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg										
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg										
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg										
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg										
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg										
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg										
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg										
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg										

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NE-2I	DDA-NE-3E	DDA-NE-5C	DDA-NE-5D	DDA-NE-5E	DDA-NE-6C	DDA-NE-6D	DDA-NE-7D	DDA-NE-7I
			Sample Date	7/14/2011	7/13/2011	8/19/2010	8/20/2010	7/13/2011	8/20/2010	8/20/2010	7/12/2011	7/15/2011
			Sample ID	DDA-NE-02I-SO-0002	DDA-NE-3E-0002	DDA-NE-5C-SO-0002	DDA-NE-5D-SO-0002	DDA-NE-05E-SO-0002	DDA-NE-6C-SO-0002	DDA-NE-6D-SO-0002	DDA-NE-07D-SO-0002	DDA-NE-07I-SO-0002
			Sample Type Code	N	N	N	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg									
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg									
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg									
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg									
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg									
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg									
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg									
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg									
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg									
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg									
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg									
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg									
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NE-8B	DDA-NW-10E	DDA-NW-10G	DDA-NW-10Q	DDA-NW-2D	DDA-NW-2F	DDA-NW-2G	DDA-NW-2G	DDA-NW-2P
			Sample Date	7/13/2011	7/14/2011	7/14/2011	7/14/2011	8/19/2010	8/18/2010	8/20/2010	8/20/2010	7/12/2011
			Sample ID	DDA-NE-08B-SO-0002	DDA-NW-10E-SO-0004	DDA-NW-10G-SO-0002	DDA-NW-10Q-SO-0002	DDA-NW-2D-SO-0002	DDA-NW-2F-SO-0002	DDA-NW-2G-SO-0002-D	DDA-NW-2G-SO-0002	DDA-NW-02P-SO-0002
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg									
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg									
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg									
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg									
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg									
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg									
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg									
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg									
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg									
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg									
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg									
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg									
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg									
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg									
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg									
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg									
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg									
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg									
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg									
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg									
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg									
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg									
FFTA_RA_SO_Other	PH	-9	SU									
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT									
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.33 U	< 0.33 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.33 U	< 0.33 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.33 U	< 0.33 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.33 U	< 0.33 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.33 U	< 0.33 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.085 U	< 0.33 U	< 0.33 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	1.96	1.2	14.2	1.94	5.65	25.6	81.7	78.9	0.31
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.96	1.2	14.2	1.94	5.65	25.6	81.7	78.9	0.31
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg									
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg									
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg									
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg									
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg									
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg									
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NE-8B	DDA-NW-10E	DDA-NW-10G	DDA-NW-10Q	DDA-NW-2D	DDA-NW-2F	DDA-NW-2G	DDA-NW-2G	DDA-NW-2P
			Sample Date	7/13/2011	7/14/2011	7/14/2011	7/14/2011	8/19/2010	8/18/2010	8/20/2010	8/20/2010	7/12/2011
			Sample ID	DDA-NE-08B-SO-0002	DDA-NW-10E-SO-0004	DDA-NW-10G-SO-0002	DDA-NW-10Q-SO-0002	DDA-NW-2D-SO-0002	DDA-NW-2F-SO-0002	DDA-NW-2G-SO-0002-D	DDA-NW-2G-SO-0002	DDA-NW-02P-SO-0002
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg									
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg									
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg									
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg									
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg									
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg									
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg									
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg									
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg									
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg									
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg									
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg									
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg									
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg									
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg									
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg									
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg									
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NE-8B	DDA-NW-10E	DDA-NW-10G	DDA-NW-10Q	DDA-NW-2D	DDA-NW-2F	DDA-NW-2G	DDA-NW-2G	DDA-NW-2P
			Sample Date	7/13/2011	7/14/2011	7/14/2011	7/14/2011	8/19/2010	8/18/2010	8/20/2010	8/20/2010	7/12/2011
			Sample ID	DDA-NE-08B-SO-0002	DDA-NW-10E-SO-0004	DDA-NW-10G-SO-0002	DDA-NW-10Q-SO-0002	DDA-NW-2D-SO-0002	DDA-NW-2F-SO-0002	DDA-NW-2G-SO-0002-D	DDA-NW-2G-SO-0002	DDA-NW-02P-SO-0002
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg									
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg									
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg									
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg									
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg									
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg									
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg									
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg									
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg									
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg									
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg									
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg									
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-3E	DDA-NW-3F	DDA-NW-3R	DDA-NW-4D	DDA-NW-4F	DDA-NW-4F	DDA-NW-4R	DDA-NW-4R	DDA-NW-4Y
			Sample Date	8/20/2010	8/18/2010	7/14/2011	8/19/2010	8/18/2010	8/18/2010	7/14/2011	7/14/2011	7/15/2011
			Sample ID	DDA-NW-3E-SO-0002	DDA-NW-3F-SO-0002	DDA-NW-03R-SO-0002	DDA-NW-4D-SO-0002	DDA-NW-4F-SO-0001	DDA-NW-4F-SO-0002	DDA-NW-4R-0002-D	DDA-NW-4R-0002	DDA-NW-04Y-SO-0002
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg									
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg									
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg									
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg									
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg									
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg									
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg									
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg									
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg									
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg									
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg									
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg									
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg									
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg									
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg									
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg									
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg									
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg									
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg									
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg									
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg									
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg									
FFTA_RA_SO_Other	PH	-9	SU									
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT									
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.018 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	22.2	3.61	0.166	8.47	11	1.3	0.63	0.612	1.34
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg							0.63	0.612	
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	22.2	3.61	0.166	8.47	11	1.3	0.63	0.612	1.34
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg									
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg									
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg									
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg									
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg									
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg									
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-3E	DDA-NW-3F	DDA-NW-3R	DDA-NW-4D	DDA-NW-4F	DDA-NW-4F	DDA-NW-4R	DDA-NW-4R	DDA-NW-4Y
			Sample Date	8/20/2010	8/18/2010	7/14/2011	8/19/2010	8/18/2010	8/18/2010	7/14/2011	7/14/2011	7/15/2011
			Sample ID	DDA-NW-3E-SO-0002	DDA-NW-3F-SO-0002	DDA-NW-03R-SO-0002	DDA-NW-4D-SO-0002	DDA-NW-4F-SO-0001	DDA-NW-4F-SO-0002	DDA-NW-4R-0002-D	DDA-NW-4R-0002	DDA-NW-04Y-SO-0002
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg									
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg									
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg									
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg									
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg									
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg									
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg									
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg									
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg									
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg									
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg									
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg									
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg									
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg									
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg									
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg									
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg									
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-3E	DDA-NW-3F	DDA-NW-3R	DDA-NW-4D	DDA-NW-4F	DDA-NW-4F	DDA-NW-4R	DDA-NW-4R	DDA-NW-4Y
			Sample Date	8/20/2010	8/18/2010	7/14/2011	8/19/2010	8/18/2010	8/18/2010	7/14/2011	7/14/2011	7/15/2011
			Sample ID	DDA-NW-3E-SO-0002	DDA-NW-3F-SO-0002	DDA-NW-03R-SO-0002	DDA-NW-4D-SO-0002	DDA-NW-4F-SO-0001	DDA-NW-4F-SO-0002	DDA-NW-4R-0002-D	DDA-NW-4R-0002	DDA-NW-04Y-SO-0002
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg									
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg									
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg									
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg									
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg									
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg									
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg									
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg									
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg									
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg									
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg									
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg									
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-5C	DDA-NW-5F	DDA-NW-5F	DDA-NW-5G	DDA-NW-6B	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-6F	DDA-NW-06R	DDA-NW-06R
			Sample Date	8/20/2010	8/17/2010	8/17/2010	8/20/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/20/2010	7/14/2011	7/14/2011
			Sample ID	DDA-NW-5C-SO-0002	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-5G-SO-0002	DDA-NW-6B-SO-0001	DDA-NW-6D-SO-0001-D	DDA-NW-6D-SO-0001	DDA-NW-6E-SO-0001-D	DDA-NW-6E-SO-0001	DDA-NW-6F-SO-0002	DDA-NW-06R-SO-0002-D	DDA-NW-06R-SO-0002
			Sample Type Code	N	N	N	N	N	FD	N	FD	N	N	FD	N
			Depth Interval	0 - 2 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units												
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg												
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg												
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg												
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg												
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg												
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg												
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg												
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg												
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg												
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg												
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg												
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg												
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg												
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg												
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg												
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg												
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg												
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg												
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg												
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg												
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg												
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg												
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg												
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg												
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg												
FFTA_RA_SO_Other	PH	-9	SU												
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT												
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg												
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg												
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg												
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg												
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg												
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg												
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.165 U	< 0.18 U	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.165 U	< 0.18 U	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.165 U	< 0.18 U	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.165 U	< 0.18 U	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.165 U	< 0.18 U	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.33 U	< 0.0165 U	< 0.085 U	< 0.0165 U	< 0.165 U	< 0.165 U	< 0.18 U	< 0.085 U	< 0.0165 U	< 0.0165 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	4.35	38.3	7.48	24.7	7.52	45.4	45.6	37.2	29.4	18.1	0.576	0.471
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg												
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg												
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg												
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg												
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg												
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg												
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg												
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg												
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg												
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg												
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg												
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg												
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg												
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg												
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg												
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg												
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	4.35	38.3	7.48	24.7	7.52	45.4	45.6	37.2	29.4	18.1	0.576	0.471
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg												
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg												
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg												
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg												
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg												
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg												
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg												
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg												
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg												
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg												
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg												
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg												
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg												
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg												
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg												
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg												
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg												
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg												
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg												
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg												
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg												
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg												
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg												
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg												
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg												
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg												

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-5C	DDA-NW-5F	DDA-NW-5F	DDA-NW-5G	DDA-NW-6B	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-6F	DDA-NW-6R	DDA-NW-6R
			Sample Date	8/20/2010	8/17/2010	8/17/2010	8/20/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/20/2010	7/14/2011	7/14/2011
			Sample ID	DDA-NW-5C-SO-0002	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-5G-SO-0002	DDA-NW-6B-SO-0001	DDA-NW-6D-SO-0001-D	DDA-NW-6D-SO-0001	DDA-NW-6E-SO-0001-D	DDA-NW-6E-SO-0001	DDA-NW-6F-SO-0002	DDA-NW-06R-SO-0002-D	DDA-NW-06R-SO-0002
			Sample Type Code	N	N	N	N	N	FD	N	FD	N	N	FD	N
			Depth Interval	0 - 2 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units												
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg												
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg												
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg												
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg												
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg												
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg												
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg												
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg												
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg												
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg												
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg												
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg												
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg												
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg												
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg												
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg												
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg												
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg												
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg												
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg												
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg												
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg												
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg												
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg												
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg												
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg												
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg												
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg												
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg												
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg												
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg												
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg												
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg												
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg												
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg												
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg												
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg												
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg												
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg												
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg												
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg												
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg												
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg												
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg												
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg												
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg												
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg												
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg												
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg												
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg												
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg												
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg												
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg												
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg												
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg												
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg												
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg												
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg												
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg												
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg												
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg												
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg												
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg												
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg												
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg												
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg												
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg												
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg												
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg												
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg												
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg												
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg												
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg												
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg												
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg												

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-5C	DDA-NW-5F	DDA-NW-5F	DDA-NW-5G	DDA-NW-6B	DDA-NW-6D	DDA-NW-6D	DDA-NW-6E	DDA-NW-6E	DDA-NW-6F	DDA-NW-06R	DDA-NW-06R
			Sample Date	8/20/2010	8/17/2010	8/17/2010	8/20/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/17/2010	8/20/2010	7/14/2011	7/14/2011
			Sample ID	DDA-NW-5C-SO-0002	DDA-NW-5F-SO-0001	DDA-NW-5F-SO-0002	DDA-NW-5G-SO-0002	DDA-NW-6B-SO-0001	DDA-NW-6D-SO-0001-D	DDA-NW-6D-SO-0001	DDA-NW-6E-SO-0001-D	DDA-NW-6E-SO-0001	DDA-NW-6F-SO-0002	DDA-NW-06R-SO-0002-D	DDA-NW-06R-SO-0002
			Sample Type Code	N	N	N	N	N	FD	N	FD	N	N	FD	N
			Depth Interval	0 - 2 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 1 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units												
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg												
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg												
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg												
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg												
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg												
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg												
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg												
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg												
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg												
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg												
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg												
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg												
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg												
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg												
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg												
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg												
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg												
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg												
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg												
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg												
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg												
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg												
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg												
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg												
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg												
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg												
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg												
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg												
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg												
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg												
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg												
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg												
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg												
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg												
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg												
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg												
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg												
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg												
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg												
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg												
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg												
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg												
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg												
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg												
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg												
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg												
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg												
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg												
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg												

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-7B	DDA-NW-7E	DDA-NW-8R	DDA-NW-9B	DDA-NW-9E	DDA-NW-9M
			Sample Date	8/20/2010	8/20/2010	7/14/2011	7/12/2011	7/12/2011	7/13/2011
			Sample ID	DDA-NW-7B-SO-0002	DDA-NW-7E-SO-0002	DDA-NW-08R-SO-0002	DDA-NW-09B-SO-0002	DDA-NW-9E-0002	DDA-NW-09M-SO-0002
			Sample Type Code	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units						
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg						
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg						
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg						
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg						
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg						
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg						
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg						
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg						
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg						
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg						
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg						
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg						
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg						
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg						
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg						
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg						
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg						
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg						
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg						
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg						
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg						
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg						
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg						
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg						
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg						
FFTA_RA_SO_Other	PH	-9	SU						
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT						
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg						
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg						
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg						
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg						
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg						
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg						
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0165 U	< 0.0215 U	< 0.0165 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	3.55	5.21	7.85	0.109	5.76	24
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg						
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg						
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg						
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg						
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg						
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg						
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg						
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg						
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg						
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg						
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg						
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg						
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg						
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg						
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg						
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg					5.76	
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	3.55	5.21	7.85	0.109	5.76	24
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg						
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg						
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg						
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg						
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg						
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg						
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg						
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg						
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg						
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg						
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg						
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg						
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg						
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg						
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg						
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg						
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg						
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg						
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg						
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg						
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg						
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg						
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg						
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg						
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg						
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg						

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-7B	DDA-NW-7E	DDA-NW-8R	DDA-NW-9B	DDA-NW-9E	DDA-NW-9M
			Sample Date	8/20/2010	8/20/2010	7/14/2011	7/12/2011	7/12/2011	7/13/2011
			Sample ID	DDA-NW-7B-SO-0002	DDA-NW-7E-SO-0002	DDA-NW-08R-SO-0002	DDA-NW-09B-SO-0002	DDA-NW-9E-0002	DDA-NW-09M-SO-0002
			Sample Type Code	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units						
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg						
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg						
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg						
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg						
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg						
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg						
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg						
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg						
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg						
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg						
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg						
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg						
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg						
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg						
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg						
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg						
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg						
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg						
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg						
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg						
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg						
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg						
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg						
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg						
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg						
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg						
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg						
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg						
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg						
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg						
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg						
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg						
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg						
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg						
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg						
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg						
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg						
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg						
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg						
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg						
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg						
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg						
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg						
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg						
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg						
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg						
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg						
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg						
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg						
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg						
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg						
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg						
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg						
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg						
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg						
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg						
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg						
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg						
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg						
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg						
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg						
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg						
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg						
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg						
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg						
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg						
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg						
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg						
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg						
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg						
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg						
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg						
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg						
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg						
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg						

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-NW-7B	DDA-NW-7E	DDA-NW-8R	DDA-NW-9B	DDA-NW-9E	DDA-NW-9M
			Sample Date	8/20/2010	8/20/2010	7/14/2011	7/12/2011	7/12/2011	7/13/2011
			Sample ID	DDA-NW-7B-SO-0002	DDA-NW-7E-SO-0002	DDA-NW-08R-SO-0002	DDA-NW-09B-SO-0002	DDA-NW-9E-0002	DDA-NW-09M-SO-0002
			Sample Type Code	N	N	N	N	N	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft
Analyte Group	Compound	CAS	Units						
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg						
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg						
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg						
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg						
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg						
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg						
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg						
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg						
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg						
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg						
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg						
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg						
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg						
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg						
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg						
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg						
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg						
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg						
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg						
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg						
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg						
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg						
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg						
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg						
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg						
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg						
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg						
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg						
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg						
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg						
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg						
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg						
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg						
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg						
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg						
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg						
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg						
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg						
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg						
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg						
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg						
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg						
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg						
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg						
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg						
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg						
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg						
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg						
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg						

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-SE-5B	DDA-SW-2F	DDA-SW-2I	DDA-SW-3G	DDA-W-1F	DDA-W-1G	PCBAREA1-003	PCBAREA1-003	PCBAREA1-004
			Sample Date	7/12/2011	8/20/2010	7/13/2011	7/13/2011	8/18/2010	8/20/2010	9/18/2013	9/18/2013	9/18/2013
			Sample ID	DDA-SE-05B-SO-0002	DDA-SW-2F-SO-0002	DDA-SW-021-SO-0002	DDA-SW-03G-SO-0002	DDA-W-1F-SO-0002	DDA-W-1G-SO-0002	PCBAREA1-003	PCBAREA1-093	PCBAREA1-004
			Sample Type Code	N	N	N	N	N	N	N	FD	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg									
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg									
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg									
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg									
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg									
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg									
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg									
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg									
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg									
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg									
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg									
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg									
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg									
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg									
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg									
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg									
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg									
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg									
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg									
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg									
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg									
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg									
FFTA_RA_SO_Other	PH	-9	SU									
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT									
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.42 U	< 0.83 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.42 U	< 0.83 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.5 U	< 0.98 U	< 0.01 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.42 U	< 0.83 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.42 U	< 0.83 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.018 U	< 0.0165 U	< 0.018 U	< 0.018 U	< 0.165 U	< 0.0165 U	< 0.42 U	< 0.83 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	21.5	8.48	1.11	0.323	36	15.2	74	67	0.4
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.935 U								
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg	< 0.495 U								
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg	< 4.95 U								
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	21.5	8.48	1.11	0.323	36	15.2	74	67	0.40
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg	< 49.5 U								
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.495 U								
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg									
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg									
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg									
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg									
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg									
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg									
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-SE-5B	DDA-SW-2F	DDA-SW-2I	DDA-SW-3G	DDA-W-1F	DDA-W-1G	PCBAREA1-003	PCBAREA1-003	PCBAREA1-004
			Sample Date	7/12/2011	8/20/2010	7/13/2011	7/13/2011	8/18/2010	8/20/2010	9/18/2013	9/18/2013	9/18/2013
			Sample ID	DDA-SE-05B-SO-0002	DDA-SW-2F-SO-0002	DDA-SW-021-SO-0002	DDA-SW-03G-SO-0002	DDA-W-1F-SO-0002	DDA-W-1G-SO-0002	PCBAREA1-003	PCBAREA1-093	PCBAREA1-004
			Sample Type Code	N	N	N	N	N	N	N	FD	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg									
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg									
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg									
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg									
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg									
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg									
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg									
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg									
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg									
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg									
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg									
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg									
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg									
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg									
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg									
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg	< 0.00096 U								

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	DDA-SE-5B	DDA-SW-2F	DDA-SW-2I	DDA-SW-3G	DDA-W-1F	DDA-W-1G	PCBAREA1-003	PCBAREA1-003	PCBAREA1-004
			Sample Date	7/12/2011	8/20/2010	7/13/2011	7/13/2011	8/18/2010	8/20/2010	9/18/2013	9/18/2013	9/18/2013
			Sample ID	DDA-SE-05B-SO-0002	DDA-SW-2F-SO-0002	DDA-SW-021-SO-0002	DDA-SW-03G-SO-0002	DDA-W-1F-SO-0002	DDA-W-1G-SO-0002	PCBAREA1-003	PCBAREA1-093	PCBAREA1-004
			Sample Type Code	N	N	N	N	N	N	N	FD	N
			Depth Interval	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	0 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg									
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg									
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg									
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg									
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg									
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg									
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg									
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.0019 U								
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg									
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg									
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.00096 U								
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreqeed/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014
			Sample Date	9/18/2013	9/18/2013	9/18/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013
			Sample ID	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014
			Sample Type Code	N	N	N	N	N	N	N	N
			Depth Interval	1 - 1 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units								
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg								
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg								
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg								
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg								
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg								
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg								
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg								
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg								
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg								
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg								
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg								
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg								
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg								
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg								
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg								
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg								
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg								
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg								
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg								
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg								
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg								
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg								
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg								
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg								
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg								
FFTA_RA_SO_Other	PH	-9	SU								
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT								
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg								
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg								
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg								
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg								
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg								
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg								
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 1.4 U	< 0.15 U	< 2.2 U	< 0.89 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0085 U	< 0.0085 U	< 0.0085 U	< 0.0084 U	< 1.2 U	< 0.13 U	< 1.9 U	< 0.76 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	0.37	0.13	0.048	3.2	240	8.9	610	140
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg								
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg								
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg								
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg								
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg								
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg								
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg								
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg								
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg								
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg								
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg								
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg								
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg								
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg								
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg								
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg								
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.37	0.13	0.048	3.2	240	8.9	610	140
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg								
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg								
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg								
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg								
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg								
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg								
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg								
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg								
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg								
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg								
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg								
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg								
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg								
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg								
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg								
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg								
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg								
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg								
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg								
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg								
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg								
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg								
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg								
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg								
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg								
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg								

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014
			Sample Date	9/18/2013	9/18/2013	9/18/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013
			Sample ID	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014
			Sample Type Code	N	N	N	N	N	N	N	N
			Depth Interval	1 - 1 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units								
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg								
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg								
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg								
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg								
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg								
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg								
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg								
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg								
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg								
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg								
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg								
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg								
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg								
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg								
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg								
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg								
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg								
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg								
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg								
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg								
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg								
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg								
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg								
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg								
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg								
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg								
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg								
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg								
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg								
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg								
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg								
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg								
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg								
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg								
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg								
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg								
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg								
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg								
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg								
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg								
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg								
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg								
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg								
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg								
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg								
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg								
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg								
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg								
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg								
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg								
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg								
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg								
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg								
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg								
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg								
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg								
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg								
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg								
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg								
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg								
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg								
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg								
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg								
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg								
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg								
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg								
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg								
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg								
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg								
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg								
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg								
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg								
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg								
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg								
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg								

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014
			Sample Date	9/18/2013	9/18/2013	9/18/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013	9/19/2013
			Sample ID	PCBAREA1-005	PCBAREA1-006	PCBAREA1-009	PCBAREA1-010	PCBAREA1-011	PCBAREA1-012	PCBAREA1-013	PCBAREA1-014
			Sample Type Code	N	N	N	N	N	N	N	N
			Depth Interval	1 - 1 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units								
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg								
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg								
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg								
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg								
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg								
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg								
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg								
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg								
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg								
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg								
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg								
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg								
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg								
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg								
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg								
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg								
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg								
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg								
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg								
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg								
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg								
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg								
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg								
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg								
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg								
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg								
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg								
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg								
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg								
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg								
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg								
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg								
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg								
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg								
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg								
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg								
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg								
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg								
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg								
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg								
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg								
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg								
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg								
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg								
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg								
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg								
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg								
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg								
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg								

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	PCBAREA1-017	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-001	PCBAREA2-002	PCBAREA2-003
			Sample Date	9/19/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013
			Sample ID	PCBAREA1-017	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-091	PCBAREA2-002	PCBAREA2-003
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	1 - 1 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg									
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg									
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg									
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg									
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg									
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg									
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg									
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg									
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg									
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg									
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg									
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg									
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg									
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg									
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg									
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg									
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg									
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg									
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg									
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg									
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg									
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg									
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg									
FFTA_RA_SO_Other	PH	-9	SU									
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT									
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg									
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.0084 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U	< 0.0085 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.0084 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U	< 0.0085 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.0098 U	< 0.01 U	< 0.99 U	< 0.0096 U	< 0.88 U	< 0.1 U	< 0.1 U	< 0.01 U	< 0.01 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.0084 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U	< 0.0085 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.0084 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U	< 0.0085 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.0084 U	< 0.0085 U	< 0.84 U	< 0.0082 U	< 0.75 U	< 0.085 U	< 0.085 U	< 0.0085 U	< 0.0085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	1.3	1.1	66	1	35	5.2	4.2	1.7	2.4
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg									
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg									
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg									
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg									
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg									
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg									
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.3	1.1	66	1.0	35	5.2	4.2	1.7	2.4
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg									
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg									
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg									
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg									
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg									
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg									
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg									
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg									
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg									
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg									
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg									
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg									
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg									
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg									
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg									
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg									
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	PCBAREA1-017	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-001	PCBAREA2-002	PCBAREA2-003
			Sample Date	9/19/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013
			Sample ID	PCBAREA1-017	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-091	PCBAREA2-002	PCBAREA2-003
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	1 - 1 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg									
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg									
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg									
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg									
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg									
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg									
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg									
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg									
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg									
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg									
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg									
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg									
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg									
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg									
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg									
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg									
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg									
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg									
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg									
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg									
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg									
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg									
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg									
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg									
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg									
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg									
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg									
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg									
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg									
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg									
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg									
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg									
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg									
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg									
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg									
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg									
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg									
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg									
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg									
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg									
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg									
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg									
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg									
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg									
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg									
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg									
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg									

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005	SITE 00005
			Location ID	PCBAREA1-017	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-001	PCBAREA2-002	PCBAREA2-003
			Sample Date	9/19/2013	9/27/2013	9/27/2013	9/27/2013	9/27/2013	9/18/2013	9/18/2013	9/18/2013	9/18/2013
			Sample ID	PCBAREA1-017	PCBAREA1-207	PCBAREA1-208	PCBAREA1-219	PCBAREA1-220	PCBAREA2-001	PCBAREA2-091	PCBAREA2-002	PCBAREA2-003
			Sample Type Code	N	N	N	N	N	N	FD	N	N
			Depth Interval	1 - 1 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1.5 - 1.5 ft	1 - 1 ft	2 - 2 ft	2 - 2 ft	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg									
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg									
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg									
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg									
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg									
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg									
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg									
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg									
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg									
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg									
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg									
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg									
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg									
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg									
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg									
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg									
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg									
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg									
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg									
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg									
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg									
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg									
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg									
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg									
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg									
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg									
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg									
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg									
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg									
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg									
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg									
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg									
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg									
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg									
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg									
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg									
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg									
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg									
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg									

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005
			Location ID	PCBAREA2-004	PCBAREA2-005
			Sample Date	9/18/2013	9/18/2013
			Sample ID	PCBAREA2-004	PCBAREA2-005
			Sample Type Code	N	N
			Depth Interval	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units		
FFTA_RA_SO_Metals	ALUMINUM	7429-90-5	mg/kg		
FFTA_RA_SO_Metals	ANTIMONY	7440-36-0	mg/kg		
FFTA_RA_SO_Metals	ARSENIC	7440-38-2	mg/kg		
FFTA_RA_SO_Metals	BARIUM	7440-39-3	mg/kg		
FFTA_RA_SO_Metals	BERYLLIUM	7440-41-7	mg/kg		
FFTA_RA_SO_Metals	CADMIUM	7440-43-9	mg/kg		
FFTA_RA_SO_Metals	CALCIUM	7440-70-2	mg/kg		
FFTA_RA_SO_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg		
FFTA_RA_SO_Metals	CHROMIUM III (c)	16065-83-1	mg/kg		
FFTA_RA_SO_Metals	CHROMIUM VI	18540-29-9	mg/kg		
FFTA_RA_SO_Metals	COBALT	7440-48-4	mg/kg		
FFTA_RA_SO_Metals	COPPER	7440-50-8	mg/kg		
FFTA_RA_SO_Metals	IRON	7439-89-6	mg/kg		
FFTA_RA_SO_Metals	LEAD	7439-92-1	mg/kg		
FFTA_RA_SO_Metals	MAGNESIUM	7439-95-4	mg/kg		
FFTA_RA_SO_Metals	MANGANESE	7439-96-5	mg/kg		
FFTA_RA_SO_Metals	MERCURY	7439-97-6	mg/kg		
FFTA_RA_SO_Metals	NICKEL	7440-02-0	mg/kg		
FFTA_RA_SO_Metals	POTASSIUM	7440-09-7	mg/kg		
FFTA_RA_SO_Metals	SELENIUM	7782-49-2	mg/kg		
FFTA_RA_SO_Metals	SILVER	7440-22-4	mg/kg		
FFTA_RA_SO_Metals	SODIUM	7440-23-5	mg/kg		
FFTA_RA_SO_Metals	THALLIUM	7440-28-0	mg/kg		
FFTA_RA_SO_Metals	VANADIUM	7440-62-2	mg/kg		
FFTA_RA_SO_Metals	ZINC	7440-66-6	mg/kg		
FFTA_RA_SO_Other	PH	-9	SU		
FFTA_RA_SO_Other	TOTAL SOLIDS	-29	PCT		
FFTA_RA_SO_Pest_PCBs	4,4-DDD	72-54-8	mg/kg		
FFTA_RA_SO_Pest_PCBs	4,4-DDE	72-55-9	mg/kg		
FFTA_RA_SO_Pest_PCBs	4,4-DDT	50-29-3	mg/kg		
FFTA_RA_SO_Pest_PCBs	ALDRIN	309-00-2	mg/kg		
FFTA_RA_SO_Pest_PCBs	ALPHA-BHC	319-84-6	mg/kg		
FFTA_RA_SO_Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.34 U	< 0.085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.34 U	< 0.085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.4 U	< 0.1 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.34 U	< 0.085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.34 U	< 0.085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.34 U	< 0.085 U
FFTA_RA_SO_Pest_PCBs	AROCLOR-1260	11096-82-5	mg/kg	19	5
FFTA_RA_SO_Pest_PCBs	AROCLOR-1262	37324-23-5	mg/kg		
FFTA_RA_SO_Pest_PCBs	AROCLOR-1268	11100-14-4	mg/kg		
FFTA_RA_SO_Pest_PCBs	BETA-BHC	319-85-7	mg/kg		
FFTA_RA_SO_Pest_PCBs	DELTA-BHC	319-86-8	mg/kg		
FFTA_RA_SO_Pest_PCBs	DIELDRIN	60-57-1	mg/kg		
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN I	959-98-8	mg/kg		
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN II	33213-65-9	mg/kg		
FFTA_RA_SO_Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg		
FFTA_RA_SO_Pest_PCBs	ENDRIN	72-20-8	mg/kg		
FFTA_RA_SO_Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg		
FFTA_RA_SO_Pest_PCBs	ENDRIN KETONE	53494-70-5	mg/kg		
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR	76-44-8	mg/kg		
FFTA_RA_SO_Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg		
FFTA_RA_SO_Pest_PCBs	LINDANE	58-89-9	mg/kg		
FFTA_RA_SO_Pest_PCBs	METHOXYCHLOR	72-43-5	mg/kg		
FFTA_RA_SO_Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS)	1336-36-3	mg/kg		
FFTA_RA_SO_Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	19	5.0
FFTA_RA_SO_Pest_PCBs	TOXAPHENE	8001-35-2	mg/kg		
FFTA_RA_SO_Pest_PCBs	TRANS-CHLORDANE	5103-74-2	mg/kg		
FFTA_RA_SO_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg		
FFTA_RA_SO_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg		
FFTA_RA_SO_SVOCs	1,4-DIOXANE	123-91-1	mg/kg		
FFTA_RA_SO_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg		
FFTA_RA_SO_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg		
FFTA_RA_SO_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg		
FFTA_RA_SO_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg		
FFTA_RA_SO_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg		
FFTA_RA_SO_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg		
FFTA_RA_SO_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg		
FFTA_RA_SO_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg		
FFTA_RA_SO_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg		
FFTA_RA_SO_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg		
FFTA_RA_SO_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg		
FFTA_RA_SO_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg		
FFTA_RA_SO_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg		
FFTA_RA_SO_SVOCs	2-NITROANILINE	88-74-4	mg/kg		
FFTA_RA_SO_SVOCs	2-NITROPHENOL	88-75-5	mg/kg		
FFTA_RA_SO_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg		
FFTA_RA_SO_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg		
FFTA_RA_SO_SVOCs	3-NITROANILINE	99-09-2	mg/kg		
FFTA_RA_SO_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg		
FFTA_RA_SO_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg		
FFTA_RA_SO_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg		

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005
			Location ID	PCBAREA2-004	PCBAREA2-005
			Sample Date	9/18/2013	9/18/2013
			Sample ID	PCBAREA2-004	PCBAREA2-005
			Sample Type Code	N	N
			Depth Interval	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units		
FFTA_RA_SO_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg		
FFTA_RA_SO_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg		
FFTA_RA_SO_SVOCs	4-NITROANILINE	100-01-6	mg/kg		
FFTA_RA_SO_SVOCs	4-NITROPHENOL	100-02-7	mg/kg		
FFTA_RA_SO_SVOCs	ACENAPHTHENE	83-32-9	mg/kg		
FFTA_RA_SO_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg		
FFTA_RA_SO_SVOCs	ACETOPHENONE	98-86-2	mg/kg		
FFTA_RA_SO_SVOCs	ANTHRACENE	120-12-7	mg/kg		
FFTA_RA_SO_SVOCs	ATRAZINE	1912-24-9	mg/kg		
FFTA_RA_SO_SVOCs	BENZALDEHYDE	100-52-7	mg/kg		
FFTA_RA_SO_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg		
FFTA_RA_SO_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg		
FFTA_RA_SO_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg		
FFTA_RA_SO_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg		
FFTA_RA_SO_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg		
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg		
FFTA_RA_SO_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg		
FFTA_RA_SO_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg		
FFTA_RA_SO_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg		
FFTA_RA_SO_SVOCs	CAPROLACTAM	105-60-2	mg/kg		
FFTA_RA_SO_SVOCs	CARBAZOLE	86-74-8	mg/kg		
FFTA_RA_SO_SVOCs	CHRYSENE	218-01-9	mg/kg		
FFTA_RA_SO_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg		
FFTA_RA_SO_SVOCs	DIBENZOFURAN	132-64-9	mg/kg		
FFTA_RA_SO_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg		
FFTA_RA_SO_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg		
FFTA_RA_SO_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg		
FFTA_RA_SO_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg		
FFTA_RA_SO_SVOCs	FLUORANTHENE	206-44-0	mg/kg		
FFTA_RA_SO_SVOCs	FLUORENE	86-73-7	mg/kg		
FFTA_RA_SO_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg		
FFTA_RA_SO_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg		
FFTA_RA_SO_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg		
FFTA_RA_SO_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg		
FFTA_RA_SO_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg		
FFTA_RA_SO_SVOCs	ISOPHORONE	78-59-1	mg/kg		
FFTA_RA_SO_SVOCs	NAPHTHALENE	91-20-3	mg/kg		
FFTA_RA_SO_SVOCs	NITROBENZENE	98-95-3	mg/kg		
FFTA_RA_SO_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg		
FFTA_RA_SO_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg		
FFTA_RA_SO_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg		
FFTA_RA_SO_SVOCs	PHENANTHRENE	85-01-8	mg/kg		
FFTA_RA_SO_SVOCs	PHENOL	108-95-2	mg/kg		
FFTA_RA_SO_SVOCs	PYRENE	129-00-0	mg/kg		
FFTA_RA_SO_SVOCs	HPAH, TOTAL (8270 Methods) (b)	RA-63_8270	mg/kg		
FFTA_RA_SO_SVOCs	LPAH, TOTAL (8270 Methods) (b)	RA-64_8270	mg/kg		
FFTA_RA_SO_SVOCs	PAH, TOTAL (8270 Methods) (b)	RA-3502_8270	mg/kg		
FFTA_RA_SO_TPH	2-METHYLNAPHTHALENE	91-57-6	mg/kg		
FFTA_RA_SO_TPH	ACENAPHTHENE	83-32-9	mg/kg		
FFTA_RA_SO_TPH	ACENAPHTHYLENE	208-96-8	mg/kg		
FFTA_RA_SO_TPH	ANTHRACENE	120-12-7	mg/kg		
FFTA_RA_SO_TPH	BENZO[A]ANTHRACENE	56-55-3	mg/kg		
FFTA_RA_SO_TPH	BENZO[A]PYRENE	50-32-8	mg/kg		
FFTA_RA_SO_TPH	BENZO[B]FLUORANTHENE	205-99-2	mg/kg		
FFTA_RA_SO_TPH	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg		
FFTA_RA_SO_TPH	BENZO[K]FLUORANTHENE	207-08-9	mg/kg		
FFTA_RA_SO_TPH	CHRYSENE	218-01-9	mg/kg		
FFTA_RA_SO_TPH	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg		
FFTA_RA_SO_TPH	FLUORANTHENE	206-44-0	mg/kg		
FFTA_RA_SO_TPH	FLUORENE	86-73-7	mg/kg		
FFTA_RA_SO_TPH	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg		
FFTA_RA_SO_TPH	NAPHTHALENE	91-20-3	mg/kg		
FFTA_RA_SO_TPH	PHENANTHRENE	85-01-8	mg/kg		
FFTA_RA_SO_TPH	PYRENE	129-00-0	mg/kg		
FFTA_RA_SO_TPH	HPAH, TOTAL (EPH Methods) (b)	RA-63_EPH	mg/kg		
FFTA_RA_SO_TPH	LPAH, TOTAL (EPH Methods) (b)	RA-64_EPH	mg/kg		
FFTA_RA_SO_TPH	PAH, TOTAL (EPH Methods) (b)	RA-3502_EPH	mg/kg		
FFTA_RA_SO_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg		
FFTA_RA_SO_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg		
FFTA_RA_SO_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg		
FFTA_RA_SO_TPH	TPH-DIESEL RANGE	-3527	mg/kg		
FFTA_RA_SO_TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANIC	-3524	mg/kg		
FFTA_RA_SO_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg		
FFTA_RA_SO_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg		
FFTA_RA_SO_VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	mg/kg		

ATTACHMENT A TABLE 4
ANALYTICAL DATA SUMMARY TABLES - SOIL
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

			Facility ID	SITE 00005	SITE 00005
			Location Group	SITE 00005	SITE 00005
			Location ID	PCBAREA2-004	PCBAREA2-005
			Sample Date	9/18/2013	9/18/2013
			Sample ID	PCBAREA2-004	PCBAREA2-005
			Sample Type Code	N	N
			Depth Interval	1 - 1 ft	1 - 1 ft
Analyte Group	Compound	CAS	Units		
FFTA_RA_SO_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg		
FFTA_RA_SO_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg		
FFTA_RA_SO_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg		
FFTA_RA_SO_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg		
FFTA_RA_SO_VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	mg/kg		
FFTA_RA_SO_VOCs	1,2-DIBROMOETHANE	106-93-4	mg/kg		
FFTA_RA_SO_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg		
FFTA_RA_SO_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg		
FFTA_RA_SO_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg		
FFTA_RA_SO_VOCs	1,2-DICHLOROPROPANE	78-87-5	mg/kg		
FFTA_RA_SO_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg		
FFTA_RA_SO_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg		
FFTA_RA_SO_VOCs	2-BUTANONE	78-93-3	mg/kg		
FFTA_RA_SO_VOCs	2-HEXANONE	591-78-6	mg/kg		
FFTA_RA_SO_VOCs	4-METHYL-2-PENTANONE	108-10-1	mg/kg		
FFTA_RA_SO_VOCs	ACETONE	67-64-1	mg/kg		
FFTA_RA_SO_VOCs	BENZENE	71-43-2	mg/kg		
FFTA_RA_SO_VOCs	BROMODICHLOROMETHANE	75-27-4	mg/kg		
FFTA_RA_SO_VOCs	BROMOFORM	75-25-2	mg/kg		
FFTA_RA_SO_VOCs	BROMOMETHANE	74-83-9	mg/kg		
FFTA_RA_SO_VOCs	CARBON DISULFIDE	75-15-0	mg/kg		
FFTA_RA_SO_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg		
FFTA_RA_SO_VOCs	CHLOROBENZENE	108-90-7	mg/kg		
FFTA_RA_SO_VOCs	CHLOROETHANE	75-00-3	mg/kg		
FFTA_RA_SO_VOCs	CHLOROFORM	67-66-3	mg/kg		
FFTA_RA_SO_VOCs	CHLOROMETHANE	74-87-3	mg/kg		
FFTA_RA_SO_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg		
FFTA_RA_SO_VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	mg/kg		
FFTA_RA_SO_VOCs	CYCLOHEXANE	110-82-7	mg/kg		
FFTA_RA_SO_VOCs	DIBROMOCHLOROMETHANE	124-48-1	mg/kg		
FFTA_RA_SO_VOCs	DICHLORODIFLUOROMETHANE	75-71-8	mg/kg		
FFTA_RA_SO_VOCs	ETHYLBENZENE	100-41-4	mg/kg		
FFTA_RA_SO_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg		
FFTA_RA_SO_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg		
FFTA_RA_SO_VOCs	METHYL ACETATE	79-20-9	mg/kg		
FFTA_RA_SO_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg		
FFTA_RA_SO_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg		
FFTA_RA_SO_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg		
FFTA_RA_SO_VOCs	O-XYLENE	95-47-6	mg/kg		
FFTA_RA_SO_VOCs	STYRENE	100-42-5	mg/kg		
FFTA_RA_SO_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg		
FFTA_RA_SO_VOCs	TOLUENE	108-88-3	mg/kg		
FFTA_RA_SO_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg		
FFTA_RA_SO_VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	mg/kg		
FFTA_RA_SO_VOCs	TRICHLOROETHENE	79-01-6	mg/kg		
FFTA_RA_SO_VOCs	TRICHLOROFLUOROMETHANE	75-69-4	mg/kg		
FFTA_RA_SO_VOCs	VINYL CHLORIDE	75-01-4	mg/kg		
FFTA_RA_SO_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg		
FFTA_RA_SO_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg		

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
EPH - Extractable Petroleum Hydrocarbons.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
R - Rejected.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 5
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility Code	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
				Location ID	FTA-SED-01	FTA-SED-01	FTA-SED-02	FTA-SED-02	FTA-SED-02	FTA-SED-03	FTA-SED-03	FTA-SED-04	FTA-SED-04	FTA-SED-05	FTA-SED-05	FTA-SED-05
				Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	6/21/2014	11/27/2012	6/20/2014	
				Sample Type Code	N	N	N	FD	N	N	N	N	N	N	N	
				Sample ID	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	
Analyte Group	Compound	CAS	Units													
FFTA_RA_SE_Metals	ALUMINUM	7429-90-5	mg/kg	10600	10100 J	11500	9890	11100 J	11300	4690 J	20400	12500 J	9660	7170 J	
FFTA_RA_SE_Metals	ANTIMONY	7440-36-0	mg/kg	0.2	0.12 J	0.11	0.14	0.095 J	0.23	0.1 J	0.21	0.2	0.34	0.576 J	
FFTA_RA_SE_Metals	ARSENIC	7440-38-2	mg/kg	8.3	4.21 J	5.9	4.9	6.22 J	3.3	1.6 J	19	8.98 J	5.6	5.03 J	
FFTA_RA_SE_Metals	BARIUM	7440-39-3	mg/kg	30.5	29.3 J	35.5	31.7	22.2 J	28	15.2 J	62	41.5 J	53.5	82.6 J	
FFTA_RA_SE_Metals	BERYLLIUM	7440-41-7	mg/kg	0.4	0.337	0.32	0.28	0.375	0.54	0.283	0.77	0.433	0.32 J	0.266 J	
FFTA_RA_SE_Metals	CADMIUM	7440-43-9	mg/kg	0.31	0.102	0.17	0.16	0.061 J	0.46	0.226	0.22	0.208	0.33	0.582 J	
FFTA_RA_SE_Metals	CALCIUM	7440-70-2	mg/kg	2720	2730	6210	7040	2310	4250	1510	4240	8520	14800	28500 J	
FFTA_RA_SE_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	20.8	16.3 J	24.6	29.9	21.5 J	27.6	12.2 J	33.2	24.9 J	17.3	16.6 J	
FFTA_RA_SE_Metals	CHROMIUM III (c)	16065-83-1	mg/kg												
FFTA_RA_SE_Metals	CHROMIUM VI	18540-29-9	mg/kg												
FFTA_RA_SE_Metals	COBALT	7440-48-4	mg/kg	12	6.57 J	8.4	7	8.33 J	11.7	4.32 J	19	10.5 J	6.2	4.56 J	
FFTA_RA_SE_Metals	COPPER	7440-50-8	mg/kg	40.4	19.2 J	31.4	31.6	16	51.1	22.8 J	55.8	40.2	67.5	99.3 J	
FFTA_RA_SE_Metals	IRON	7439-89-6	mg/kg	15200	16200 J	17100	14900	19400 J	15600	8100 J	25600	20400 J	14300	12000 J	
FFTA_RA_SE_Metals	LEAD	7439-92-1	mg/kg	12.8	7.36 J	10.4	10.1	7.5	13.3	6.21 J	25.6	13.3	12.4	17.5 J	
FFTA_RA_SE_Metals	MAGNESIUM	7439-95-4	mg/kg	4880	5230 J	5730	5240	5720 J	6350	2570 J	6870	5830 J	4510	3520 J	
FFTA_RA_SE_Metals	MANGANESE	7439-96-5	mg/kg	284	298 J	415	369	354	278	116 J	714	439	373	421 J	
FFTA_RA_SE_Metals	MERCURY	7439-97-6	mg/kg	0.03 J	0.043	0.01 J	0.02 J	0.01 J	0.04 J	0.047	0.04 J	0.0864	0.08 J	0.213 J	
FFTA_RA_SE_Metals	NICKEL	7440-02-0	mg/kg	27.4	14.6 J	19.4	17	19.7 J	25	10.9 J	34.5	22.6 J	17.7	15.2 J	
FFTA_RA_SE_Metals	POTASSIUM	7440-09-7	mg/kg	1010	1090 J	1040	734	1040 J	544	372 J	1960	1030 J	888	1020 J	
FFTA_RA_SE_Metals	SELENIUM	7782-49-2	mg/kg	0.46	< 0.24 U	0.36	0.29	< 0.21 U	0.55	< 0.414 U	0.7	< 0.56 U	0.69 J	< 1.31 U	
FFTA_RA_SE_Metals	SILVER	7440-22-4	mg/kg	0.22	0.118	0.24	0.39	< 0.0608 U	0.23	0.164	0.16	0.353	0.81	2.34 J	
FFTA_RA_SE_Metals	SODIUM	7440-23-5	mg/kg	138	92.2 J	114	104	118 J	161	44.4 J	150	153 J	142 J	284 J	
FFTA_RA_SE_Metals	THALLIUM	7440-28-0	mg/kg	0.15	0.07 J	0.07	0.05 J	0.064 J	0.3	0.069 J	0.16	0.087 J	0.06 J	< 0.074 U	
FFTA_RA_SE_Metals	VANADIUM	7440-62-2	mg/kg	29	27.3 J	30.4	27.6	27.6	36.4	14.5 J	46.2	32.3	21.8	17.5 J	
FFTA_RA_SE_Metals	ZINC	7440-66-6	mg/kg	59.9	46.8 J	62.4	61.8	42.1	69.6	35.4 J	82	78.1	120	166 J	
FFTA_RA_SE_Other	PH	-9	SU	5.8		7.2	7.2		5.6		6.6		6.6 J		
FFTA_RA_SE_Other	TOTAL ORGANIC CARBON	-28	mg/kg	52000		76000	62000		76000		88000		200000 J		
FFTA_RA_SE_Other	TOTAL SOLIDS	-29	PCT	58	56	61	62	73	58	51	51	47	36	20	
FFTA_RA_SE_PestPCBs	4,4-DDD	72-54-8	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	0.015 J	< 0.003 U	0.043 J	< 0.0046 U	0.026 J	
FFTA_RA_SE_PestPCBs	4,4-DDE	72-55-9	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	0.00086 J	0.00095 J	< 0.003 U	0.0023 J	< 0.0046 U	< 0.0016 UJ	
FFTA_RA_SE_PestPCBs	4,4-DDT	50-29-3	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	0.006 J	< 0.0022 U	0.011 J	< 0.003 U	0.043 J	< 0.0046 U	< 0.0016 UJ	
FFTA_RA_SE_PestPCBs	ALDRIN	309-00-2	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.013 U	< 0.034 U	< 0.016 U	< 0.016 U	< 0.0024 U	< 0.013 U	< 0.0039 UJ	< 0.018 U	< 0.0041 U	< 0.028 U	< 0.0098 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1260	11096-82-5	mg/kg	1.4	1.2 J	1.3	1.3	0.079 J	0.22	0.23 J	2.1	0.6 J	0.76	0.44 J	
FFTA_RA_SE_PestPCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.011 U	< 0.029 U	< 0.014 U	< 0.013 U	< 0.002 U	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	BETA-BHC	319-85-7	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	DELTA-BHC	319-86-8	mg/kg	< 0.0011 UJ	< 0.00029 UJ	< 0.0014 UJ	< 0.0013 UJ	< 0.0002 UJ	< 0.0011 UJ	< 0.00033 UJ	< 0.0016 UJ	< 0.00035 U	< 0.0024 UJ	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	DIELDRIN	60-57-1	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 U	< 0.0046 U	0.0071 J	
FFTA_RA_SE_PestPCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	0.00073 J	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 U	< 0.0046 U	0.013 J	
FFTA_RA_SE_PestPCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0021 U	< 0.0056 UJ	< 0.0026 U	< 0.0026 U	0.007 J	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 UJ	< 0.0046 U	< 0.0016 UJ	
FFTA_RA_SE_PestPCBs	ENDRIN	72-20-8	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	< 0.00064 UJ	< 0.003 U	< 0.00067 U	< 0.0046 U	< 0.0016 UJ	
FFTA_RA_SE_PestPCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0021 U	< 0.00056 UJ	< 0.0026 U	< 0.0026 U	< 0.0004 UJ	< 0.0022 U	0.0072 J	< 0.003 U	< 0.00067 U	< 0.0046 U	< 0.0016 UJ	
FFTA_RA_SE_PestPCBs	ENDRIN KETONE	53494-70-5	mg/kg	0.21 J	0.13 J	0.18 J	0.17 J	0.014 J	0.037 J	< 0.00064 UJ	0.29 J	< 0.00067 U	0.088 J	0.061 J	
FFTA_RA_SE_PestPCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	LINDANE	58-89-9	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_PestPCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.011 U	< 0.0029 UJ	< 0.014 U	< 0.013 U	< 0.002 UJ	< 0.011 U	< 0.0033 UJ	< 0.016 U	< 0.0035 U	< 0.024 U	< 0.0083 UJ	
FFTA_RA_SE_PestPCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	1.4	1.2	1.3	1.3	0.079	0.22	0.23	2.1	0.60	0.76	0.44	
FFTA_RA_SE_PestPCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.021 U	< 0.0056 UJ	< 0.026 U	< 0.026 U	< 0.004 UJ	< 0.022 U	< 0.0064 UJ	< 0.03 U	< 0.0067 U	< 0.046 U	< 0.016 UJ	
FFTA_RA_SE_PestPCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0011 U	< 0.00029 UJ	< 0.0014 U	< 0.0013 U	< 0.0002 UJ	< 0.0011 U	< 0.00033 UJ	< 0.0016 U	< 0.00035 U	< 0.0024 U	< 0.00083 UJ	
FFTA_RA_SE_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 0.38 U	0.0089 J	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 UJ	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	
FFTA_RA_SE_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 0.38 UJ	< 0.018 UJ	< 0.4 UJ	< 0.38 UJ	< 0.012 UJ	< 0.37 UJ	< 0.019 UJ	< 0.42 UJ	< 0.02 UJ	< 0.66 UJ	< 0.048 UJ	
FFTA_RA_SE_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	0.0066 J	< 0.088 U	< 0.08 U	0.006 J	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	0.045 J	
FFTA_RA_SE_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	
FFTA_RA_SE_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	0.02 J	< 0.088 U	< 0.08 U	0.02 J	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	0.02 J	

ATTACHMENT A TABLE 5
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility Code	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
				Location ID	FTA-SED-01	FTA-SED-01	FTA-SED-02	FTA-SED-02	FTA-SED-02	FTA-SED-03	FTA-SED-03	FTA-SED-04	FTA-SED-04	FTA-SED-05	FTA-SED-05	FTA-SED-05
				Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	6/21/2014	11/27/2012	6/20/2014	
				Sample Type Code	N	N	N	FD	N	N	N	N	N	N	N	
				Sample ID	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	
Analyte Group	Compound	CAS	Units													
FFTA_RA_SE_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 0.94 U	UR	< 0.99 U	< 0.95 U	UR	< 0.91 U	UR	< 1 U	UR	< 1.6 U	UR	
FFTA_RA_SE_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.015 U	0.027 J	0.018 J	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	0.15	< 0.02 U	< 0.026 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.076 U	< 0.088 U	< 0.08 U	< 0.077 U	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	< 0.24 UJ	
FFTA_RA_SE_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	0.29	< 0.44 U	< 0.016 U	0.022 J	< 0.3 U	< 0.015 U	< 0.47 U	0.33	< 0.53 UJ	0.033 J	< 1.2 UJ	
FFTA_RA_SE_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.076 U	< 0.088 U	< 0.08 U	< 0.077 U	< 0.06 U	< 0.074 U	< 0.095 U	< 0.084 U	< 0.1 U	< 0.13 U	< 0.24 UJ	
FFTA_RA_SE_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	
FFTA_RA_SE_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 0.38 U	0.029 J	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	0.22	< 0.42 U	< 0.1 U	< 0.66 U	0.16 J	
FFTA_RA_SE_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	UR	< 0.017 U	< 0.02 U	< 0.026 UJ	< 0.048 UJ	
FFTA_RA_SE_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 0.94 U	< 1.1 U	< 0.99 U	< 0.95 U	< 0.74 U	< 0.91 U	< 1.2 U	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	
FFTA_RA_SE_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.15 U	< 0.18 U	< 0.16 U	< 0.15 U	< 0.12 U	< 0.15 U	UR	< 0.17 U	< 0.2 U	< 0.26 U	< 0.48 UJ	
FFTA_RA_SE_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 U	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	
FFTA_RA_SE_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 0.94 U	< 0.018 U	< 0.99 U	< 0.95 U	< 0.012 U	< 0.91 U	UR	< 1 U	< 0.02 U	< 1.6 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 0.94 U	< 1.1 UJ	< 0.99 U	< 0.95 U	< 0.74 UJ	< 0.91 U	< 1.2 UJ	< 1 U	< 1.3 UJ	< 1.6 U	< 3 UJ	
FFTA_RA_SE_SVOCs	ACENAPHTHENE	83-32-9	mg/kg	1.5	0.071	0.024 J	0.042 J	0.0028 J	< 0.015 U	< 0.019 U	0.12	0.0092 J	0.11	0.033 J	
FFTA_RA_SE_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.015 U	< 0.44 U	< 0.016 U	< 0.015 U	< 0.3 U	< 0.015 U	< 0.47 U	< 0.017 U	< 0.53 UJ	< 0.026 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 0.38 U		< 0.4 U	< 0.38 U		< 0.37 U		< 0.42 U		< 0.66 U		
FFTA_RA_SE_SVOCs	ANTHRACENE	120-12-7	mg/kg	1.7	< 0.44 U	0.03 J	0.063 J	< 0.3 U	0.0087 J	< 0.47 U	0.1	< 0.53 UJ	0.14	< 1.2 UJ	
FFTA_RA_SE_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 0.38 U	< 0.44 UJ	< 0.4 U	< 0.38 U	< 0.3 UJ	< 0.37 U	< 0.47 UJ	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	3.6	0.22	0.1 J	0.18 J	0.018 J	0.028 J	0.014 J	0.22	0.055	0.34	0.16 J	
FFTA_RA_SE_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	2.4	0.16	0.085	0.14	0.015 J	0.027 J	0.014 J	0.18	0.052	0.25	0.13 J	
FFTA_RA_SE_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	3.2	0.25	0.11 J	0.23 J	0.023 J	< 0.042 U	0.024 J	0.24	0.079	0.39	0.24 J	
FFTA_RA_SE_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	1.2	< 0.44 U	0.045	0.064	< 0.3 U	0.017 J	< 0.47 U	0.078	< 0.53 UJ	0.11	< 1.2 UJ	
FFTA_RA_SE_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	1.4 J	< 0.44 U	0.043 J	0.057 J	< 0.3 U	0.014 J	< 0.47 U	0.091 J	< 0.53 UJ	0.12 J	< 1.2 UJ	
FFTA_RA_SE_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.35 U	0.6	< 0.26 U	< 0.31 U	< 0.3 U	< 0.49 U	0.48 J	< 0.23 U	0.89 J	< 0.59 U	2.9 J	
FFTA_RA_SE_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 0.38 UJ	< 0.088 U	< 0.4 UJ	< 0.38 UJ	< 0.06 U	< 0.37 UJ	< 0.095 U	< 0.42 UJ	< 0.1 U	< 0.66 UJ	< 0.24 UJ	
FFTA_RA_SE_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	UR	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	CARBAZOLE	86-74-8	mg/kg	1.2	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	CHRYSENE	218-01-9	mg/kg	3.2	0.27 J	0.1 J	0.17 J	< 0.3 U	0.03 J	< 0.47 U	0.24	< 0.53 UJ	0.32	< 1.2 UJ	
FFTA_RA_SE_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.51 J	< 0.44 U	0.018 J	0.026 J	< 0.3 U	0.0058 J	< 0.47 U	0.038	< 0.53 UJ	0.048 J	< 1.2 UJ	
FFTA_RA_SE_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	0.79	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 0.38 U	< 0.088 U	< 0.4 U	< 0.38 U	< 0.06 U	< 0.37 U	< 0.095 U	< 0.42 U	< 0.1 U	< 0.66 U	< 0.24 UJ	
FFTA_RA_SE_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	FLUORANTHENE	206-44-0	mg/kg	7.3	0.46 J	0.19 J	0.37 J	< 0.3 U	< 0.37 U	< 0.47 U	0.46 J	< 0.53 UJ	0.76 J	< 1.2 UJ	
FFTA_RA_SE_SVOCs	FLUORENE	86-73-7	mg/kg	1.3	< 0.44 U	0.027 J	0.046	< 0.3 U	< 0.015 U	< 0.47 U	0.15	< 0.53 UJ	0.097	< 1.2 UJ	
FFTA_RA_SE_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	HPAH, TOTAL (b)	RA-63	mg/kg	30	2.0	0.99	1.7	0.074	0.25	0.073	2.2	0.55	3.1	0.69	
FFTA_RA_SE_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	2.4	0.15	0.086	0.12	0.018 J	< 0.031 U	0.021 J	0.17	0.053	0.23	0.16 J	
FFTA_RA_SE_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	LPAH, TOTAL (b)	RA-64	mg/kg	12	0.48	0.20	0.45	0.0028	0.045	< 0.47 U	1.3	0.0092	0.96	0.033	
FFTA_RA_SE_SVOCs	NAPHTHALENE	91-20-3	mg/kg	0.57 J	0.022 J	< 0.016 U	0.0066 J	< 0.012 U	< 0.015 U	< 0.019 U	0.038	< 0.02 U	0.03 J	< 0.048 UJ	
FFTA_RA_SE_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 0.38 U	< 0.018 UJ	< 0.4 U	< 0.38 U	< 0.012 UJ	< 0.37 U	< 0.019 UJ	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.015 U	< 0.018 U	< 0.016 U	< 0.015 U	< 0.012 U	< 0.015 U	< 0.019 U	< 0.017 U	< 0.02 U	< 0.026 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 0.38 U	< 0.018 U	< 0.4 U	< 0.38 U	< 0.012 U	< 0.37 U	< 0.019 U	< 0.42 U	< 0.02 U	< 0.66 U	< 0.048 UJ	
FFTA_RA_SE_SVOCs	PAH, TOTAL (b)	RA-3502	mg/kg	43	2.5	1.2	2.1	0.077	0.30	0.073	3.5	0.56	4.1	0.72	
FFTA_RA_SE_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	0.028 J	< 0.088 U	< 0.08 UJ	< 0.077 UJ	< 0.06 U	< 0.074 UJ	< 0.095 U	< 0.084 UJ	< 0.1 U	< 0.13 UJ	0.078 J	
FFTA_RA_SE_SVOCs	PHENANTHRENE	85-01-8	mg/kg	7	0.39 J	0.12 J	0.27 J	< 0.3 U	0.036	< 0.47 U	0.57	< 0.53 UJ	0.55	< 1.2 UJ	
FFTA_RA_SE_SVOCs	PHENOL	108-95-2	mg/kg	< 0.38 U	< 0.44 U	< 0.4 U	< 0.38 U	< 0.3 U	< 0.37 U	< 0.47 U	< 0.42 U	< 0.53 UJ	< 0.66 U	< 1.2 UJ	
FFTA_RA_SE_SVOCs	PYRENE	129-00-0	mg/kg	5.1	0.46 J	0.21	0.33	< 0.3 U	0.13	< 0.47 U	0.5	0.31 J	0.58	< 1.2 UJ	
FFTA_RA_SE_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	110 J	60 J	120	110	27 J	69	280 J	380	52	130 J	< 67 UJ	
FFTA_RA_SE_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 51 U		< 42 UJ	< 36 U		< 92 UJ		< 70 U		< 140 UJ		

ATTACHMENT A TABLE 5
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility Code	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
				Location ID	FTA-SED-01	FTA-SED-01	FTA-SED-02	FTA-SED-02	FTA-SED-02	FTA-SED-03	FTA-SED-03	FTA-SED-04	FTA-SED-04	FTA-SED-05	FTA-SED-05	FTA-SED-05
				Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	6/21/2014	11/27/2012	6/20/2014	
				Sample Type Code	N	N	N	FD	N	N	N	N	N	N	N	
				Sample ID	FTA-SED-01-0005	FTA-SD-01-000.5	FTA-SED-02-0005	FTA-SED-02-0005-D	FTA-SD-02-000.5	FTA-SED-03-0005	FTA-SD-03-000.5	FTA-SED-04-0005	FTA-SD-04-000.5	FTA-SED-05-0005	FTA-SD-05-000.5	
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	
Analyte Group	Compound	CAS	Units													
FFTA_RA_SE_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 51 U		< 42 UJ	< 36 U		< 92 UJ		89 J		< 140 UJ		
FFTA_RA_SE_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.0028 U		< 0.0038 U	< 0.004 U		< 0.0068 U		< 0.0052 U		< 0.0098 UJ		
FFTA_RA_SE_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	< 0.0052 UJ	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.014 U	< 0.018 U	< 0.019 U	< 0.02 U	< 0.014 U	< 0.034 U	< 0.022 U	< 0.026 U	< 0.021 UJ	< 0.049 UJ	< 0.071 UJ	
FFTA_RA_SE_VOCs	ACETONE	67-64-1	mg/kg	< 0.043 U	< 0.06 U	0.27 J	0.12 J	0.026 J	0.2	0.23 J	0.32	0.42 J	0.38 J	3 J	
FFTA_RA_SE_VOCs	BENZENE	71-43-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 U	< 0.01 U	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	
FFTA_RA_SE_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.0055 UJ	< 0.007 U	< 0.0075 UJ	< 0.008 UJ	< 0.0055 U	< 0.014 UJ	< 0.009 U	< 0.01 UJ	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	
FFTA_RA_SE_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	ETHYLBENZENE	100-41-4	mg/kg	0.00093 J	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 UJ	0.002 J	< 0.0042 UJ	0.011 J	< 0.014 UJ	
FFTA_RA_SE_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	0.0016 J	< 0.0035 U	< 0.0038 UJ	0.0025 J	< 0.0028 U	< 0.0068 UJ	< 0.0045 U	0.0039 J	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 UJ	< 0.01 U	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	
FFTA_RA_SE_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 UJ	< 0.004 U	< 0.0028 U	< 0.0068 UJ	< 0.0045 UJ	0.0028 J	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.014 U	< 0.018 U	< 0.019 U	< 0.02 U	< 0.014 U	< 0.034 U	< 0.022 U	< 0.026 U	< 0.021 UJ	< 0.049 UJ	< 0.071 UJ	
FFTA_RA_SE_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	STYRENE	100-42-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 UJ	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	TOLUENE	108-88-3	mg/kg	0.0032 J	0.0029 J	0.029 J	0.0087 J	< 0.0028 U	0.01 J	0.0032 J	0.024	0.012 J	0.047 J	0.31 J	
FFTA_RA_SE_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.0028 U	< 0.0035 U	< 0.0038 U	< 0.004 U	< 0.0028 U	< 0.0068 U	< 0.0045 U	< 0.0052 U	< 0.0042 UJ	< 0.0098 UJ	< 0.014 UJ	
FFTA_RA_SE_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.0055 UJ	< 0.007 U	< 0.0075 UJ	< 0.008 UJ	< 0.0055 U	< 0.014 UJ	< 0.009 U	< 0.01 UJ	< 0.0085 UJ	< 0.02 UJ	< 0.028 UJ	
FFTA_RA_SE_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.0082 U	< 0.01 U	< 0.011 U	< 0.012 U	< 0.0082 U	< 0.02 U	< 0.014 UJ	< 0.016 U	< 0.013 UJ	< 0.029 UJ	< 0.043 UJ	
FFTA_RA_SE_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.0055 U	< 0.007 U	< 0.0075 U	< 0.008 U	< 0.0055 U	< 0.014 U	< 0.009 U	< 0.01 U	< 0.0085 U	< 0.02 U	< 0.028 U	

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 5
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility Code	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
				Location ID	FTA-SED-06	FTA-SED-06	FTA-SED-06	FTA-SED-07	FTA-SED-07	FTA-SED-07	FTA-SED-08	FTA-SED-08
				Sample Date	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/2/2016	11/28/2012	6/19/2014
				Sample Type Code	N	N	FD	N	N	N	N	N
				Sample ID	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SE_Metals	ALUMINUM	7429-90-5	mg/kg	8650 J	10400 J	4970 J	16900	5880 J		9290	10500 J
FFTA_RA_SE_Metals	ANTIMONY	7440-36-0	mg/kg	0.73 J	0.54 J	0.42 J	0.14 J	0.31 J		0.15 J	0.086 J
FFTA_RA_SE_Metals	ARSENIC	7440-38-2	mg/kg	4.4 J	8.25 J	4.56 J	9.3	4.3 J		7.1	7.08 J
FFTA_RA_SE_Metals	BARIUM	7440-39-3	mg/kg	89.1 J	96.6 J	56.2 J	55	31.7 J		25.8	18.6 J
FFTA_RA_SE_Metals	BERYLLIUM	7440-41-7	mg/kg	0.26 J	0.4 J	0.2 J	0.84 J	0.832 J		0.4 J	0.24
FFTA_RA_SE_Metals	CADMIUM	7440-43-9	mg/kg	0.59 J	0.529 J	0.379 J	0.55 J	0.673 J		0.17 J	0.0701 J
FFTA_RA_SE_Metals	CALCIUM	7440-70-2	mg/kg	33700 J	26400 J	17800 J	9380	13400 J		9870	2740
FFTA_RA_SE_Metals	CHROMIUM, TOTAL	7440-47-3	mg/kg	17.9 J	20.8 J	12.1 J	33.7	23.8 J	17.2 J	11.3	14.7 J
FFTA_RA_SE_Metals	CHROMIUM III (c)	16065-83-1	mg/kg						17		
FFTA_RA_SE_Metals	CHROMIUM VI	18540-29-9	mg/kg						10 U		
FFTA_RA_SE_Metals	COBALT	7440-48-4	mg/kg	5.8 J	7.95 J	4.01 J	7.5	3.56 J		3.6	3.73 J
FFTA_RA_SE_Metals	COPPER	7440-50-8	mg/kg	108 J	97.2 J	66.9 J	22.8	18.6 J		9	5.59
FFTA_RA_SE_Metals	IRON	7439-89-6	mg/kg	13400 J	18300 J	10700 J	22300	9700 J		10300	12000 J
FFTA_RA_SE_Metals	LEAD	7439-92-1	mg/kg	16.7 J	18 J	11.6 J	9.5	5.55 J		5.2	8
FFTA_RA_SE_Metals	MAGNESIUM	7439-95-4	mg/kg	4700 J	4820 J	2370 J	7580	2600 J		3480	2940 J
FFTA_RA_SE_Metals	MANGANESE	7439-96-5	mg/kg	500 J	775 J	473 J	496	378 J		427	197
FFTA_RA_SE_Metals	MERCURY	7439-97-6	mg/kg	0.32 J	0.206 J	0.125 J	0.07	0.134 J		0.07 J	0.039
FFTA_RA_SE_Metals	NICKEL	7440-02-0	mg/kg	21.1 J	19.2 J	10.5 J	12.2	7.55 J		7.6	9.42 J
FFTA_RA_SE_Metals	POTASSIUM	7440-09-7	mg/kg	701 J	1280 J	722 J	2500 J	430 J		380 J	531 J
FFTA_RA_SE_Metals	SELENIUM	7782-49-2	mg/kg	1 J	< 1.19 U	< 1.04 U	3.2	5.5 J		< 1.5 U	< 0.595 U
FFTA_RA_SE_Metals	SILVER	7440-22-4	mg/kg	1.6 J	1.5 J	1.11 J	0.18	0.18 J		0.06 J	< 0.033 U
FFTA_RA_SE_Metals	SODIUM	7440-23-5	mg/kg	218 J	273 J	149 J	159 J	103 J		77.3 J	71.4 J
FFTA_RA_SE_Metals	THALLIUM	7440-28-0	mg/kg	0.06 J	0.1 J	0.049 J	0.19	0.077 J		0.06 J	0.0826
FFTA_RA_SE_Metals	VANADIUM	7440-62-2	mg/kg	20.6 J	21.7 J	13.1 J	43.7	16.6 J		15.8	20.4
FFTA_RA_SE_Metals	ZINC	7440-66-6	mg/kg	198 J	191 J	119 J	76.4	35 J		25.7	28.6
FFTA_RA_SE_Other	PH	-9	SU	6.7 J			6.4			6	
FFTA_RA_SE_Other	TOTAL ORGANIC CARBON	-28	mg/kg	440000 J			160000			220000	
FFTA_RA_SE_Other	TOTAL SOLIDS	-29	PCT	24	22	27	42	22		38	60
FFTA_RA_SE_PestPCBs	4,4-DDD	72-54-8	mg/kg	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	0.0016 J	< 0.0015 UJ		0.0096	0.0023 J
FFTA_RA_SE_PestPCBs	4,4-DDE	72-55-9	mg/kg	0.0018 J	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	0.0017 J		0.0061 J	0.0033 J
FFTA_RA_SE_PestPCBs	4,4-DDT	50-29-3	mg/kg	< 0.0063 UJ	0.031 J	< 0.001 UJ	< 0.0036 U	0.0065 J		0.0058 J	0.0031 J
FFTA_RA_SE_PestPCBs	ALDRIN	309-00-2	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	ALPHA-BHC	319-84-6	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	ALPHA-CHLORDANE	5103-71-9	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1016	12674-11-2	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1221	11104-28-2	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1232	11141-16-5	mg/kg	< 0.038 UJ	< 0.0088 UJ	< 0.0069 UJ	< 0.023 U	< 0.009 UJ		< 0.026 U	< 0.003 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1242	53469-21-9	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1248	12672-29-6	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1254	11097-69-1	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1260	11096-82-5	mg/kg	0.29 J	0.63 J	1.1 J	0.066	0.16 J		< 0.022 U	0.028 J
FFTA_RA_SE_PestPCBs	AROCLOR-1262	37324-23-5	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	AROCLOR-1268	11100-14-4	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0059 UJ	< 0.019 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	BETA-BHC	319-85-7	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	DELTA-BHC	319-86-8	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	DIELDRIN	60-57-1	mg/kg	< 0.0063 UJ	0.01 J	0.0055 J	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
FFTA_RA_SE_PestPCBs	ENDOSULFAN I	959-98-8	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	ENDOSULFAN II	33213-65-9	mg/kg	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
FFTA_RA_SE_PestPCBs	ENDOSULFAN SULFATE	1031-07-8	mg/kg	< 0.0063 UJ	0.043 J	0.026 J	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
FFTA_RA_SE_PestPCBs	ENDRIN	72-20-8	mg/kg	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
FFTA_RA_SE_PestPCBs	ENDRIN ALDEHYDE	7421-93-4	mg/kg	< 0.0063 UJ	< 0.0014 UJ	< 0.001 UJ	< 0.0036 U	< 0.0015 UJ		< 0.0042 U	< 0.0005 UJ
FFTA_RA_SE_PestPCBs	ENDRIN KETONE	53494-70-5	mg/kg	< 0.0063 UJ	< 0.0014 UJ	0.055 J	< 0.0036 U	0.022 J		< 0.0042 U	< 0.0005 UJ
FFTA_RA_SE_PestPCBs	HEPTACHLOR	76-44-8	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	HEPTACHLOR EPOXIDE	1024-57-3	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	LINDANE	58-89-9	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_PestPCBs	METHOXYCHLOR	72-43-5	mg/kg	< 0.032 UJ	< 0.0075 UJ	< 0.0054 UJ	< 0.018 U	< 0.0077 UJ		< 0.022 U	< 0.0026 UJ
FFTA_RA_SE_PestPCBs	TOTAL AROCLORS (b)	RATotAroclors	mg/kg	0.29	0.63	1.1	0.066	0.16		< 0.026 U	0.028
FFTA_RA_SE_PestPCBs	TOXAPHENE	8001-35-2	mg/kg	< 0.063 UJ	< 0.014 UJ	< 0.01 UJ	< 0.036 U	< 0.015 UJ		< 0.042 U	< 0.005 UJ
FFTA_RA_SE_PestPCBs	TRANS-CHLORDANE	5103-74-2	mg/kg	< 0.0032 UJ	< 0.00075 UJ	< 0.00054 UJ	< 0.0018 U	< 0.00077 UJ		< 0.0022 U	< 0.00026 UJ
FFTA_RA_SE_SVOCs	1,1-BIPHENYL	92-52-4	mg/kg	< 1 UJ	0.013 J	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	mg/kg	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	1,4-DIOXANE	123-91-1	mg/kg	< 1 UJ	0.013 J	< 0.17 UJ	< 0.59 U	< 0.21 UJ		< 0.59 U	< 0.079 U
FFTA_RA_SE_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	mg/kg	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 UJ	< 0.042 UJ		< 0.59 UJ	< 0.016 UJ
FFTA_RA_SE_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	mg/kg	< 0.2 UJ	0.023 J	< 0.17 UJ	0.011 J	< 0.21 UJ		< 0.12 U	< 0.079 U
FFTA_RA_SE_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	mg/kg	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	< 1.4 U	< 2.8 UJ		< 1.4 U	< 1 UJ
FFTA_RA_SE_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	mg/kg	< 0.2 UJ	0.017 J	< 0.17 UJ	0.0079 J	< 0.21 UJ		< 0.12 U	< 0.079 U

ATTACHMENT A TABLE 5
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility Code	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
				Location ID	FTA-SED-06	FTA-SED-06	FTA-SED-06	FTA-SED-07	FTA-SED-07	FTA-SED-07	FTA-SED-08	FTA-SED-08
				Sample Date	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/2/2016	11/28/2012	6/19/2014
				Sample Type Code	N	N	FD	N	N	N	N	N
				Sample ID	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SE_SVOCs	2,4-DICHLOROPHENOL	120-83-2	mg/kg	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	0.0055 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	mg/kg	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	2,4-DINITROPHENOL	51-28-5	mg/kg	< 2.5 UJ	UR	UR	< 1.4 U	UR		< 1.4 U	UR
FFTA_RA_SE_SVOCs	2,4-DINITROTOLUENE	121-14-2	mg/kg	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 U	< 0.042 UJ		< 0.024 U	< 0.016 U
FFTA_RA_SE_SVOCs	2,6-DINITROTOLUENE	606-20-2	mg/kg	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 UJ	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	2-CHLORONAPHTHALENE	91-58-7	mg/kg	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	2-CHLOROPHENOL	95-57-8	mg/kg	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ	< 0.12 UJ	< 0.21 UJ		< 0.12 U	< 0.079 U
FFTA_RA_SE_SVOCs	2-METHYLNAPHTHALENE	91-57-6	mg/kg	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		0.072	< 0.42 UJ
FFTA_RA_SE_SVOCs	2-METHYLPHENOL	95-48-7	mg/kg	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ	< 0.12 UJ	< 0.21 UJ		< 0.12 U	< 0.079 U
FFTA_RA_SE_SVOCs	2-NITROANILINE	88-74-4	mg/kg	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	< 1.4 U	< 2.8 UJ		< 1.4 U	< 1 UJ
FFTA_RA_SE_SVOCs	2-NITROPHENOL	88-75-5	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	mg/kg	< 1 UJ	0.34 J	0.36 J	< 0.59 U	< 0.21 UJ		< 0.59 U	< 0.079 U
FFTA_RA_SE_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	mg/kg	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	UR	< 0.042 UJ		< 0.024 U	< 0.016 U
FFTA_RA_SE_SVOCs	3-NITROANILINE	99-09-2	mg/kg	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	UR	< 2.8 UJ		< 1.4 U	< 1 UJ
FFTA_RA_SE_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	mg/kg	< 0.41 UJ	< 0.45 UJ	< 0.34 UJ	UR	< 0.42 UJ		< 0.24 U	< 0.16 U
FFTA_RA_SE_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	4-CHLOROANILINE	106-47-8	mg/kg	< 1 UJ	< 0.22 UJ	< 0.17 UJ	UR	< 0.21 UJ		< 0.59 U	< 0.079 U
FFTA_RA_SE_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	4-NITROANILINE	100-01-6	mg/kg	< 2.5 UJ	< 0.045 UJ	< 0.034 UJ	< 1.4 U	< 0.042 UJ		< 1.4 U	< 0.016 U
FFTA_RA_SE_SVOCs	4-NITROPHENOL	100-02-7	mg/kg	< 2.5 UJ	< 2.8 UJ	< 2.2 UJ	< 1.4 UJ	< 2.8 UJ		< 1.4 UJ	< 1 UJ
FFTA_RA_SE_SVOCs	ACENAPHTHENE	83-32-9	mg/kg	0.027 J	0.19 J	0.013 J	< 0.024 U	0.037 J		0.037 J	< 0.016 U
FFTA_RA_SE_SVOCs	ACENAPHTHYLENE	208-96-8	mg/kg	< 0.041 UJ	< 1.1 UJ	< 0.9 UJ	< 0.024 UJ	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	ACETOPHENONE	98-86-2	mg/kg	< 1 UJ			< 0.59 U			< 0.59 U	
FFTA_RA_SE_SVOCs	ANTHRACENE	120-12-7	mg/kg	0.037 J	< 1.1 UJ	< 0.9 UJ	0.0049 J	< 1.1 UJ		0.0098 J	< 0.42 UJ
FFTA_RA_SE_SVOCs	ATRAZINE	1912-24-9	mg/kg	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	0.0059 J	< 0.042 UJ		< 0.024 U	< 0.016 U
FFTA_RA_SE_SVOCs	BENZALDEHYDE	100-52-7	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	BENZO[A]ANTHRACENE	56-55-3	mg/kg	0.11 J	0.42 J	0.064 J	< 0.024 U	0.073 J		< 0.024 U	0.0078 J
FFTA_RA_SE_SVOCs	BENZO[A]PYRENE	50-32-8	mg/kg	0.09 J	0.28 J	0.053 J	0.011 J	0.049 J		< 0.024 U	0.0072 J
FFTA_RA_SE_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	mg/kg	0.14 J	0.46 J	0.1 J	< 0.024 U	0.083 J		< 0.024 U	0.013 J
FFTA_RA_SE_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	mg/kg	0.044 J	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	mg/kg	0.048 J	< 1.1 UJ	< 0.9 UJ	0.011 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	mg/kg	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 UJ	< 0.042 UJ		< 0.024 U	< 0.016 U
FFTA_RA_SE_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	mg/kg	< 0.87 U	1.4 J	1.4 J	< 0.12 U	< 1.1 UJ		< 0.12 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	mg/kg	< 1 UJ	< 0.22 UJ	< 0.17 UJ	< 0.59 UJ	0.059 J		< 0.59 UJ	< 0.079 U
FFTA_RA_SE_SVOCs	CAPROLACTAM	105-60-2	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	CARBAZOLE	86-74-8	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	CHRYSENE	218-01-9	mg/kg	0.11 J	0.52 J	< 0.9 UJ	0.0045 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	mg/kg	0.022 J	< 1.1 UJ	< 0.9 UJ	0.009 J	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	DIBENZOFURAN	132-64-9	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	DIETHYLPHTHALATE	84-66-2	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	DIMETHYL PHTHALATE	131-11-3	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 UJ	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	mg/kg	< 1 UJ	< 0.22 UJ	< 0.17 UJ	< 0.59 U	0.11 J		< 0.59 U	< 0.079 U
FFTA_RA_SE_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	FLUORANTHENE	206-44-0	mg/kg	< 1 UJ	0.84 J	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	FLUORENE	86-73-7	mg/kg	0.026 J	< 1.1 UJ	< 0.9 UJ	< 0.024 U	< 1.1 UJ		0.06	< 0.42 UJ
FFTA_RA_SE_SVOCs	HEXACHLOROBENZENE	118-74-1	mg/kg	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 UJ	< 0.042 UJ		< 0.024 U	< 0.016 U
FFTA_RA_SE_SVOCs	HEXACHLOROBUTADIENE	87-68-3	mg/kg	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	UR	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	HEXACHLOROETHANE	67-72-1	mg/kg	< 1 UJ	0.015 J	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	HPAH, TOTAL (b)	RA-63	mg/kg	0.86	3.6	0.29	0.036	0.26		< 0.59 U	0.040
FFTA_RA_SE_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	mg/kg	0.1 J	0.25 J	0.076 J	< 0.028 U	0.058 J		< 0.024 U	0.012 J
FFTA_RA_SE_SVOCs	ISOPHORONE	78-59-1	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	LPAH, TOTAL (b)	RA-64	mg/kg	0.25	1.2	0.013	0.017	0.037		0.26	< 0.42 U
FFTA_RA_SE_SVOCs	NAPHTHALENE	91-20-3	mg/kg	< 0.041 UJ	0.074 J	< 0.034 UJ	< 0.024 U	< 0.042 UJ		0.014 J	< 0.016 U
FFTA_RA_SE_SVOCs	NITROBENZENE	98-95-3	mg/kg	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 U	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	mg/kg	< 0.041 UJ	< 0.045 UJ	< 0.034 UJ	< 0.024 UJ	< 0.042 UJ		< 0.024 U	< 0.016 U
FFTA_RA_SE_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	mg/kg	< 1 UJ	< 0.045 UJ	< 0.034 UJ	< 0.59 UJ	< 0.042 UJ		< 0.59 U	< 0.016 U
FFTA_RA_SE_SVOCs	PAH, TOTAL (b)	RA-3502	mg/kg	1.1	4.9	0.31	0.052	0.30		0.26	0.040
FFTA_RA_SE_SVOCs	PENTACHLOROPHENOL	87-86-5	mg/kg	< 0.2 UJ	< 0.22 UJ	< 0.17 UJ	< 0.12 U	< 0.21 UJ		< 0.12 U	< 0.079 U
FFTA_RA_SE_SVOCs	PHENANTHRENE	85-01-8	mg/kg	0.16 J	0.98 J	< 0.9 UJ	0.012 J	< 1.1 UJ		0.068	< 0.42 UJ
FFTA_RA_SE_SVOCs	PHENOL	108-95-2	mg/kg	< 1 UJ	< 1.1 UJ	< 0.9 UJ	< 0.59 U	< 1.1 UJ		< 0.59 U	< 0.42 UJ
FFTA_RA_SE_SVOCs	PYRENE	129-00-0	mg/kg	0.2 J	0.86 J	< 0.9 UJ	< 0.024 U	< 1.1 UJ		< 0.024 U	< 0.42 UJ
FFTA_RA_SE_TPH	TPH-C11-C22 AROMATICS	-267	mg/kg	210 J	430 J	140 J	40 J	110 J		60	36 J
FFTA_RA_SE_TPH	TPH-C5-C8 ALIPHATICS	-2755	mg/kg	< 220 UJ			< 130 UJ			< 140 UJ	

ATTACHMENT A TABLE 5
ANALYTICAL DATA SUMMARY TABLES - SEDIMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Facility Code	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
				Location ID	FTA-SED-06	FTA-SED-06	FTA-SED-06	FTA-SED-07	FTA-SED-07	FTA-SED-07	FTA-SED-08	FTA-SED-08
				Sample Date	11/27/2012	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/2/2016	11/28/2012	6/19/2014
				Sample Type Code	N	N	FD	N	N	N	N	N
				Sample ID	FTA-SED-06-0005	FTA-SD-06-000.5	FTA-SD-06-000.5-D	FTA-SED-07-0005	FTA-SD-07-000.5	FTA-SD-07-000.5	FTA-SED-08-0005	FTA-SD-08-000.5
				Depth Interval	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft	0 - 0.5 ft
Analyte Group	Compound	CAS	Units									
FFTA_RA_SE_TPH	TPH-C9-C12 ALIPHATICS	-266	mg/kg	< 220 UJ			< 130 UJ			< 140 UJ	
FFTA_RA_SE_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,1-DICHLOROETHANE	75-34-3	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,1-DICHLOROETHENE	75-35-4	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,2-DICHLOROBENZENE	95-50-1	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,2-DICHLOROETHANE	107-06-2	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	mg/kg	< 0.016 UJ			0.006 J			< 0.011 UJ	
FFTA_RA_SE_VOCs	1,3-DICHLOROBENZENE	541-73-1	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	1,4-DICHLOROBENZENE	106-46-7	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	2-HEXANONE	591-78-6	mg/kg	< 0.082 UJ	< 0.064 UJ	< 0.061 UJ	< 0.052 U	< 0.082 UJ		< 0.054 UJ	< 0.018 UJ
FFTA_RA_SE_VOCs	ACETONE	67-64-1	mg/kg	1.3 J	2.2 J	2 J	0.34	2.9 J		0.88 J	0.47 J
FFTA_RA_SE_VOCs	BENZENE	71-43-2	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	CARBON TETRACHLORIDE	56-23-5	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	CHLOROBENZENE	108-90-7	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	CHLOROETHANE	75-00-3	mg/kg	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 U	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
FFTA_RA_SE_VOCs	CHLOROFORM	67-66-3	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	CHLOROMETHANE	74-87-3	mg/kg	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 UJ	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
FFTA_RA_SE_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	0.006 J	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	ETHYLBENZENE	100-41-4	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	ISOPROPYLBENZENE	98-82-8	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	mg/kg	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 U	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
FFTA_RA_SE_VOCs	METHYL CYCLOHEXANE	108-87-2	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 UJ	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	METHYLENE CHLORIDE	75-09-2	mg/kg	< 0.082 UJ	< 0.064 UJ	< 0.061 UJ	< 0.052 U	< 0.082 UJ		< 0.054 UJ	< 0.018 UJ
FFTA_RA_SE_VOCs	O-XYLENE	95-47-6	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.013 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	STYRENE	100-42-5	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	UR	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	TETRACHLOROETHENE	127-18-4	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	TOLUENE	108-88-3	mg/kg	0.14 J	0.14 J	0.12 J	< 0.01 U	0.012 J		0.012 J	0.011 J
FFTA_RA_SE_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	TRICHLOROETHENE	79-01-6	mg/kg	< 0.016 UJ	< 0.013 UJ	< 0.012 UJ	< 0.01 U	< 0.016 UJ		< 0.011 UJ	< 0.0035 UJ
FFTA_RA_SE_VOCs	VINYL CHLORIDE	75-01-4	mg/kg	< 0.033 UJ	< 0.026 UJ	< 0.024 UJ	< 0.021 U	< 0.033 UJ		< 0.022 UJ	< 0.007 UJ
FFTA_RA_SE_VOCs	XYLENES, TOTAL (a)	1330-20-7	mg/kg	< 0.05 UJ	< 0.038 UJ	< 0.037 UJ	< 0.032 U	< 0.05 UJ		< 0.032 UJ	< 0.01 UJ
FFTA_RA_SE_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	mg/kg	< 0.033 U	< 0.026 U	< 0.024 U	< 0.021 U	< 0.033 U		< 0.022 U	< 0.007 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
mg/kg - milligram per kilogram.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".
(c) Chromium III concentrations were calculated by the laboratory by subtracting chromium IV from total chromium, and were reported to two significant figures. Where chromium IV was not detected, the chromium III concentration was reported as the total chromium concentration at two significant figures.

ATTACHMENT A TABLE 6
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
					Location ID	FTA-SW-01	FTA-SW-01	FTA-SW-02	FTA-SW-02	FTA-SW-02	FTA-SW-03	FTA-SW-03	FTA-SW-04	FTA-SW-05	FTA-SW-06
					Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	11/27/2012	11/27/2012
					Sample Type Code	N	N	N	FD	N	N	N	N	N	N
					Sample ID	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712
Analyte Group	Compound	CAS	Fraction	Units											
FFTA_RA_SW_Metals	ALUMINUM	7429-90-5	F	ug/L	34.7 J	< 100 U	60.7 J	40 J	< 100 U	36.6 J	49 J	49.6 J	51.4 J	57.5 J
FFTA_RA_SW_Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.5 U	0.094 J	< 0.5 U	< 0.5 U	0.11 J	< 0.5 U	0.14 J	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_Metals	ARSENIC	7440-38-2	F	ug/L	3.7 J	< 4 U	< 4 U	3.5 J	3.3 J	3.7 J	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	BARIUM	7440-39-3	F	ug/L	2.5 J	3.75 J	3.6 J	3.5 J	3.04 J	13.6	11.9	4 J	2.5 J	< 3 U
FFTA_RA_SW_Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
FFTA_RA_SW_Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
FFTA_RA_SW_Metals	CALCIUM	7440-70-2	F	ug/L	4700	7800	20200	20900	8590	7710	6660	70300	83400	59900
FFTA_RA_SW_Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	COBALT	7440-48-4	F	ug/L	2.9	0.732 J	2.1	2.1	0.16 J	1.6	1.12	2.2	1	1.1
FFTA_RA_SW_Metals	COPPER	7440-50-8	F	ug/L	0.98 J	2.68 J	2.2 J	2.5 J	6.6	1.3 J	4.01	1.2 J	1.2 J	0.98 J
FFTA_RA_SW_Metals	IRON	7439-89-6	F	ug/L	525	157	959	907	134	695	215	3570	150	649
FFTA_RA_SW_Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.46 J	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_Metals	MAGNESIUM	7439-95-4	F	ug/L	1710	1940	2710	2760	1600	1790	1410	5610	7120	4210
FFTA_RA_SW_Metals	MANGANESE	7439-96-5	F	ug/L	113	54.9	786	811	15.4	62.2	38.3	1120	448	673
FFTA_RA_SW_Metals	MERCURY	7439-97-6	F	ug/L	0.02 J	< 0.1 U	0.03 J	0.01 J	< 0.1 U	0.03 J	< 0.1 U	< 0.1 U	0.02 J	0.02 J
FFTA_RA_SW_Metals	NICKEL	7440-02-0	F	ug/L	1.1 J	1 J	0.99 J	0.94 J	1.4 J	0.92 J	2.04	1.5 J	1.3 J	1.1 J
FFTA_RA_SW_Metals	POTASSIUM	7440-09-7	F	ug/L	1100	927 J	800 J	836 J	1050	2000	1460	3570	3860	3940
FFTA_RA_SW_Metals	SELENIUM	7782-49-2	F	ug/L	0.67 J	< 3 U	0.31 J	0.38 J	< 3 U	0.29 J	< 3 U	0.65 J	< 3 U	0.51 J
FFTA_RA_SW_Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	SODIUM	7440-23-5	F	ug/L	3800	3670	4580	4500	3760	3960	3740	5480	6210	6350
FFTA_RA_SW_Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	VANADIUM	7440-62-2	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	ZINC	7440-66-6	F	ug/L	< 10 U	3.6 J	< 10 U	< 10 U	1.9 J	< 10 U	10.4 J	7.8 J	< 10 U	< 10 U
FFTA_RA_SW_Metals	ALUMINUM	7429-90-5	N	ug/L	145 J	< 100 U	368	342	1590	257 J	120 J	531	54.4 J	104 J
FFTA_RA_SW_Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	0.14 J	< 0.5 U	< 0.5 U	0.16 J	< 0.5 U	0.096 J	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_Metals	ARSENIC	7440-38-2	N	ug/L	< 4 U	< 4 U	6	4.9 J	3.6 J	< 4 U	< 4 U	4 J	< 3 U	3.8 J
FFTA_RA_SW_Metals	BARIUM	7440-39-3	N	ug/L	4.4 J	4.44 J	6.4	6.4	11.5	17.8	12.8	20.6	3.8 J	4.2 J
FFTA_RA_SW_Metals	BERYLLIUM	7440-41-7	N	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
FFTA_RA_SW_Metals	CADMIUM	7440-43-9	N	ug/L	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	2.14	0.15 J	0.18 J	0.08 J	< 0.2 U	< 0.2 U
FFTA_RA_SW_Metals	CALCIUM	7440-70-2	N	ug/L	4630	7880	20100	20100	8660	7620	6280	73000	87800	62600
FFTA_RA_SW_Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	COBALT	7440-48-4	N	ug/L	3.4	0.851 J	2.5	2.4	1	2.2	1.24	2.5	0.93 J	1.4
FFTA_RA_SW_Metals	COPPER	7440-50-8	N	ug/L	1.8 J	2.74 J	3.1	3.3	9.42	9.4	8.54	8.1	1.3 J	2.8 J
FFTA_RA_SW_Metals	IRON	7439-89-6	N	ug/L	748	335	2110	2100	1650	946	380	5620	536	1500
FFTA_RA_SW_Metals	LEAD	7439-92-1	N	ug/L	< 0.5 U	< 0.5 U	0.52 J	0.56 J	2.02	2.1	1.59	1.5	< 0.5 U	< 0.5 U
FFTA_RA_SW_Metals	MAGNESIUM	7439-95-4	N	ug/L	1740	1990	2810	2760	1860	1780	1360	5840	7340	4230
FFTA_RA_SW_Metals	MANGANESE	7439-96-5	N	ug/L	124	57.4	840	835	31.1	67.8	41.3	1190	496	815
FFTA_RA_SW_Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 UJ
FFTA_RA_SW_Metals	NICKEL	7440-02-0	N	ug/L	1.5 J	0.93 J	1.4 J	1.3 J	8.09	1.6 J	2.24	2.1	1.5 J	1.1 J
FFTA_RA_SW_Metals	POTASSIUM	7440-09-7	N	ug/L	1080	947 J	902 J	855 J	1360	2120	1490	3570	4000	4180
FFTA_RA_SW_Metals	SELENIUM	7782-49-2	N	ug/L	0.82 J	< 3 U	0.51 J	0.31 J	< 3 U	< 3 U	< 3 U	0.35 J	0.77 J	0.59 J
FFTA_RA_SW_Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.1 J	0.07 J	0.11 J	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	SODIUM	7440-23-5	N	ug/L	3720	3680	4540	4560	3770	3910	3470	5580	6530	6540
FFTA_RA_SW_Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.32 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	VANADIUM	7440-62-2	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	ZINC	7440-66-6	N	ug/L	< 10 U	3.3 J	< 10 U	< 10 U	5.7 J	19 J	13.7 J	23	< 10 U	8.3 J
FFTA_RA_SW_PCBs	AROCLOR-1016	12674-11-2	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1221	11104-28-2	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1232	11141-16-5	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1242	53469-21-9	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1248	12672-29-6	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1254	11097-69-1	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1260	11096-82-5	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1262	37324-23-5	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	AROCLOR-1268	11100-14-4	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 UJ			
FFTA_RA_SW_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L		< 0.024 U			< 0.048 U		< 0.05 U			
FFTA_RA_SW_SVOCs	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.095 UJ	< 0.096 UJ	< 0.095 UJ	< 0.094 UJ	< 0.095 UJ	< 0.094 UJ	< 0.1 UJ	< 0.096 UJ	< 0.095 UJ	< 0.096 UJ
FFTA_RA_SW_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U
FFTA_RA_SW_SVOCs	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U
FFTA_RA_SW_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.15 UJ	< 0.14 U	< 0.14 U	< 0.14 U
FFTA_RA_SW_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 0.48 U	< 7.2 U	< 0.48 U	< 0.47 U	< 7.1 U	< 0.47 U	< 7.6 U	< 0.48 U	< 0.48 U	< 0.48 U
FFTA_RA_SW_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 UJ	< 18 U	< 18 UJ	< 18 UJ	< 18 U	< 18 UJ	< 19 U	< 18 UJ	< 18 UJ	< 18 UJ
FFTA_RA_SW_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U
FFTA_RA_SW_SVOCs	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U
FFTA_RA_SW_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U
FFTA_RA_SW_SVOCs	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U
FFTA_RA_SW_SVOCs	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U

ATTACHMENT A TABLE 6
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
					Location ID	FTA-SW-01	FTA-SW-01	FTA-SW-02	FTA-SW-02	FTA-SW-02	FTA-SW-03	FTA-SW-03	FTA-SW-04	FTA-SW-05	FTA-SW-06	
					Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	11/27/2012	11/27/2012	
					Sample Type Code	N	N	N	FD	N	N	N	N	N	N	
					Sample ID	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712	
Analyte Group	Compound	CAS	Fraction	Units												
FFTA_RA_SW_SVOCs	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	
FFTA_RA_SW_SVOCs	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	
FFTA_RA_SW_SVOCs	2-NITROPHENOL	88-75-5	N	ug/L	< 7.3 UJ	< 7.2 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.6 U	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	
FFTA_RA_SW_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	
FFTA_RA_SW_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 UJ	UR	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 0.096 U	< 18 U	< 18 U	< 0.095 U	< 18 U	< 0.1 UJ	< 18 U	< 18 U	< 18 U	
FFTA_RA_SW_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.71 U	< 0.72 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.76 U	< 0.72 U	< 0.71 U	< 0.72 U	
FFTA_RA_SW_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.3 UJ	< 7.2 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.6 U	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	
FFTA_RA_SW_SVOCs	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U	UR	< 0.48 U	< 0.48 U	< 0.48 U	
FFTA_RA_SW_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	4-NITROANILINE	100-01-6	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	4-NITROPHENOL	100-02-7	N	ug/L	< 18 UJ	< 18 U	< 18 UJ	< 18 UJ	< 18 UJ	< 18 UJ	< 19 UJ	< 18 UJ	< 18 UJ	< 18 UJ	
FFTA_RA_SW_SVOCs	ACENAPHTHENE	83-32-9	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	ACETOPHENONE	98-86-2	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	ANTHRACENE	120-12-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	ATRAZINE	1912-24-9	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	BENZALDEHYDE	100-52-7	N	ug/L	< 7.3 U	< 7.2 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.6 UJ	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.19 U	< 0.096 U	< 0.2 U	< 0.19 U	< 0.095 U	< 0.19 U	< 0.1 UJ	< 0.096 UJ	< 0.19 U	< 0.22 U	
FFTA_RA_SW_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.095 UJ	< 7.2 U	< 0.095 UJ	< 0.094 UJ	< 7.1 U	< 0.094 UJ	< 7.6 U	< 0.096 UJ	< 0.095 UJ	0.052 J	
FFTA_RA_SW_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.49 U	< 0.48 UJ	< 0.51 U	< 0.48 U	< 0.48 UJ	< 0.77 U	< 0.51 UJ	< 0.95 U	< 0.52 U	< 0.82 U	
FFTA_RA_SW_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	CAPROLACTAM	105-60-2	N	ug/L	< 7.3 U	UR	< 7.1 U	< 7.1 U	UR	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	CARBAZOLE	86-74-8	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	CHRYSENE	218-01-9	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.095 U	< 0.096 UJ	< 0.095 U	< 0.094 U	< 0.095 UJ	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	DIBENZOFURAN	132-64-9	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	FLUORANTHENE	206-44-0	N	ug/L	< 0.095 U	< 7.2 U	< 0.095 U	< 0.094 U	< 7.1 U	< 0.094 U	< 7.6 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	FLUORENE	86-73-7	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 UJ	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	HPAH, TOTAL (b)	RA-63	N	ug/L	< 0.19 U	< 7.2 U	< 0.2 U	< 0.19 U	< 7.1 U	0.14	< 7.6 U	0.15	< 0.19 U	0.21	
FFTA_RA_SW_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	0.14 J	< 0.1 UJ	0.15 J	< 0.095 U	0.16 J	
FFTA_RA_SW_SVOCs	ISOPHORONE	78-59-1	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	LPAH, TOTAL (b)	RA-64	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	NAPHTHALENE	91-20-3	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	
FFTA_RA_SW_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	
FFTA_RA_SW_SVOCs	PAH, TOTAL (b)	RA-3502	N	ug/L	< 7.3 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U	0.14	< 7.6 U	0.15	< 7.1 U	0.21	
FFTA_RA_SW_SVOCs	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 UJ	< 0.51 U	< 0.48 U	< 0.48 U	< 0.48 U	
FFTA_RA_SW_SVOCs	PHENANTHRENE	85-01-8	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_SVOCs	PHENOL	108-95-2	N	ug/L	< 0.48 U	< 7.2 U	< 0.48 U	< 0.47 U	< 7.1 U	< 0.47 U	< 7.6 U	< 0.48 U	< 0.48 U	< 0.48 U	
FFTA_RA_SW_SVOCs	PYRENE	129-00-0	N	ug/L	< 0.095 U	< 0.096 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.1 U	< 0.096 U	< 0.095 U	< 0.096 U	
FFTA_RA_SW_TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L	< 71 U	< 71 U	< 71 U	< 71 U	< 72 U	140	< 71 U	< 71 U	< 71 U	< 71 U	
FFTA_RA_SW_TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L	< 75 U		< 75 U	< 75 U		< 75 U		< 75 U	< 75 U	< 75 U	
FFTA_RA_SW_TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L	< 75 U		< 75 U	< 75 U		< 75 U		< 75 U	< 75 U	< 75 U	
FFTA_RA_SW_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	
FFTA_RA_SW_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	
FFTA_RA_SW_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	
FFTA_RA_SW_VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	

ATTACHMENT A TABLE 6
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
					Location ID	FTA-SW-01	FTA-SW-01	FTA-SW-02	FTA-SW-02	FTA-SW-02	FTA-SW-03	FTA-SW-03	FTA-SW-04	FTA-SW-05	FTA-SW-06
					Sample Date	11/27/2012	6/19/2014	11/27/2012	11/27/2012	6/19/2014	11/27/2012	6/19/2014	11/27/2012	11/27/2012	11/27/2012
					Sample Type Code	N	N	N	FD	N	N	N	N	N	N
					Sample ID	FTA-SW01-112712	FTA-SW-01-061914	FTA-SW02-112712	FTA-SW02-112712-D	FTA-SW-02-061914	FTA-SW03-112712	FTA-SW-03-061914	FTA-SW04-112712	FTA-SW05-112712	FTA-SW06-112712
Analyte Group	Compound	CAS	Fraction	Units											
FFTA_RA_SW_VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 0.5 U		< 0.5 U	< 0.5 UJ		< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	2-HEXANONE	591-78-6	N	ug/L	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U
FFTA_RA_SW_VOCs	ACETONE	67-64-1	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	2.3 J	< 2.5 UJ	< 2.5 U	7.3	2.3 J
FFTA_RA_SW_VOCs	BENZENE	71-43-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 UJ	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U
FFTA_RA_SW_VOCs	CHLOROFORM	67-66-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U
FFTA_RA_SW_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 UJ
FFTA_RA_SW_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
FFTA_RA_SW_VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U
FFTA_RA_SW_VOCs	O-XYLENE	95-47-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	STYRENE	100-42-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U
FFTA_RA_SW_VOCs	TOLUENE	108-88-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.43 J	< 0.5 U	1.9	< 0.5 U	0.35 J
FFTA_RA_SW_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.005 U	< 0.05 U	< 0.005 U	< 0.005 U	< 0.05 U	< 0.005 U	< 0.05 U	< 0.005 U	< 0.005 U	< 0.005 U
FFTA_RA_SW_VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
FFTA_RA_SW_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

ATTACHMENT A TABLE 6
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
					Location ID	FTA-SW-06	FTA-SW-06	FTA-SW-07	FTA-SW-07	FTA-SW-08	FTA-SW-08
					Sample Date	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/28/2012	6/19/2014
					Sample Type Code	N	FD	N	N	N	N
					Sample ID	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914	FTA-SW08-112812	FTA-SW-08-061914
Analyte Group	Compound	CAS	Fraction	Units							
FFTA_RA_SW_Metals	ALUMINUM	7429-90-5	F	ug/L	< 100 U	56 J	45.4 J	< 100 U	34.7 J	35 J
FFTA_RA_SW_Metals	ANTIMONY	7440-36-0	F	ug/L	0.099 J	0.11 J	< 0.5 U	0.21 J	< 0.09 U	0.15 J
FFTA_RA_SW_Metals	ARSENIC	7440-38-2	F	ug/L	6.5	7.5	3.3 J	6.2	3.1 J	5.1
FFTA_RA_SW_Metals	BARIUM	7440-39-3	F	ug/L	3 J	2.93 J	0.86 J	2.2 J	0.68 J	2.2 J
FFTA_RA_SW_Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
FFTA_RA_SW_Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
FFTA_RA_SW_Metals	CALCIUM	7440-70-2	F	ug/L	48500	48600	66700	56600	54000	26500
FFTA_RA_SW_Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	COBALT	7440-48-4	F	ug/L	4.25	4.14	0.7 J	1.35	0.42 J	0.608 J
FFTA_RA_SW_Metals	COPPER	7440-50-8	F	ug/L	< 2 U	1.99 J	< 2 U	< 2 U	< 2 U	2.45 J
FFTA_RA_SW_Metals	IRON	7439-89-6	F	ug/L	664	522	< 80 U	833	91.5 J	794
FFTA_RA_SW_Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_Metals	MAGNESIUM	7439-95-4	F	ug/L	4360	4330	6580	5840	5490	2440
FFTA_RA_SW_Metals	MANGANESE	7439-96-5	F	ug/L	1010	941	349	372	45.7	11
FFTA_RA_SW_Metals	MERCURY	7439-97-6	F	ug/L	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 U
FFTA_RA_SW_Metals	NICKEL	7440-02-0	F	ug/L	1.83 J	2.46	< 1.2 U	1.76 J	< 1.2 U	1.61 J
FFTA_RA_SW_Metals	POTASSIUM	7440-09-7	F	ug/L	1320	1270	3810	2910	3840	755 J
FFTA_RA_SW_Metals	SELENIUM	7782-49-2	F	ug/L	< 3 U	< 3 U	0.3 J	< 3 U	0.23 J	< 3 U
FFTA_RA_SW_Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	SODIUM	7440-23-5	F	ug/L	3780	4040	6280	3930	5900	2810
FFTA_RA_SW_Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	VANADIUM	7440-62-2	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	ZINC	7440-66-6	F	ug/L	2.4 J	3.7 J	< 10 U	5.6 J	< 10 U	4 J
FFTA_RA_SW_Metals	ALUMINUM	7429-90-5	N	ug/L	< 100 U	97 J	68.4 J	< 110 U	44.2 J	< 100 U
FFTA_RA_SW_Metals	ANTIMONY	7440-36-0	N	ug/L	0.15 J	0.11 J	< 0.5 U	0.19 J	< 0.5 U	< 0.09 U
FFTA_RA_SW_Metals	ARSENIC	7440-38-2	N	ug/L	7.9	7.9	3.6 J	7.9	3.3 J	5.1
FFTA_RA_SW_Metals	BARIUM	7440-39-3	N	ug/L	17.4	20.9	0.99 J	4.29 J	1.1 J	1.8 J
FFTA_RA_SW_Metals	BERYLLIUM	7440-41-7	N	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
FFTA_RA_SW_Metals	CADMIUM	7440-43-9	N	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.03 J	< 0.2 U
FFTA_RA_SW_Metals	CALCIUM	7440-70-2	N	ug/L	46200	54500	67700	52500	54900	27600
FFTA_RA_SW_Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	COBALT	7440-48-4	N	ug/L	5.06	5.52	0.76 J	1.38	0.49 J	0.53 J
FFTA_RA_SW_Metals	COPPER	7440-50-8	N	ug/L	3.21	3.85	< 2 U	2.3 J	< 2.4 U	2.27 J
FFTA_RA_SW_Metals	IRON	7439-89-6	N	ug/L	5890	7060	291	2340	344	1250
FFTA_RA_SW_Metals	LEAD	7439-92-1	N	ug/L	0.41 J	0.41 J	0.07 J	< 0.5 U	0.32 J	< 0.5 U
FFTA_RA_SW_Metals	MAGNESIUM	7439-95-4	N	ug/L	3990	4770	6550	5260	5540	2560
FFTA_RA_SW_Metals	MANGANESE	7439-96-5	N	ug/L	1080	1240	365	432	52.2	28.3
FFTA_RA_SW_Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 UJ	< 0.1 U
FFTA_RA_SW_Metals	NICKEL	7440-02-0	N	ug/L	1.87 J	2.09	< 1.2 U	1.66 J	< 1.2 U	1.1 J
FFTA_RA_SW_Metals	POTASSIUM	7440-09-7	N	ug/L	1240	1310	3780	3180	3880	810 J
FFTA_RA_SW_Metals	SELENIUM	7782-49-2	N	ug/L	< 3 U	< 3 U	< 3 UJ	< 3 U	< 3 UJ	< 3 U
FFTA_RA_SW_Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	SODIUM	7440-23-5	N	ug/L	3490	4030	6220	3660	5940	2730
FFTA_RA_SW_Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
FFTA_RA_SW_Metals	VANADIUM	7440-62-2	N	ug/L	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U
FFTA_RA_SW_Metals	ZINC	7440-66-6	N	ug/L	4.6 J	6.3 J	< 10 U	5.4 J	< 10 U	2.2 J
FFTA_RA_SW_PCBs	AROCLOR-1016	12674-11-2	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1221	11104-28-2	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1232	11141-16-5	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1242	53469-21-9	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1248	12672-29-6	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1254	11097-69-1	N	ug/L	0.38 J	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1260	11096-82-5	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1262	37324-23-5	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	AROCLOR-1268	11100-14-4	N	ug/L	< 0.048 U	< 0.047 UJ		< 0.047 U		< 0.047 U
FFTA_RA_SW_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L	0.38	< 0.047 U		< 0.047 U		< 0.047 U
FFTA_RA_SW_SVOCs	1,1-BIPHENYL	92-52-4	N	ug/L	0.082 J	< 0.097 UJ	< 0.095 UJ	< 0.094 UJ	< 0.095 UJ	< 0.098 UJ
FFTA_RA_SW_SVOCs	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	0.11 J	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	1,4-DIOXANE	123-91-1	N	ug/L	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.49 U
FFTA_RA_SW_SVOCs	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.15 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ	< 0.15 UJ
FFTA_RA_SW_SVOCs	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 7.5 U	< 7.3 U	< 0.48 U	< 7.1 U	< 0.48 U	< 7.4 U
FFTA_RA_SW_SVOCs	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 19 U	< 18 U	< 18 U	< 18 U	< 18 U	< 18 U
FFTA_RA_SW_SVOCs	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	0.22 J	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.49 U
FFTA_RA_SW_SVOCs	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.49 U
FFTA_RA_SW_SVOCs	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.4 U
FFTA_RA_SW_SVOCs	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.49 U
FFTA_RA_SW_SVOCs	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U

ATTACHMENT A TABLE 6
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
					Location ID	FTA-SW-06	FTA-SW-06	FTA-SW-07	FTA-SW-07	FTA-SW-08	FTA-SW-08
					Sample Date	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/28/2012	6/19/2014
					Sample Type Code	N	FD	N	N	N	N
					Sample ID	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914	FTA-SW08-112812	FTA-SW-08-061914
Analyte Group	Compound	CAS	Fraction	Units							
FFTA_RA_SW_SVOCs	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 7.4 U
FFTA_RA_SW_SVOCs	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.49 U
FFTA_RA_SW_SVOCs	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	2-NITROANILINE	88-74-4	N	ug/L	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U
FFTA_RA_SW_SVOCs	2-NITROPHENOL	88-75-5	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.49 U
FFTA_RA_SW_SVOCs	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	3-NITROANILINE	99-09-2	N	ug/L	< 0.1 U	< 0.097 U	< 18 U	< 0.094 U	< 18 U	< 0.098 U
FFTA_RA_SW_SVOCs	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.75 U	< 0.73 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.74 U
FFTA_RA_SW_SVOCs	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 7.4 U
FFTA_RA_SW_SVOCs	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U	< 0.48 U	< 0.49 U
FFTA_RA_SW_SVOCs	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	4-NITROANILINE	100-01-6	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	4-NITROPHENOL	100-02-7	N	ug/L	< 19 UJ	< 18 UJ	< 18 U	< 18 UJ	< 18 U	< 18 UJ
FFTA_RA_SW_SVOCs	ACENAPHTHENE	83-32-9	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	ACETOPHENONE	98-86-2	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	ANTHRACENE	120-12-7	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	ATRAZINE	1912-24-9	N	ug/L	0.06 J	< 0.097 U	< 0.095 U	< 0.094 U	0.047 J	< 0.098 U
FFTA_RA_SW_SVOCs	BENZALDEHYDE	100-52-7	N	ug/L	< 7.5 UJ	< 7.3 UJ	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	< 7.4 UJ
FFTA_RA_SW_SVOCs	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	0.065 J	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	BENZO[A]PYRENE	50-32-8	N	ug/L	0.076 J	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U	< 0.095 UJ	< 0.098 U
FFTA_RA_SW_SVOCs	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 7.4 U
FFTA_RA_SW_SVOCs	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 7.5 U	< 7.3 U	< 0.095 UJ	< 7.1 U	< 0.095 UJ	< 7.4 U
FFTA_RA_SW_SVOCs	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 7.4 U
FFTA_RA_SW_SVOCs	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	0.044 J	< 0.097 U	< 0.095 UJ	< 0.094 U	< 0.095 UJ	< 0.098 U
FFTA_RA_SW_SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.5 UJ	< 0.48 UJ	< 0.48 U	< 0.47 UJ	< 0.48 U	< 0.49 UJ
FFTA_RA_SW_SVOCs	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	CAPROLACTAM	105-60-2	N	ug/L	UR	UR	< 7.1 U	UR	< 7.1 U	UR
FFTA_RA_SW_SVOCs	CARBAZOLE	86-74-8	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	CHRYSENE	218-01-9	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.1 UJ	< 0.097 UJ	< 0.095 U	< 0.094 UJ	< 0.095 U	< 0.098 UJ
FFTA_RA_SW_SVOCs	DIBENZOFURAN	132-64-9	N	ug/L	0.087 J	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 7.5 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 7.4 U
FFTA_RA_SW_SVOCs	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	FLUORANTHENE	206-44-0	N	ug/L	< 7.5 U	< 7.3 U	< 0.095 UJ	< 7.1 U	< 0.095 UJ	< 7.4 U
FFTA_RA_SW_SVOCs	FLUORENE	86-73-7	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 UJ	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	HPAH, TOTAL (b)	RA-63	N	ug/L	0.26	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 7.4 U
FFTA_RA_SW_SVOCs	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	0.12 J	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	ISOPHORONE	78-59-1	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	LPAH, TOTAL (b)	RA-64	N	ug/L	0.20	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	NAPHTHALENE	91-20-3	N	ug/L	0.1 J	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	NITROBENZENE	98-95-3	N	ug/L	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U
FFTA_RA_SW_SVOCs	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.5 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	PAH, TOTAL (b)	RA-3502	N	ug/L	0.46	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.4 U
FFTA_RA_SW_SVOCs	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U	< 0.48 UJ	< 0.49 U
FFTA_RA_SW_SVOCs	PHENANTHRENE	85-01-8	N	ug/L	0.095 J	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_SVOCs	PHENOL	108-95-2	N	ug/L	< 7.5 U	< 7.3 U	< 0.48 U	< 7.1 U	< 0.48 U	< 7.4 U
FFTA_RA_SW_SVOCs	PYRENE	129-00-0	N	ug/L	< 0.1 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 0.098 U
FFTA_RA_SW_TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L	< 71 U	< 71 U	< 71 U	< 74 UJ	< 71 U	< 71 U
FFTA_RA_SW_TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L			< 75 U		< 75 U	
FFTA_RA_SW_TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L			< 75 U		< 75 U	
FFTA_RA_SW_VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U

ATTACHMENT A TABLE 6
ANALYTICAL DATA SUMMARY TABLES - SURFACE WATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Facility ID	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001	SITE 00001
					Location ID	FTA-SW-06	FTA-SW-06	FTA-SW-07	FTA-SW-07	FTA-SW-08	FTA-SW-08
					Sample Date	6/19/2014	6/19/2014	11/28/2012	6/19/2014	11/28/2012	6/19/2014
					Sample Type Code	N	FD	N	N	N	N
					Sample ID	FTA-SW-06-061914	FTA-SW-06-061914-D	FTA-SW07-112812	FTA-SW-07-061914	FTA-SW08-112812	FTA-SW-08-061914
Analyte Group	Compound	CAS	Fraction	Units							
FFTA_RA_SW_VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ
FFTA_RA_SW_VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L			< 0.5 U		< 0.5 U	
FFTA_RA_SW_VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	2-HEXANONE	591-78-6	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 UJ	< 2.5 U
FFTA_RA_SW_VOCs	ACETONE	67-64-1	N	ug/L	7.5 J	11 J	< 2.5 U	6	< 2.5 U	4.1 J
FFTA_RA_SW_VOCs	BENZENE	71-43-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 U
FFTA_RA_SW_VOCs	CHLOROFORM	67-66-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
FFTA_RA_SW_VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 UJ
FFTA_RA_SW_VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
FFTA_RA_SW_VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
FFTA_RA_SW_VOCs	O-XYLENE	95-47-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	STYRENE	100-42-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 0.025 U	< 0.025 U	< 0.025 UJ	< 0.025 U	< 0.025 U	< 0.025 U
FFTA_RA_SW_VOCs	TOLUENE	108-88-3	N	ug/L	0.86 J	1	< 0.5 U	5.1	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
FFTA_RA_SW_VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.05 U	< 0.05 U	< 0.005 UJ	< 0.05 U	< 0.005 U	< 0.05 U
FFTA_RA_SW_VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
FFTA_RA_SW_VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

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ATTACHMENT B

SUMMARY STATISTICS

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ATTACHMENT B TABLE 1
SUMMARY STATISTICS - SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
INORGANICS									
ALUMINUM	37 : 37	--	--	4320	J	13300	19700		FTA-ANOM1E-SO-SURF (0 - 2 ft)
ANTIMONY	36 : 37	0.046	0.046	0.052	J	0.11	0.72	J	FTA-SB-201 (0 - 2 ft)
ARSENIC	37 : 37	--	--	3.6	J	7.6	12	J	FTA-SB-205 (0 - 2 ft)
BARIUM	37 : 37	--	--	12		30	114	J	FTA-SB-200 (0 - 2 ft)
BERYLLIUM	37 : 37	--	--	0.26	J	0.48	0.89	J	FTA-SB-201 (0 - 2 ft)
CADMIUM	37 : 37	--	--	0.040	J	0.15	1.3	J	FTA-SB-201 (0 - 2 ft)
CALCIUM	37 : 37	--	--	1470		3800	22700	J	FTA-SB-201 (0 - 2 ft)
CHROMIUM, TOTAL	47 : 48	11	11	14	J	27	42	J	FTA-AREAA-02 (0 - 2 ft)
CHROMIUM, HEXAVALENT	0 : 10	0.310	1.60	--		--	--		ND
CHROMIUM, TRIVALENT (calculated)	10 : 11	0.50	0.50	20		24	29		FTA-SB-212 (0 - 0.5 ft)FTA-SB-215 (0 - 0.5 ft)
COBALT	37 : 37	--	--	6.8		11	24	J	FTA-SB-201 (0 - 2 ft)
COPPER	37 : 37	--	--	6.3		21	32		FTA-SB-216 (0 - 2 ft)
IRON	37 : 37	--	--	6840	J	21900	32000		FTA-SB-210 (0 - 2 ft)
LEAD	37 : 37	--	--	5.2	J	13	48	J	FTA-AREAA-02 (0 - 2 ft)
MAGNESIUM	37 : 37	--	--	2760	J	6510	9690		FTA-SB-209 (0 - 2 ft)
MANGANESE	37 : 37	--	--	315		824	8600	J	FTA-SB-201 (0 - 2 ft)
MERCURY	29 : 37	0.014	0.018	0.0043	J	0.027	0.21	J	FTA-SB-200 (0 - 2 ft)
NICKEL	36 : 37	8.9	8.9	7.1		24	32	J	FTA-AREAI-01 (0 - 2 ft)
POTASSIUM	36 : 37	536	536	436	J	1040	2790	J	FTA-ANOM1E-SO-SURF (0 - 2 ft)
SELENIUM	25 : 37	0.21	4.0	0.056	J	0.59	6.4	J	FTA-SB-201 (0 - 2 ft)
SILVER	37 : 37	--	--	0.020	J	0.049	0.22		FTA-SB-216 (0 - 2 ft)
SODIUM	31 : 37	61	167	87	J	149	417	J	FTA-SB-210 (0 - 2 ft)
THALLIUM	37 : 37	--	--	0.050	J	0.080	0.14		FTA-ANOM1E-SO-SURF (0 - 2 ft)
VANADIUM	37 : 37	--	--	18	J	34	47		FTA-SB-210 (0 - 2 ft)
ZINC	37 : 37	--	--	35		50	72		FTA-SB-210 (0 - 2 ft)
POLYCHLORINATED BIPHENYLS (PCBs) - AROCLORS									
AROCLOR-1016	0 : 107	0.0014	1.90	--		--	--		ND
AROCLOR-1221	0 : 107	0.0014	1.900	--		--	--		ND
AROCLOR-1232	0 : 107	0.0016	2.200	--		--	--		ND
AROCLOR-1242	0 : 107	0.0014	1.900	--		--	--		ND
AROCLOR-1248	0 : 107	0.0014	1.900	--		--	--		ND
AROCLOR-1254	2 : 107	0.0014	1.900	2.6	J	4.2	5.8	J	FTA-SB-211 (0 - 2 ft)
AROCLOR-1260	103 : 107	0.0082	0.010	0.015	J	18	610		PCBAREA1-013 (1 - 1 ft)
AROCLOR-1262	0 : 37	0.0014	0.190	--		--	--		ND
AROCLOR-1268	0 : 37	0.0014	0.190	--		--	--		ND
TOTAL AROCLORS	103 : 107	0.0097	0.012	0.015		19	610		PCBAREA1-013 (1 - 1 ft)

ATTACHMENT B TABLE 1
SUMMARY STATISTICS - SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
PESTICIDES									
4,4-DDD	1 : 30	0.00027	0.94	0.0092	J	0.0092	0.0092	J	FTA-AREAH-01 (0 - 2 ft)
4,4-DDE	0 : 30	0.00027	0.94	--		--	--		ND
4,4-DDT	10 : 30	0.00033	0.94	0.0032	J	0.15	0.76	J	FTA-AREAG-03 (0 - 2 ft)
ALDRIN	1 : 30	0.00015	0.50	0.00016	J	0.00016	0.00016	J	FTA-AREAF-01 (0 - 2 ft)
ALPHA-BHC	0 : 30	0.00014	0.50	--		--	--		ND
ALPHA-CHLORDANE	0 : 30	0.00014	0.50	--		--	--		ND
BETA-BHC	0 : 30	0.00014	0.50	--		--	--		ND
DDT, TOTAL	0 : 12	0.0016	0.0020	--		--	--		ND
DELTA-BHC	0 : 30	0.00014	0.50	--		--	--		ND
DIELDRIN	11 : 30	0.00032	0.94	0.0018	J	0.068	0.48	J	FTA-AREAG-03 (0 - 2 ft)
ENDOSULFAN I	2 : 30	0.00014	0.50	0.00026	J	0.00035	0.00044	J	FTA-AREAG-02 (0 - 2 ft)
ENDOSULFAN II	2 : 30	0.00027	0.94	0.0058		0.013	0.020	J	FTA-AREAA-02 (0 - 2 ft)
ENDOSULFAN SULFATE	7 : 30	0.00027	0.94	0.0025	J	0.059	0.22	J	FTA-AREAB-02 (0 - 2 ft)
ENDRIN	5 : 30	0.00027	0.94	0.00050	J	0.034	0.13	J	FTA-AREAG-03 (0 - 2 ft)
ENDRIN ALDEHYDE	1 : 30	0.00030	0.94	0.017	J	0.017	0.017	J	FTA-AREAF-01 (0 - 2 ft)
ENDRIN KETONE	25 : 30	0.0017	0.94	0.0011	J	0.33	3.0	J	FTA-SB-211 (0 - 2 ft)
HEPTACHLOR	0 : 30	0.00014	0.50	--		--	--		ND
HEPTACHLOR EPOXIDE	3 : 30	0.00014	0.50	0.0031	J	0.032	0.087	J	FTA-AREAG-03 (0 - 2 ft)
LINDANE	0 : 30	0.00014	0.50	--		--	--		ND
METHOXYCHLOR	6 : 30	0.0014	4.95	0.012	J	0.42	1.6	J	FTA-AREAB-02 (0 - 2 ft)
TOXAPHENE	0 : 30	0.0027	49.50	--		--	--		ND
TRANS-CHLORDANE	0 : 30	0.00014	0.50	--		--	--		ND
PETROLEUM HYDROCARBONS									
TPH-C11-C22 AROMATICS	6 : 20	12	18	9.4	J	52	220		FTA-SB-305 (0 - 2 ft)
TPH-C11-C22 AROMATICS UNADJUSTED	6 : 20	12	18	9.4	J	52	220		FTA-SB-305 (0 - 2 ft)
TPH-C19-C36 ALIPHATICS UNADJUSTED	8 : 20	12	18	13	J	75	220		FTA-SB-305 (0 - 2 ft)
TPH-C5-C8 ALIPHATICS	0 : 20	17	39	--		--	--		ND
TPH-C5-C8 ALIPHATICS UNADJUSTED	0 : 20	17	39	--		--	--		ND
TPH-C9-C10 AROMATICS UNADJUSTED	1 : 20	17	39	30	J	30	30	J	FTA-SB-305 (0 - 2 ft)
TPH-C9-C12 ALIPHATICS	0 : 20	17	39	--		--	--		ND
TPH-C9-C12 ALIPHATICS UNADJUSTED	1 : 20	17	39	47		47	47		FTA-SB-305 (0 - 2 ft)
TPH-C9-C18 ALIPHATICS UNADJUSTED	1 : 20	12	18	220		220	220		FTA-SB-305 (0 - 2 ft)
TPH-DIESEL RANGE	3 : 4	5.3	5.3	15	J	34	65	J	A31-SB03 (0 - 2 ft)
TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	4 : 4	--	--	0.33	J	0.44	0.66	J	A31-SB03 (0 - 2 ft)

ATTACHMENT B TABLE 1
SUMMARY STATISTICS - SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte		FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
			Minimum	Maximum	Minimum		Mean	Maximum		
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)										
2-METHYLNAPHTHALENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
ACENAPHTHENE	[1]	0 : 4	0.19	0.2	--		--	--		ND
ACENAPHTHYLENE	[1]	0 : 37	0.22	1.6	--		--	--		ND
ANTHRACENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
BENZO[A]ANTHRACENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
BENZO[A]PYRENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
BENZO[B]FLUORANTHENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
BENZO[G,H,I]PERYLENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
BENZO[K]FLUORANTHENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
CHRYSENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
DIBENZ[A,H]ANTHRACENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
FLUORANTHENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
FLUORENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
INDENO[1,2,3-CD]PYRENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
NAPHTHALENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
PHENANTHRENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
PYRENE	[1]	0 : 4	0.15	0.2	--		--	--		ND
HPAH, TOTAL (EPH Methods)	[1]	0 : 4	0.15	0.2	--		--	--		ND
LPAH, TOTAL (EPH Methods)	[1]	0 : 4	0.19	0.2	--		--	--		ND
PAH, TOTAL (EPH Methods)	[1]	0 : 4	0.19	0.2	--		--	--		ND
1,1-BIPHENYL		9 : 41	0.0088	0.38	0.0014	J	0.088	0.64		FTA-SB-203 (0 - 2 ft)
1,2,4,5-TETRACHLOROBENZENE		0 : 37	0.0088	0.1	--		--	--		ND
1,4-DIOXANE		0 : 37	0.044	0.3	--		--	--		ND
2,2'-OXYBIS(1-CHLOROPROPANE)		0 : 41	0.0088	0.4	--		--	--		ND
2,3,4,6-TETRACHLOROPHENOL		2 : 37	0.044	0.33	0.0032	J	0.0037	0.0041	J	FTA-SB-218 (0 - 2 ft)
2,4,5-TRICHLOROPHENOL		0 : 41	0.54	4.0	--		--	--		ND
2,4,6-TRICHLOROPHENOL		1 : 41	0.044	0.38	0.0035	J	0.0035	0.0035	J	FTA-AREAG-02 (0 - 2 ft)
2,4-DICHLOROPHENOL		0 : 41	0.22	1.6	--		--	--		ND
2,4-DIMETHYLPHENOL		0 : 41	0.22	1.6	--		--	--		ND
2,4-DINITROPHENOL		0 : 28	0.066	1.0	--		--	--		ND
2,4-DINITROTOLUENE		0 : 41	0.0088	0.4	--		--	--		ND
2,6-DINITROTOLUENE		0 : 41	0.0088	0.4	--		--	--		ND
2-CHLORONAPHTHALENE		0 : 41	0.0088	0.4	--		--	--		ND
2-CHLOROPHENOL		0 : 41	0.044	0.4	--		--	--		ND

ATTACHMENT B TABLE 1
SUMMARY STATISTICS - SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
2-METHYLNAPHTHALENE	2 : 37	0.22	1.6	0.21	J	1.2	2.1		FTA-SB-203 (0 - 2 ft)
2-METHYLPHENOL	0 : 41	0.047	1.6	--		--	--		ND
2-NITROANILINE	0 : 41	0.54	4.0	--		--	--		ND
2-NITROPHENOL	0 : 41	0.22	1.6	--		--	--		ND
3- AND 4-METHYLPHENOL	0 : 41	0.047	1.6	--		--	--		ND
3,3-DICHLOROBENZIDINE	0 : 37	0.0088	0.4	--		--	--		ND
3-NITROANILINE	0 : 41	0.54	4.0	--		--	--		ND
4,6-DINITRO-2-METHYLPHENOL	0 : 41	0.088	1.0	--		--	--		ND
4-BROMOPHENYL-PHENYLETHER	0 : 41	0.22	1.6	--		--	--		ND
4-CHLORO-3-METHYLPHENOL	0 : 41	0.22	1.6	--		--	--		ND
4-CHLOROANILINE	0 : 40	0.044	0.4	--		--	--		ND
4-CHLOROPHENYL-PHENYLETHER	0 : 41	0.22	1.6	--		--	--		ND
4-NITROANILINE	0 : 41	0.0088	1.0	--		--	--		ND
4-NITROPHENOL	0 : 41	0.54	4.0	--		--	--		ND
ACENAPHTHENE	6 : 37	0.0015	1.6	0.0046	J	0.38	1.7		FTA-SB-216 (0 - 2 ft)
ACENAPHTHYLENE	0 : 37	0.22	1.6	--		--	--		ND
ACETOPHENONE	0 : 28	0.22	1.6	--		--	--		ND
ANTHRACENE	2 : 37	0.22	1.6	0.087	J	1.4	2.8		FTA-SB-216 (0 - 2 ft)
ATRAZINE	5 : 41	0.0088	0.38	0.0010	J	0.0017	0.0021	J	FTA-AREAG-01 (0 - 2 ft)
BENZALDEHYDE	0 : 41	0.22	1.6	--		--	--		ND
BENZO[A]ANTHRACENE	23 : 37	0.0088	0.066	0.0020	J	0.32	6.6		FTA-SB-216 (0 - 2 ft)
BENZO[A]PYRENE	15 : 37	0.0088	0.066	0.0042	J	0.32	4.3		FTA-SB-216 (0 - 2 ft)
BENZO[B]FLUORANTHENE	19 : 37	0.0088	0.066	0.0028	J	0.36	6.1		FTA-SB-216 (0 - 2 ft)
BENZO[G,H,I]PERYLENE	1 : 37	0.22	1.6	1.50		1.5	1.5		FTA-SB-216 (0 - 2 ft)
BENZO[K]FLUORANTHENE	3 : 37	0.22	1.6	0.087	J	0.83	2.3		FTA-SB-216 (0 - 2 ft)
BIS(2-CHLOROETHOXY)METHANE	0 : 41	0.0088	0.4	--		--	--		ND
BIS(2-CHLOROETHYL)ETHER	0 : 41	0.0088	0.4	--		--	--		ND
BIS(2-ETHYLHEXYL)PHTHALATE	3 : 41	0.22	1.6	0.15	J	0.33	0.61		FTA-SB-220 (0 - 2 ft)
BUTYLBENZYLPHTHALATE	4 : 41	0.044	0.4	0.00	J	0.011	0.031	J	FTA-SB-201 (0 - 2 ft)
CAPROLACTAM	0 : 41	0.22	1.6	--		--	--		ND
CARBAZOLE	1 : 41	0.22	1.6	0.76		0.8	0.8		FTA-SB-216 (0 - 2 ft)
CHRYSENE	4 : 37	0.22	1.6	0.11	J	1.6	6.0		FTA-SB-216 (0 - 2 ft)
DIBENZ[A,H]ANTHRACENE	9 : 37	0.0088	0.27	0.0031	J	0.11	0.92	J	FTA-SB-216 (0 - 2 ft)
DIBENZOFURAN	1 : 41	0.22	1.6	0.62		0.62	0.62		FTA-SB-216 (0 - 2 ft)
DIETHYLPHTHALATE	0 : 41	0.22	1.6	--		--	--		ND

ATTACHMENT B TABLE 1
SUMMARY STATISTICS - SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
DIMETHYL PHTHALATE	0 : 41	0.22	1.6	--		--	--		ND
DI-N-BUTYLPHTHALATE	0 : 41	0.044	0.4	--		--	--		ND
DI-N-OCTYLPHTHALATE	0 : 41	0.22	1.6	--		--	--		ND
FLUORANTHENE	5 : 37	0.22	1.6	0.10	J	3.0	14.0		FTA-SB-216 (0 - 2 ft)
FLUORENE	2 : 37	0.22	1.6	0.77		1.0	1.3		FTA-SB-216 (0 - 2 ft)
HEXACHLOROBENZENE	5 : 41	0.0088	0.38	0.0025	J	0.0066	0.013	J	FTA-SB-211 (0 - 2 ft)
HEXACHLOROBUTADIENE	0 : 41	0.0088	0.4	--		--	--		ND
HEXACHLOROCYCLOPENTADIENE	0 : 41	0.22	1.6	--		--	--		ND
HEXACHLOROETHANE	0 : 41	0.0088	0.4	--		--	--		ND
INDENO[1,2,3-CD]PYRENE	23 : 37	0.0088	0.012	0.0021	J	0.24	4.7	J	FTA-SB-216 (0 - 2 ft)
ISOPHORONE	0 : 41	0.22	1.6	--		--	--		ND
NAPHTHALENE	8 : 37	0.0088	0.066	0.0027	J	0.045	0.16		FTA-SB-216 (0 - 2 ft)
NITROBENZENE	0 : 41	0.0088	0.4	--		--	--		ND
N-NITROSODINPROPYLAMINE	0 : 41	0.0088	0.4	--		--	--		ND
N-NITROSODIPHENYLAMINE	0 : 41	0.0095	1.6	--		--	--		ND
PENTACHLOROPHENOL	0 : 41	0.044	1.0	--		--	--		ND
PHENANTHRENE	5 : 37	0.22	1.6	0.13	J	2.3	9.3		FTA-SB-216 (0 - 2 ft)
PHENOL	0 : 41	0.22	1.6	--		--	--		ND
PYRENE	6 : 37	0.22	1.6	0.13	J	2.0	11		FTA-SB-216 (0 - 2 ft)
HPAH, TOTAL	26 : 37	0.22	0.29	0.0020		2.4	57		FTA-SB-216 (0 - 2 ft)
LPAH, TOTAL	9 : 37	0.22	1.6	0.0027		2.3	15		FTA-SB-216 (0 - 2 ft)
PAH, TOTAL	26 : 37	0.22	0.29	0.0020		3.2	73		FTA-SB-216 (0 - 2 ft)
VOLATILE ORGANIC COMPOUNDS (VOCs)									
1,1,1-TRICHLOROETHANE	1 : 42	0.00096	0.028	0.00085	J	0.00085	0.00085	J	FTA-ANOM1E-SO-SURF (0 - 2 ft)
1,1,2,2-TETRACHLOROETHANE	0 : 42	0.00096	0.028	--		--	--		ND
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	0 : 5	0.00096	0.007	--		--	--		ND
1,1,2-TRICHLOROETHANE	0 : 42	0.00096	0.028	--		--	--		ND
1,1-DICHLOROETHANE	0 : 42	0.00096	0.028	--		--	--		ND
1,1-DICHLOROETHENE	0 : 42	0.00096	0.028	--		--	--		ND
1,2,4-TRICHLOROBENZENE	9 : 42	0.00096	0.028	0.00072	J	0.0018	0.0040	J	A31-SB01 (0 - 2 ft)
1,2-DIBROMO-3-CHLOROPROPANE	0 : 5	0.00096	0.007	--		--	--		ND
1,2-DIBROMOETHANE	0 : 4	0.00500	0.007	--		--	--		ND

ATTACHMENT B TABLE 1
SUMMARY STATISTICS - SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
1,2-DICHLOROBENZENE	1 : 42	0.00096	0.028	0.0033	J	0.0033	0.0033	J	FTA-SB-211 (0 - 2 ft)
1,2-DICHLOROETHANE	0 : 42	0.00096	0.028	--		--	--		ND
1,2-DICHLOROETHENE, TOTAL	1 : 20	0.0019	0.028	0.014	J	0.014	0.014	J	FTA-SB-201 (0 - 2 ft)
1,2-DICHLOROPROPANE	0 : 5	0.00096	0.007	--		--	--		ND
1,3-DICHLOROBENZENE	1 : 42	0.00096	0.028	0.0042	J	0.0042	0.0042	J	FTA-SB-211 (0 - 2 ft)
1,4-DICHLOROBENZENE	2 : 42	0.00096	0.028	0.00085	J	0.0012	0.0015	J	FTA-SB-211 (0 - 2 ft)
2-BUTANONE	2 : 4	0.025	0.034	0.012	J	0.018	0.023	J	A31-SB01 (0 - 2 ft)
2-HEXANONE	0 : 41	0.00740	0.140	--		--	--		ND
4-METHYL-2-PENTANONE	0 : 4	0.02500	0.035	--		--	--		ND
ACETONE	25 : 41	0.021	0.17	0.037	J	0.26	2.0	J	FTA-SB-201 (0 - 2 ft)
BENZENE	1 : 41	0.0015	0.028	0.0014	J	0.0014	0.0014	J	FTA-SB-204 (0 - 2 ft)
BROMODICHLOROMETHANE	0 : 5	0.00096	0.007	--		--	--		ND
BROMOFORM	0 : 4	0.00500	0.007	--		--	--		ND
BROMOMETHANE	0 : 4	0.00500	0.007	--		--	--		ND
CARBON DISULFIDE	2 : 4	0.0050	0.0070	0.0080		0.023	0.038		A31-SB01 (0 - 2 ft)
CARBON TETRACHLORIDE	0 : 42	0.00096	0.028	--		--	--		ND
CHLOROBENZENE	0 : 42	0.00096	0.028	--		--	--		ND
CHLOROETHANE	0 : 42	0.00096	0.055	--		--	--		ND
CHLOROFORM	0 : 42	0.00096	0.028	--		--	--		ND
CHLOROMETHANE	0 : 42	0.00096	0.055	--		--	--		ND
CIS-1,2-DICHLOROETHENE	2 : 42	0.00096	0.028	0.0019	J	0.0080	0.014	J	FTA-SB-201 (0 - 2 ft)
CIS-1,3-DICHLOROPROPENE	0 : 5	0.00096	0.007	--		--	--		ND
CYCLOHEXANE	0 : 4	0.00500	0.007	--		--	--		ND
DIBROMOCHLOROMETHANE	0 : 5	0.00096	0.007	--		--	--		ND
DICHLORODIFLUOROMETHANE	1 : 5	0.00096	0.0070	0.0010	J	0.0010	0.0010	J	A31-SB03 (0 - 2 ft)
ETHYLBENZENE	2 : 41	0.0015	0.028	0.0020	J	0.0050	0.0080	J	FTA-SB-204 (0 - 2 ft)
ISOPROPYLBENZENE	1 : 41	0.0015	0.028	0.011	J	0.011	0.011	J	FTA-SB-219 (0 - 2 ft)
M- AND P-XYLENE	0 : 41	0.00300	0.055	--		--	--		ND
METHYL ACETATE	1 : 4	0.0050	0.0070	0.037	J	0.0370	0.037	J	A31-SB03 (0 - 2 ft)
METHYL CYCLOHEXANE	0 : 41	0.00150	0.028	--		--	--		ND
METHYL TERT-BUTYL ETHER	0 : 41	0.00150	0.028	--		--	--		ND
METHYLENE CHLORIDE	0 : 42	0.00190	0.140	--		--	--		ND
O-XYLENE	0 : 41	0.00150	0.028	--		--	--		ND
STYRENE	0 : 41	0.00150	0.028	--		--	--		ND
TETRACHLOROETHENE	0 : 42	0.00096	0.028	--		--	--		ND

ATTACHMENT B TABLE 1
SUMMARY STATISTICS - SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations			Location of Maximum Detect
		Minimum	Maximum	Minimum	Mean	Maximum	
TOLUENE	4 : 41	0.0015	0.028	0.0029 J	0.0067	0.016 J	FTA-SB-204 (0 - 2 ft)
TRANS-1,2-DICHLOROETHENE	0 : 42	0.00096	0.028	--	--	--	ND
TRANS-1,3-DICHLOROPROPENE	0 : 5	0.00096	0.007	--	--	--	ND
TRICHLOROETHENE	1 : 42	0.00096	0.028	0.0078	0.0078	0.0078	FTA-ANOM4-SO-SURF (0 - 2 ft)
TRICHLOROFLUOROMETHANE	0 : 5	0.00096	0.007	--	--	--	ND
VINYL CHLORIDE	0 : 42	0.00096	0.055	--	--	--	ND
XYLENES, TOTAL CALC	0 : 41	0.00300	0.055	--	--	--	ND
OTHER							
PH (SU)	24 : 24	--	--	4.5	6.0	8.1	FTA-ANOM1C-SO-SURF (0 - 2 ft)
TOTAL SOLIDS (%)	55 : 55	--	--	14	83	97	FTA-AREAI-01 (0 - 2 ft)

Notes:
The calculation of the summary statistics is based on detected concentrations only. The minimum and maximum detection limits are presented for chemicals that were not detected.
All results reported in milligrams per kilogram (mg/kg) unless otherwise noted.
FOD - Frequency of Detection.
J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.
ND - Not Detected.
[1] Chemical analyzed using extractable petroleum hydrocarbon (EPH) methods.

ATTACHMENT B TABLE 2
SUMMARY STATISTICS - FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
INORGANICS									
ALUMINUM	16 : 16	--	--	4690	J	10400	20400		FTA-SED-04 (0 - 0.5 ft)
ANTIMONY	16 : 16	--	--	0.086	J	0.26	0.73	J	FTA-SED-06 (0 - 0.5 ft)
ARSENIC	16 : 16	--	--	1.6	J	6.6	19		FTA-SED-04 (0 - 0.5 ft)
BARIUM	16 : 16	--	--	15	J	43	89	J	FTA-SED-06 (0 - 0.5 ft)
BERYLLIUM	16 : 16	--	--	0.24		0.43	0.84	J	FTA-SED-07 (0 - 0.5 ft)
CADMIUM	16 : 16	--	--	0.061	J	0.32	0.67	J	FTA-SED-07 (0 - 0.5 ft)
CALCIUM	16 : 16	--	--	1510		10500	33700	J	FTA-SED-06 (0 - 0.5 ft)
CHROMIUM, TOTAL	17 : 17	--	--	11.3		20.8	33.7		FTA-SED-07 (0 - 0.5 ft)
CHROMIUM, HEXAVALENT	0 : 1	10	10	--		--	--		ND
CHROMIUM, TRIVALENT (calculated)	1 : 1	--	--	17.0		17.0	17.0		FTA-SED-07
COBALT	16 : 16	--	--	3.6	J	7.6	19		FTA-SED-04 (0 - 0.5 ft)
COPPER	16 : 16	--	--	5.59		43	108	J	FTA-SED-06 (0 - 0.5 ft)
IRON	16 : 16	--	--	8100	J	15300	25600		FTA-SED-04 (0 - 0.5 ft)
LEAD	16 : 16	--	--	5.2		12	26		FTA-SED-04 (0 - 0.5 ft)
MAGNESIUM	16 : 16	--	--	2570	J	4740	7580		FTA-SED-07 (0 - 0.5 ft)
MANGANESE	16 : 16	--	--	116	J	393	714		FTA-SED-04 (0 - 0.5 ft)
MERCURY	16 : 16	--	--	0.010	J	0.088	0.32	J	FTA-SED-06 (0 - 0.5 ft)
NICKEL	16 : 16	--	--	7.6	J	17	35		FTA-SED-04 (0 - 0.5 ft)
POTASSIUM	16 : 16	--	--	372	J	961	2500	J	FTA-SED-07 (0 - 0.5 ft)
SELENIUM	8 : 16	0.21	1.5	0.33		1.6	5.5	J	FTA-SED-07 (0 - 0.5 ft)
SILVER	14 : 16	0.033	0.061	0.060	J	0.58	2.3	J	FTA-SED-05 (0 - 0.5 ft)
SODIUM	16 : 16	--	--	44	J	139	284	J	FTA-SED-05 (0 - 0.5 ft)
THALLIUM	15 : 16	0.074	0.074	0.06	J	0.10	0.30		FTA-SED-03 (0 - 0.5 ft)
VANADIUM	16 : 16	--	--	15	J	26	46		FTA-SED-04 (0 - 0.5 ft)
ZINC	16 : 16	--	--	26		80	198	J	FTA-SED-06 (0 - 0.5 ft)
POLYCHLORINATED BIPHENYLS (PCBs)									
AROCLOR-1016	0 : 16	0.002	0.032	--		--	--		ND
AROCLOR-1221	0 : 16	0.002	0.032	--		--	--		ND
AROCLOR-1232	0 : 16	0.0024	0.038	--		--	--		ND
AROCLOR-1242	0 : 16	0.002	0.032	--		--	--		ND
AROCLOR-1248	0 : 16	0.002	0.032	--		--	--		ND
AROCLOR-1254	0 : 16	0.002	0.032	--		--	--		ND
AROCLOR-1260	15 : 16	0.022	0.022	0.028	J	0.65	2.1		FTA-SED-04 (0 - 0.5 ft)
AROCLOR-1262	0 : 16	0.002	0.032	--		--	--		ND
AROCLOR-1268	0 : 16	0.002	0.032	--		--	--		ND
TOTAL AROCLORS	15 : 16	0.026	0.026	0.028		0.65	2.1		FTA-SED-04 (0 - 0.5 ft)
PESTICIDES									
4,4-DDD	6 : 16	0.00040	0.0063	0.0016	J	0.016	0.043	J	FTA-SED-04 (0 - 0.5 ft)
4,4-DDE	7 : 16	0.00040	0.0046	0.00086	J	0.0024	0.006	J	FTA-SED-08 (0 - 0.5 ft)
4,4-DDT	7 : 16	0.00056	0.0063	0.0031	J	0.015	0.043	J	FTA-SED-04 (0 - 0.5 ft)
ALDRIN	0 : 16	0.00020	0.0032	--		--	--		ND
ALPHA-BHC	0 : 16	0.00020	0.0032	--		--	--		ND
ALPHA-CHLORDANE	0 : 16	0.00020	0.0032	--		--	--		ND
BETA-BHC	0 : 16	0.00020	0.0032	--		--	--		ND
DELTA-BHC	0 : 16	0.00020	0.0032	--		--	--		ND
DIELDRIN	2 : 16	0.00040	0.0063	0.0071	J	0.008	0.008	J	FTA-SED-06 (0 - 0.5 ft)

ATTACHMENT B TABLE 2
SUMMARY STATISTICS - FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
ENDOSULFAN I	1 : 16	0.00020	0.0032	0.00073	J	0.00073	0.00073	J	FTA-SED-04 (0 - 0.5 ft)
ENDOSULFAN II	1 : 16	0.00040	0.0063	0.013	J	0.013	0.013	J	FTA-SED-05 (0 - 0.5 ft)
ENDOSULFAN SULFATE	2 : 16	0.00050	0.0063	0.0070	J	0.021	0.035	J	FTA-SED-06 (0 - 0.5 ft)
ENDRIN	0 : 16	0.00040	0.0063	--		--	--		ND
ENDRIN ALDEHYDE	1 : 16	0.00040	0.0063	0.0072	J	0.0072	0.0072	J	FTA-SED-03 (0 - 0.5 ft)
ENDRIN KETONE	10 : 16	0.00050	0.0063	0.014	J	0.11	0.29	J	FTA-SED-04 (0 - 0.5 ft)
HEPTACHLOR	0 : 16	0.00020	0.0032	--		--	--		ND
HEPTACHLOR EPOXIDE	0 : 16	0.00020	0.0032	--		--	--		ND
LINDANE	0 : 16	0.00020	0.0032	--		--	--		ND
METHOXYCHLOR	0 : 16	0.00200	0.032	--		--	--		ND
TOXAPHENE	0 : 16	0.00400	0.063	--		--	--		ND
TRANS-CHLORDANE	0 : 16	0.00020	0.0032	--		--	--		ND
PETROLEUM HYDROCARBONS									
TPH-C11-C22 AROMATICS	15 : 16	67	67	27	J	130	380		FTA-SED-04 (0 - 0.5 ft)
TPH-C11-C22 AROMATICS UNADJUSTED	15 : 16	67	67	27	J	130	380		FTA-SED-04 (0 - 0.5 ft)
TPH-C19-C36 ALIPHATICS UNADJUSTED	10 : 16	12	60	100		250	460	J	FTA-SED-06 (0 - 0.5 ft)
TPH-C5-C8 ALIPHATICS	0 : 8	39	220	--		--	--		ND
TPH-C5-C8 ALIPHATICS UNADJUSTED	0 : 8	39	220	--		--	--		ND
TPH-C9-C10 AROMATICS UNADJUSTED	0 : 8	39	220	--		--	--		ND
TPH-C9-C12 ALIPHATICS	1 : 8	39	220	89	J	89	89	J	FTA-SED-04 (0 - 0.5 ft)
TPH-C9-C12 ALIPHATICS UNADJUSTED	1 : 8	39	220	89	J	89	89	J	FTA-SED-04 (0 - 0.5 ft)
TPH-C9-C18 ALIPHATICS UNADJUSTED	10 : 16	14	67	29	J	150	460		FTA-SED-04 (0 - 0.5 ft)
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)									
1,1-BIPHENYL	2 : 16	0.012	1.0	0.0089	J	0.011	0.013	J	FTA-SED-06 (0 - 0.5 ft)
1,2,4,5-TETRACHLOROBENZENE	0 : 16	0.012	1.0	--		--	--		ND
1,4-DIOXANE	1 : 16	0.060	1	0.013	J	0.013	0.013	J	FTA-SED-06 (0 - 0.5 ft)
2,2'-OXYBIS(1-CHLOROPROPANE)	0 : 16	0.012	1.0	--		--	--		ND
2,3,4,6-TETRACHLOROPHENOL	5 : 16	0.06	0.21	0.006	J	0.018	0.045	J	FTA-SED-05 (0 - 0.5 ft)
2,4,5-TRICHLOROPHENOL	0 : 16	0.74	3.0	--		--	--		ND
2,4,6-TRICHLOROPHENOL	5 : 16	0.06	0.21	0.0079	J	0.017	0.020	J	FTA-SED-05 (0 - 0.5 ft); FTA-SED-01 (0 - 0.5 ft); FTA-SED-02 (0 - 0.5 ft)
2,4-DICHLOROPHENOL	1 : 16	0.015	1.2	0.0055	J	0.006	0.006	J	FTA-SED-07 (0 - 0.5 ft)
2,4-DIMETHYLPHENOL	0 : 16	0.015	1.2	--		--	--		ND
2,4-DINITROPHENOL	0 : 8	0.91	2.5	--		--	--		ND
2,4-DINITROTOLUENE	3 : 16	0.012	0.048	0.018	J	0.065	0.15		FTA-SED-04 (0 - 0.5 ft)
2,6-DINITROTOLUENE	0 : 16	0.012	1.0	--		--	--		ND
2-CHLORONAPHTHALENE	0 : 16	0.012	1.0	--		--	--		ND
2-CHLOROPHENOL	0 : 16	0.06	0.24	--		--	--		ND
2-METHYLNAPHTHALENE	5 : 16	0.015	1.2	0.022	J	0.15	0.33		FTA-SED-04 (0 - 0.5 ft)
2-METHYLPHENOL	0 : 16	0.06	0.2	--		--	--		ND
2-NITROANILINE	0 : 16	0.74	3.0	--		--	--		ND
2-NITROPHENOL	0 : 16	0.3	1.2	--		--	--		ND
3- AND 4-METHYLPHENOL	4 : 16	0.06	1.0	0.029	J	0.19	0.35	J	FTA-SED-06 (0 - 0.5 ft)
3,3-DICHLOROBENZIDINE	0 : 14	0.012	0.048	--		--	--		ND
3-NITROANILINE	0 : 15	0.74	3.0	--		--	--		ND
4,6-DINITRO-2-METHYLPHENOL	0 : 14	0.12	0.480	--		--	--		ND
4-BROMOPHENYL-PHENYLETHER	0 : 16	0.30	1.2	--		--	--		ND
4-CHLORO-3-METHYLPHENOL	0 : 16	0.30	1.2	--		--	--		ND

ATTACHMENT B TABLE 2
SUMMARY STATISTICS - FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
4-CHLOROANILINE	0 : 15	0.060	1.0	--		--	--		ND
4-CHLOROPHENYL-PHENYLETHER	0 : 16	0.30	1.2	--		--	--		ND
4-NITROANILINE	0 : 15	0.012	2.5	--		--	--		ND
4-NITROPHENOL	0 : 16	0.74	3.0	--		--	--		ND
ACENAPHTHENE	12 : 16	0.015	0.024	0.0028	J	0.17	1.5		FTA-SED-01 (0 - 0.5 ft)
ACENAPHTHYLENE	0 : 16	0.015	1.2	--		--	--		ND
ACETOPHENONE	0 : 8	0.37	1.0	--		--	--		ND
ANTHRACENE	8 : 16	0.30	1.2	0.0049	J	0.260	1.700		FTA-SED-01 (0 - 0.5 ft)
ATRAZINE	1 : 16	0.012	0.048	0.0059	J	0.006	0.006	J	FTA-SED-07 (0 - 0.5 ft)
BENZALDEHYDE	0 : 16	0.30	1.2	--		--	--		ND
BENZO[A]ANTHRACENE	14 : 16	0.024	0.024	0.0078	J	0.37	3.6		FTA-SED-01 (0 - 0.5 ft)
BENZO[A]PYRENE	15 : 16	0.024	0.024	0.0072	J	0.24	2.4		FTA-SED-01 (0 - 0.5 ft)
BENZO[B]FLUORANTHENE	13 : 16	0.024	0.042	0.013	J	0.39	3.2		FTA-SED-01 (0 - 0.5 ft)
BENZO[G,H,I]PERYLENE	6 : 16	0.024	1.2	0.017	J	0.25	1.2		FTA-SED-01 (0 - 0.5 ft)
BENZO[K]FLUORANTHENE	7 : 16	0.024	1.2	0.011	J	0.25	1.4	J	FTA-SED-01 (0 - 0.5 ft)
BIS(2-CHLOROETHOXY)METHANE	0 : 16	0.30	1.20	--		--	--		ND
BIS(2-CHLOROETHYL)ETHER	0 : 16	0.012	0.048	--		--	--		ND
BIS(2-ETHYLHEXYL)PHTHALATE	5 : 16	0.12	1.1	0.48	J	1.3	2.9	J	FTA-SED-05 (0 - 0.5 ft)
BUTYLBENZYLPHTHALATE	1 : 16	0.06	1.0	0.059	J	0.059	0.059	J	FTA-SED-07 (0 - 0.5 ft)
CAPROLACTAM	0 : 15	0.30	1.2	--		--	--		ND
CARBAZOLE	1 : 16	0.30	1.2	1.2		1.2	1.2		FTA-SED-01 (0 - 0.5 ft)
CHRYSENE	9 : 16	0.024	1.2	0.0045	J	0.54	3.2		FTA-SED-01 (0 - 0.5 ft)
DIBENZ[A,H]ANTHRACENE	7 : 16	0.024	1.2	0.0058	J	0.094	0.51	J	FTA-SED-01 (0 - 0.5 ft)
DIBENZOFURAN	1 : 16	0.30	1.2	0.79		0.79	0.79		FTA-SED-01 (0 - 0.5 ft)
DIETHYLPHTHALATE	0 : 16	0.30	1.2	--		--	--		ND
DIMETHYL PHTHALATE	0 : 16	0.30	1.2	--		--	--		ND
DI-N-BUTYLPHTHALATE	1 : 16	0.060	1.0	0.11	J	0.11	0.11	J	FTA-SED-07 (0 - 0.5 ft)
DI-N-OCTYLPHTHALATE	0 : 16	0.30	1.2	--		--	--		ND
FLUORANTHENE	6 : 16	0.30	1.2	0.28	J	1.7	7.3		FTA-SED-01 (0 - 0.5 ft)
FLUORENE	6 : 16	0.015	1.2	0.026	J	0.28	1.3		FTA-SED-01 (0 - 0.5 ft)
HEXACHLOROBENZENE	0 : 16	0.012	0.048	--		--	--		ND
HEXACHLOROBUTADIENE	0 : 16	0.012	1.0	--		--	--		ND
HEXACHLOROCYCLOPENTADIENE	0 : 15	0.30	1.2	--		--	--		ND
HEXACHLOROETHANE	1 : 16	0.012	1.0	0.015	J	0.015	0.015	J	FTA-SED-06 (0 - 0.5 ft)
INDENO[1,2,3-CD]PYRENE	13 : 16	0.024	0.031	0.012	J	0.28	2.4		FTA-SED-01 (0 - 0.5 ft)
ISOPHORONE	0 : 16	0.30	1.2	--		--	--		ND
NAPHTHALENE	7 : 16	0.012	0.048	0.0066	J	0.11	0.57	J	FTA-SED-01 (0 - 0.5 ft)
NITROBENZENE	0 : 16	0.012	1.0	--		--	--		ND
N-NITROSODINPROPYLAMINE	0 : 16	0.012	0.048	--		--	--		ND
N-NITROSODIPHENYLAMINE	0 : 16	0.012	1.0	--		--	--		ND
HPAH, TOTAL	15 : 16	0.59	0.59	0.036		2.9	30		FTA-SED-01 (0 - 0.5 ft)
LPAH, TOTAL	14 : 16	0.42	0.47	0.0028		1.20	12		FTA-SED-01 (0 - 0.5 ft)
PAH, TOTAL	16 : 16	--	--	0.040		3.8	43		FTA-SED-01 (0 - 0.5 ft)
PENTACHLOROPHENOL	2 : 16	0.06	0.21	0.028	J	0.053	0.078	J	FTA-SED-05 (0 - 0.5 ft)
PHENANTHRENE	10 : 16	0.30	1.2	0.012	J	1.0	7.0		FTA-SED-01 (0 - 0.5 ft)
PHENOL	0 : 16	0.30	1.2	--		--	--		ND
PYRENE	9 : 16	0.024	1.2	0.13		0.93	5.1		FTA-SED-01 (0 - 0.5 ft)

ATTACHMENT B TABLE 2
SUMMARY STATISTICS - FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
VOLATILE ORGANIC COMPOUNDS (VOCs)									
1,1,1-TRICHLOROETHANE	0 : 16	0.0028	0.016	--		--	--		ND
1,1,2,2-TETRACHLOROETHANE	0 : 16	0.0028	0.016	--		--	--		ND
1,1,2-TRICHLOROETHANE	0 : 16	0.0028	0.016	--		--	--		ND
1,1-DICHLOROETHANE	0 : 16	0.0028	0.016	--		--	--		ND
1,1-DICHLOROETHENE	0 : 16	0.0028	0.016	--		--	--		ND
1,2,4-TRICHLOROBENZENE	0 : 16	0.0028	0.016	--		--	--		ND
1,2-DICHLOROBENZENE	0 : 16	0.0028	0.016	--		--	--		ND
1,2-DICHLOROETHANE	0 : 16	0.0028	0.016	--		--	--		ND
1,2-DICHLOROETHENE, TOTAL	1 : 8	0.0028	0.016	0.0060	J	0.0060	0.0060	J	FTA-SED-07 (0 - 0.5 ft)
1,3-DICHLOROBENZENE	0 : 16	0.0028	0.016	--		--	--		ND
1,4-DICHLOROBENZENE	0 : 16	0.0028	0.016	--		--	--		ND
2-HEXANONE	0 : 16	0.014	0.082	--		--	--		ND
ACETONE	14 : 16	0.043	0.060	0.026	J	0.91	3.0	J	FTA-SED-05 (0 - 0.5 ft)
BENZENE	0 : 16	0.0028	0.016	--		--	--		ND
CARBON TETRACHLORIDE	0 : 16	0.0028	0.016	--		--	--		ND
CHLOROBENZENE	0 : 16	0.0028	0.016	--		--	--		ND
CHLOROETHANE	0 : 16	0.0055	0.033	--		--	--		ND
CHLOROFORM	0 : 16	0.0028	0.016	--		--	--		ND
CHLOROMETHANE	0 : 16	0.0055	0.033	--		--	--		ND
CIS-1,2-DICHLOROETHENE	1 : 16	0.0028	0.016	0.0060	J	0.0060	0.0060	J	FTA-SED-07 (0 - 0.5 ft)
ETHYLBENZENE	3 : 16	0.0028	0.016	0.00093	J	0.0046	0.011	J	FTA-SED-05 (0 - 0.5 ft)
ISOPROPYLBENZENE	3 : 16	0.0028	0.016	0.0016	J	0.0027	0.0039	J	FTA-SED-04 (0 - 0.5 ft)
M- AND P-XYLENE	0 : 16	0.0055	0.033	--		--	--		ND
METHYL CYCLOHEXANE	1 : 16	0.0028	0.016	0.0028	J	0.0028	0.0028	J	FTA-SED-04 (0 - 0.5 ft)
METHYL TERT-BUTYL ETHER	0 : 16	0.0028	0.016	--		--	--		ND
METHYLENE CHLORIDE	0 : 16	0.014	0.082	--		--	--		ND
O-XYLENE	0 : 16	0.0028	0.016	--		--	--		ND
STYRENE	0 : 15	0.0028	0.016	--		--	--		ND
TETRACHLOROETHENE	0 : 16	0.0028	0.016	--		--	--		ND
TOLUENE	14 : 16	0.0028	0.010	0.0029	J	0.053	0.31	J	FTA-SED-05 (0 - 0.5 ft)
TRANS-1,2-DICHLOROETHENE	0 : 16	0.0028	0.016	--		--	--		ND
TRICHLOROETHENE	0 : 16	0.0028	0.016	--		--	--		ND
VINYL CHLORIDE	0 : 16	0.0055	0.033	--		--	--		ND
XYLENES, TOTAL CALC	0 : 16	0.0055	0.033	--		--	--		ND
OTHER									
PH (SU)	8 : 8	--	--	5.6		6.4	7.2		FTA-SED-02 (0 - 0.5 ft)
TOTAL ORGANIC CARBON	8 : 8	--	--	52000		160000	440000	J	FTA-SED-06 (0 - 0.5 ft)
TOTAL SOLIDS	16 : 16	--	--	20		45	73		FTA-SED-02 (0 - 0.5 ft)

Notes:
The calculation of the summary statistics is based on detected concentrations only. The minimum and maximum detection limits are presented for chemicals that were not detected.
All results reported in milligrams per kilogram (mg/kg) unless otherwise noted.
FOD - Frequency of Detection.
J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.
ND - Not Detected.

ATTACHMENT B TABLE 3
SUMMARY STATISTICS - SURFACE WATER
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
INORGANICS - DISSOLVED									
ALUMINUM	11 : 14	100	100	35	J	46	58	J	FTA-SW-06
ANTIMONY	6 : 14	0.090	0.5	0.094	J	0.13	0.21	J	FTA-SW-07
ARSENIC	9 : 14	4.0	4.0	3.1	J	4.3	7.0		FTA-SW-06
BARIUM	13 : 14	3.0	3.0	0.68	J	4.1	14		FTA-SW-03
BERYLLIUM	0 : 14	0.20	0.20	--		--	--		ND
CADMIUM	1 : 14	0.20	0.20	0.040	J	0.040	0.040	J	FTA-SW-02
CALCIUM	14 : 14	--	--	4700		37300	83400		FTA-SW-05
CHROMIUM, TOTAL	0 : 14	4.0	4.0	--		--	--		ND
COBALT	14 : 14	--	--	0.16	J	1.4	4.2		FTA-SW-06
COPPER	11 : 14	2.0	2.0	1.0	J	2.3	6.6		FTA-SW-02
IRON	13 : 14	80	80	92	J	718	3570		FTA-SW-04
LEAD	1 : 14	0.50	0.50	0.46	J	0.46	0.46	J	FTA-SW-03
MAGNESIUM	14 : 14	--	--	1410		3770	7120		FTA-SW-05
MANGANESE	14 : 14	--	--	11		363	1120		FTA-SW-04
MERCURY	5 : 14	0.10	0.10	0.020	J	0.020	0.030	J	FTA-SW-03
NICKEL	12 : 14	1.2	1.2	0.92	J	1.4	2.2	J	FTA-SW-06
POTASSIUM	14 : 14	--	--	755	J	2240	3940		FTA-SW-06
SELENIUM	7 : 14	3.0	3.0	0.23	J	0.43	0.67	J	FTA-SW-01
SILVER	0 : 14	0.40	0.40	--		--	--		ND
SODIUM	14 : 14	--	--	2810		4600	6350		FTA-SW-06
THALLIUM	0 : 14	0.40	0.40	--		--	--		ND
VANADIUM	0 : 14	4.0	4.0	--		--	--		ND
ZINC	7 : 14	10.0	10.0	1.9	J	5.2	10.4	J	FTA-SW-03
INORGANICS - TOTAL RECOVERABLE									
ALUMINUM	11 : 14	100	110	44	J	306	1590		FTA-SW-02
ANTIMONY	5 : 14	0.090	0.50	0.096	J	0.14	0.19	J	FTA-SW-07
ARSENIC	9 : 14	3.0	4.0	3.3	J	5.0	7.9		FTA-SW-06FTA-SW-07
BARIUM	14 : 14	--	--	0.99	J	8.1	21		FTA-SW-04
BERYLLIUM	1 : 14	0.20	0.20	0.04	J	0.04	0.04	J	FTA-SW-03
CADMIUM	6 : 14	0.20	0.20	0.03	J	0.44	2.1		FTA-SW-02
CALCIUM	14 : 14	--	--	4630		38000	87800		FTA-SW-05
CHROMIUM, TOTAL	0 : 14	4.0	4.0	--		--	--		ND
COBALT	14 : 14	--	--	0.49	J	1.8	5.3		FTA-SW-06
COPPER	12 : 14	2.0	2.4	1.3	J	4.6	9.4		FTA-SW-02
IRON	14 : 14	--	--	291		1750	6480		FTA-SW-06
LEAD	8 : 14	0.50	0.50	0.07	J	1.1	2.1		FTA-SW-03
MAGNESIUM	14 : 14	--	--	1360		3800	7340		FTA-SW-05
MANGANESE	14 : 14	--	--	28		407	1190		FTA-SW-04
MERCURY	0 : 14	0.10	0.10	--		--	--		ND
NICKEL	12 : 14	1.2	1.2	0.93	J	2.1	8.1		FTA-SW-02
POTASSIUM	14 : 14	--	--	810	J	2330	4180		FTA-SW-06
SELENIUM	5 : 14	3.0	3.0	0.35	J	0.59	0.82	J	FTA-SW-01
SILVER	3 : 14	0.40	0.40	0.07	J	0.09	0.11	J	FTA-SW-04
SODIUM	14 : 14	--	--	2730		4580	6540		FTA-SW-06
THALLIUM	1 : 14	0.40	0.40	0.32	J	0.32	0.32	J	FTA-SW-02
VANADIUM	0 : 14	4.0	4.0	--		--	--		ND
ZINC	9 : 14	10	10	2.2	J	9.6	23		FTA-SW-04

ATTACHMENT B TABLE 3
SUMMARY STATISTICS - SURFACE WATER
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
POLYCHLORINATED BIPHENYLS (PCBS)									
AROCLOR-1016	0 : 6	0.024	0.050	--		--	--		ND
AROCLOR-1221	0 : 6	0.024	0.050	--		--	--		ND
AROCLOR-1232	0 : 6	0.024	0.050	--		--	--		ND
AROCLOR-1242	0 : 6	0.024	0.050	--		--	--		ND
AROCLOR-1248	0 : 6	0.024	0.050	--		--	--		ND
AROCLOR-1254	1 : 6	0.024	0.050	0.38	J	0.38	0.38	J	FTA-SW-06
AROCLOR-1260	0 : 6	0.024	0.050	--		--	--		ND
AROCLOR-1262	0 : 6	0.024	0.050	--		--	--		ND
AROCLOR-1268	0 : 6	0.024	0.050	--		--	--		ND
TOTAL AROCLORS	1 : 6	0.024	0.050	0.38		0.38	0.38		FTA-SW-06
PETROLEUM HYDROCARBONS									
TPH-C11-C22 AROMATICS	1 : 14	71	74	140		140	140		FTA-SW-03
TPH-C11-C22 AROMATICS UNADJUSTED	1 : 14	71	74	140		140	140		FTA-SW-03
TPH-C19-C36 ALIPHATICS UNADJUSTED	2 : 14	71	74	170		210	250		FTA-SW-03
TPH-C5-C8 ALIPHATICS	0 : 8	75	75	--		--	--		ND
TPH-C5-C8 ALIPHATICS UNADJUSTED	0 : 8	75	75	--		--	--		ND
TPH-C9-C10 AROMATICS UNADJUSTED	0 : 8	75	75	--		--	--		ND
TPH-C9-C12 ALIPHATICS	0 : 8	75	75	--		--	--		ND
TPH-C9-C12 ALIPHATICS UNADJUSTED	0 : 8	75	75	--		--	--		ND
TPH-C9-C18 ALIPHATICS UNADJUSTED	1 : 14	71	74	70	J	70	70	J	FTA-SW-03
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)									
1,1-BIPHENYL	1 : 14	0.094	0.10	0.082	J	0.082	0.082	J	FTA-SW-06
1,2,4,5-TETRACHLOROBENZENE	1 : 14	0.094	0.10	0.11	J	0.11	0.11	J	FTA-SW-06
1,4-DIOXANE	0 : 14	0.47	0.51	--		--	--		ND
2,2'-OXYBIS(1-CHLOROPROPANE)	0 : 14	0.14	0.15	--		--	--		ND
2,3,4,6-TETRACHLOROPHENOL	0 : 14	0.47	7.6	--		--	--		ND
2,4,5-TRICHLOROPHENOL	0 : 14	18	19	--		--	--		ND
2,4,6-TRICHLOROPHENOL	1 : 14	0.47	0.51	0.22	J	0.22	0.22	J	FTA-SW-06
2,4-DICHLOROPHENOL	0 : 14	0.47	0.51	--		--	--		ND
2,4-DIMETHYLPHENOL	0 : 14	7.1	7.6	--		--	--		ND
2,4-DINITROPHENOL	0 : 14	0.47	0.51	--		--	--		ND
2,4-DINITROTOLUENE	0 : 14	0.094	0.10	--		--	--		ND
2,6-DINITROTOLUENE	0 : 14	0.094	0.10	--		--	--		ND
2-CHLORONAPHTHALENE	0 : 14	0.094	7.6	--		--	--		ND
2-CHLOROPHENOL	0 : 14	0.47	0.51	--		--	--		ND
2-METHYLNAPHTHALENE	0 : 14	0.094	0.10	--		--	--		ND
2-METHYLPHENOL	0 : 13	7.1	7.4	--		--	--		ND
2-NITROANILINE	0 : 14	0.14	0.15	--		--	--		ND
2-NITROPHENOL	0 : 14	7.1	7.6	--		--	--		ND
3- AND 4-METHYLPHENOL	0 : 14	0.47	0.51	--		--	--		ND
3,3-DICHLOROBENZIDINE	0 : 13	0.094	0.099	--		--	--		ND
3-NITROANILINE	0 : 14	0.094	18	--		--	--		ND
4,6-DINITRO-2-METHYLPHENOL	0 : 14	0.71	0.76	--		--	--		ND
4-BROMOPHENYL-PHENYLETHER	0 : 14	0.094	7.6	--		--	--		ND
4-CHLORO-3-METHYLPHENOL	0 : 14	7.1	7.6	--		--	--		ND
4-CHLOROANILINE	0 : 13	0.47	0.49	--		--	--		ND

ATTACHMENT B TABLE 3
SUMMARY STATISTICS - SURFACE WATER
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations					Location of Maximum Detect
		Minimum	Maximum	Minimum		Mean	Maximum		
4-CHLOROPHENYL-PHENYLETHER	0 : 14	7.1	7.6	--		--	--		ND
4-NITROANILINE	0 : 14	0.094	0.10	--		--	--		ND
4-NITROPHENOL	0 : 14	18	19	--		--	--		ND
ACENAPHTHENE	0 : 14	7.10	7.6	--		--	--		ND
ACENAPHTHYLENE	0 : 14	7.10	7.6	--		--	--		ND
ACETOPHENONE	0 : 14	7.1	7.6	--		--	--		ND
ANTHRACENE	0 : 14	7.1	7.6	--		--	--		ND
ATRAZINE	2 : 14	0.094	0.10	0.047	J	0.05	0.06	J	FTA-SW-06
BENZALDEHYDE	0 : 14	7.1	7.6	--		--	--		ND
BENZO[A]ANTHRACENE	1 : 14	0.094	0.10	0.065	J	0.065	0.065	J	FTA-SW-06
BENZO[A]PYRENE	1 : 14	0.094	0.10	0.08	J	0.08	0.08	J	FTA-SW-06
BENZO[B]FLUORANTHENE	0 : 14	0.094	0.22	--		--	--		ND
BENZO[G,H,I]PERYLENE	0 : 14	0.094	7.6	--		--	--		ND
BENZO[K]FLUORANTHENE	1 : 14	0.094	7.6	0.052	J	0.052	0.052	J	FTA-SW-06
BIS(2-CHLOROETHOXY)METHANE	0 : 14	0.094	7.6	--		--	--		ND
BIS(2-CHLOROETHYL)ETHER	1 : 14	0.094	0.10	0.044	J	0.04	0.04	J	FTA-SW-06
BIS(2-ETHYLHEXYL)PHTHALATE	0 : 14	0.47	1.0	--		--	--		ND
BUTYLBENZYLPHTHALATE	0 : 14	7.1	7.6	--		--	--		ND
CAPROLACTAM	0 : 8	7.1	7.3	--		--	--		ND
CARBAZOLE	0 : 14	7.1	7.6	--		--	--		ND
CHRYSENE	0 : 14	0.094	0.10	--		--	--		ND
DIBENZ[A,H]ANTHRACENE	0 : 14	0.094	0.10	--		--	--		ND
DIBENZOFURAN	1 : 14	0.094	0.10	0.087	J	0.09	0.09	J	FTA-SW-06
DIETHYLPHTHALATE	0 : 14	7.1	7.6	--		--	--		ND
DIMETHYL PHTHALATE	0 : 14	0.094	7.6	--		--	--		ND
DI-N-BUTYLPHTHALATE	0 : 14	7.1	7.6	--		--	--		ND
DI-N-OCTYLPHTHALATE	0 : 14	7.1	7.6	--		--	--		ND
FLUORANTHENE	0 : 14	0.094	7.6	--		--	--		ND
FLUORENE	0 : 14	7.1	7.6	--		--	--		ND
HEXACHLOROBENZENE	0 : 14	0.094	0.10	--		--	--		ND
HEXACHLOROBUTADIENE	0 : 14	0.094	0.10	--		--	--		ND
HEXACHLOROCYCLOPENTADIENE	0 : 14	0.094	0.10	--		--	--		ND
HEXACHLOROETHANE	0 : 14	0.094	0.10	--		--	--		ND
INDENO[1,2,3-CD]PYRENE	4 : 14	0.094	0.10	0.12	J	0.14	0.16	J	FTA-SW-06
ISOPHORONE	0 : 14	7.1	7.60	--		--	--		ND
NAPHTHALENE	1 : 14	0.094	0.10	0.10	J	0.10	0.10	J	FTA-SW-06
NITROBENZENE	0 : 14	0.14	0.15	--		--	--		ND
N-NITROSODINPROPYLAMINE	0 : 14	0.094	0.10	--		--	--		ND
N-NITROSODIPHENYLAMINE	0 : 14	7.1	7.60	--		--	--		ND
PENTACHLOROPHENOL	0 : 14	0.47	0.51	--		--	--		ND
PHENANTHRENE	1 : 14	0.094	0.10	0.095	J	0.10	0.10	J	FTA-SW-06
PHENOL	0 : 14	0.47	7.6	--		--	--		ND
PYRENE	0 : 14	0.094	0.10	--		--	--		ND
HPAH, TOTAL	4 : 14	0.095	7.60	0.14		0.19	0.26		FTA-SW-06
LPAH, TOTAL	1 : 14	7.1	7.6	0.20		0.20	0.20		FTA-SW-06
PAH, TOTAL	4 : 14	7.1	7.6	0.14		0.24	0.46		FTA-SW-06

ATTACHMENT B TABLE 3
SUMMARY STATISTICS - SURFACE WATER
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	FOD	Reporting Limits		Detected Concentrations			Location of Maximum Detect
		Minimum	Maximum	Minimum	Mean	Maximum	
VOLATILE ORGANIC COMPOUNDS (VOCs)							
1,1,1-TRICHLOROETHANE	0 : 14	0.50	0.50	--	--	--	ND
1,1,2,2-TETRACHLOROETHANE	0 : 14	0.50	0.50	--	--	--	ND
1,1,2-TRICHLOROETHANE	0 : 14	0.50	0.50	--	--	--	ND
1,1-DICHLOROETHANE	0 : 14	0.50	0.50	--	--	--	ND
1,1-DICHLOROETHENE	0 : 14	0.50	0.50	--	--	--	ND
1,2,4-TRICHLOROBENZENE	0 : 14	0.50	0.50	--	--	--	ND
1,2-DICHLOROBENZENE	0 : 14	0.50	0.50	--	--	--	ND
1,2-DICHLOROETHANE	0 : 14	0.50	0.50	--	--	--	ND
1,2-DICHLOROETHENE, TOTAL	0 : 8	0.50	0.50	--	--	--	ND
1,3-DICHLOROBENZENE	0 : 14	0.50	0.50	--	--	--	ND
1,4-DICHLOROBENZENE	0 : 14	0.50	0.50	--	--	--	ND
2-HEXANONE	0 : 14	2.5	2.5	--	--	--	ND
ACETONE	6 : 14	2.5	2.5	2.3 J	5.2	9.3 J	FTA-SW-06
BENZENE	0 : 14	0.50	0.50	--	--	--	ND
CARBON TETRACHLORIDE	0 : 14	0.50	0.50	--	--	--	ND
CHLOROBENZENE	0 : 14	0.5	0.5	--	--	--	ND
CHLOROETHANE	0 : 14	1.0	1.0	--	--	--	ND
CHLOROFORM	0 : 14	0.50	0.50	--	--	--	ND
CHLOROMETHANE	0 : 14	1.0	1.0	--	--	--	ND
CIS-1,2-DICHLOROETHENE	0 : 14	0.50	0.50	--	--	--	ND
ETHYLBENZENE	0 : 14	0.50	0.50	--	--	--	ND
ISOPROPYLBENZENE	0 : 14	0.50	0.50	--	--	--	ND
M- AND P-XYLENE	0 : 14	1.0	1.0	--	--	--	ND
METHYL CYCLOHEXANE	0 : 14	0.50	0.50	--	--	--	ND
METHYL TERT-BUTYL ETHER	0 : 14	0.50	0.50	--	--	--	ND
METHYLENE CHLORIDE	0 : 14	2.5	2.5	--	--	--	ND
O-XYLENE	0 : 14	0.50	0.50	--	--	--	ND
STYRENE	0 : 14	0.50	0.50	--	--	--	ND
TETRACHLOROETHENE	0 : 14	0.025	0.025	--	--	--	ND
TOLUENE	5 : 14	0.50	0.50	0.35 J	1.70	5.10	FTA-SW-07
TRANS-1,2-DICHLOROETHENE	0 : 14	0.50	0.50	--	--	--	ND
TRICHLOROETHENE	0 : 14	0.50	0.50	--	--	--	ND
VINYL CHLORIDE	0 : 14	0.005	0.05	--	--	--	ND
XYLENES, TOTAL CALC	0 : 14	1.0	1.0	--	--	--	ND

Notes:
The calculation of the summary statistics is based on detected concentrations only. The minimum and maximum detection limits are presented for chemicals that were not detected.
All results reported in micrograms per liter (ug/L).
FOD - Frequency of Detection.
J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.
ND - Not Detected.

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ATTACHMENT C

WILDLIFE RECEPTOR PROFILES

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ATTACHMENT C
SUMMARY OF REPRESENTATIVE WILDLIFE RECEPTORS SELECTED FOR EVALUATION IN THE ECOLOGICAL RISK ASSESSMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

It is not feasible to evaluate exposures and risks for each of the vertebrate wildlife species potentially present in the vicinity of the Fire Training Area (FTA) located at the Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det) in Cutler, Maine. Therefore, representative wildlife species were identified as surrogates in order to estimate exposure and risk. The surrogate species are wildlife species that are representative of species with similar dietary preferences that may be present within the ecological exposure areas to be evaluated in the ERA. Representative surrogate species were selected based on a review of trophic level, feeding habits, and the availability of life history information. Species-specific exposure assumptions are provided in the food web model appendices for each of the exposure areas and in **Table 1** of this attachment.

In order to evaluate potential bioaccumulation in the food chain, two trophic levels were selected for evaluation. These trophic levels include Trophic Level 2 (TL2) herbivores, and Trophic Level 3 (TL3) insectivores. Herbivores are primary consumers, ingesting primary producers (vegetation) and analytes from one trophic level. Insectivores consume primary consumers (invertebrates).

Trophic Level 4 (TL4) carnivorous birds and mammals were not selected for evaluation in the ERA because their home ranges (hundreds of acres) are much larger than the site so they would only consume a small portion of food from the site. Because of that, risks will be greater to small mammals and birds that may obtain all of the food from contaminated areas around the site.

The following individual species were identified as representative surrogate species for the food web model.

Meadow vole *(Microtus pennsylvanicus)*: The meadow vole was selected as a representative mammalian herbivore wildlife species for evaluation of potential risks associated with the terrestrial exposure area. The meadow vole is common in the United States and is associated with a wide range of habitats including wetlands and rangelands. Meadow voles inhabit grassy fields, marshes, and bogs; however, they prefer fields with more grass, more cover, and fewer woody plants. They typically consume green succulent vegetation, sedges, seeds, roots, bark, fungi, insects, and animal matter. However, green succulent vegetation makes up the majority of their diet (USEPA, 1993). Home range of the meadow vole listed by USEPA (1993) ranges from 0.000494 to 0.2051 acres with an average of 0.0659 acres. Selection of the meadow vole allows evaluation of a TL2 herbivorous exposure pathway in the terrestrial habitat available at the FTA.

Short-tailed shrew (*Blarina brevicauda*): The short-tailed shrew was selected as a representative small insectivorous mammalian wildlife species that may be found within the terrestrial exposure area. Insects, earthworms, slugs, and snails can make up most of the shrew's food, while plants, fungi, millipedes, centipedes, arachnids, and small mammals also are consumed. Shrews inhabit a wide variety of habitats and are common in areas with abundant vegetative cover. They need cool, moist habitats because of their high metabolic and water-loss rates (USEPA, 1993). The mean home range of the short-tailed shrew listed by USEPA (1993) is 0.96 acres. Selection of the short-tailed shrew allows evaluation of a TL3 insectivorous exposure pathway in the terrestrial habitat available at the FTA.

Raccoon (*Procyon lotor*): The raccoon was selected as a representative insectivorous mammalian wildlife species that may be found within the wetland exposure areas. It is assumed that the raccoon consumes benthic invertebrates associated with the wetland portions of the FTA. The raccoon is the most abundant and widespread medium-sized omnivore in North America. Raccoons are commonly found in aquatic habitats, particularly in hardwood swamps, floodplain forests and freshwater and saltwater marshes. They are also common in suburban residential areas. Raccoons feed primarily on fleshy fruits, nuts, acorns, and corn, but also eat grains, insects, frogs, crayfish, eggs, and virtually any

animal and vegetable matter, with plants typically being an important component of the diet. The proportion of different foods in their diet depends on location and season and they may focus on a preferred food when it is available (USEPA, 1993). Raccoons have a large home range; the home range areas listed by USEPA (1993) ranges from 96 to 6325 acres with an average of 1558 acres. Selection of the raccoon allows evaluation of a TL3 insectivorous exposure pathway for the wetland habitat available at the FTA.

Bobwhite quail (*Colinus virginianus*): The bobwhite quail was selected as a representative herbivorous avian wildlife species for the terrestrial exposure area. Quail are ground-dwelling birds adapted for foraging on the ground for seeds and insects. Bobwhite quail are the most widespread of the North American quail. They prefer to forage in areas with open vegetation, some bare ground, and light litter. Home range areas for the quail range from 8.9 to 41.3 acres with an average of 24.7 acres (USEPA, 1993). Seeds from weeds, woody plants, and grasses comprise the majority of an adult's diet, although green vegetation may also be consumed. Insects and other invertebrates can comprise up to 10 to 25 percent of the adults' diet during the spring and summer in more northerly areas. Bobwhite quail are typically not migratory (USEPA, 1993). Selection of the bobwhite quail allows evaluation of a TL2 herbivorous exposure pathway in the terrestrial habitat available at the FTA.

American robin *(Turdus migratorius)*: The robin was selected as a representative insectivorous avian wildlife species for the terrestrial exposure area. The robin occurs throughout most of the continental United States and can be found in a variety of habitats including open woodlands, swamps, suburbs, parks, lawns, moist forests, and orchards. Access to fresh water, protected nesting sites and productive foraging areas are important requirements. Robins forage on the ground in open areas, along habitat edges or the edges of streams as well as above ground in shrubs and lower branches of trees. Home range areas of the robin have been reported from 0.27 to 1.04 acres with an average of 0.6095 acres (USEPA, 1993). In the months preceding and during the breeding season, robins feed primarily on invertebrates and on some fruits. During the rest of the year their diet consists primarily of fruits. Most northern robins leave their breeding grounds from September to November and return between February and April (USEPA, 1993). Selection of the robin allows evaluation of a TL3 insectivorous exposure pathway in the terrestrial habitat available at the FTA.

Marsh wren (*Cistothorus palustris*): The marsh wren was selected as a representative insectivorous avian wildlife species for the freshwater exposure area. These birds commonly inhabit freshwater cattail marshes and salt marshes and have long, slender bills adapted for gleaning insects from the ground and vegetation. Permanent water is necessary to provide a food supply of insects necessary to maintain the birds and as a defense against predation (USEPA, 1993). Therefore, wrens are expected to be migratory in areas where marshes freeze. Marsh wrens consume aquatic invertebrates, other insects, and spiders, which they typically glean from the water surface, on stems and leaves of emergent vegetation, and the marsh floor. The insect orders most commonly taken include Coleoptera, Diptera, Hemiptera, Lepidoptera, and Odonata. Home range areas for the marsh wren have been reported from 0.17 to 0.42 acres with an average of 0.295 acres (USEPA, 1993). Selection of the marsh wren allows evaluation of a TL3 insectivorous exposure pathway for the wetland habitat available at the FTA.

USEPA. 1993. Wildlife Exposure Factors Handbook. Vols. I and II. Office of Research and Development; Washington, D.C. EPA/600-R/R-93/187a,187b.

ATTACHMENT C TABLE 1
EXPOSURE PARAMETERS FOR WILDLIFE RECEPTORS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Receptor Species	Average Body Weight (kg)	Food Ingestion Rate (kg_{dw}/day)	Dietary Assumptions (%; kg_{dw}/day)			Incidental Soil/Sediment Ingestion (%; kg_{dw}/day)	Water Ingestion Rate (L/day)
			Terrestrial Plants	Soil Invertebrates	Freshwater Benthic Invertebrates		
Birds							
Bobwhite quail *(Colinus virginianus)*	0.1751 [a]	0.00204 [b]	100% [c] 0.00204	--	--	6.1% [d] 0.00012	0.0228 [e]
American robin *(Turdus migratorius)*	0.0804 [a]	0.0119 [b]	--	100% [c] 0.0119	--	6.4% [d] 0.00076	0.0113 [e]
Marsh wren *(Cistothorus palustris)*	0.011 [a]	0.0029 [b]	--	--	100% [c] 0.0029	3.3% [d] 0.000094	0.0028 [e]
Mammals							
Meadow vole *(Microtus pennsylvanicus)*	0.0358 [a]	0.00174 [b]	100% [c] 0.00174	--	--	1.2% [d] 0.000021	0.0075 [e]
Short-tailed shrew *(Blarina brevicauda)*	0.0161 [a]	0.00143 [b]	--	100% [c] 0.0014	--	0.9% [d] 0.000013	0.0036 [e]
Raccoon *(Procyon lotor)*	5.636 [a]	0.1840 [b]	--	--	100% [c] 0.1840	9.4% [d] 0.017	0.4694 [e]

General Notes:
See individual organism notes for source, units, and conversion.
All receptors assumed to be present and actively foraging year-round in screening level evaluation (area use factor [AUF] and exposure duration [ED] set at 100%).

BW - Body Weight.
DW - Dry Weight.
FIR - Food Ingestion Rate.
Kg - Kilogram.
L/day - Liters per Day.

Notes for Bobwhite quail
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.078 g/g/day (USEPA, 1993) multiplied by average body weight of 0.1751 kg (USEPA, 1993) and 0.15 to convert to dry weight (grass ingestion).
[c] An exclusive terrestrial plant diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for mourning dove (USEPA, 2007a).
[e] Water ingestion rate of 0.13 L/day (USEPA, 1993) multiplied by average body weight.

Notes for American robin
[a] Average of adult body weights listed by USEPA (1993).
[b] Food ingestion rates were calculated from Nagy et al. (1999) for insectivorous birds as follows:
FIR (kJ/day)= (9.7*BW(g) $^{0.705}$) using average body weight of 0.0804 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18 kJ/g of dry matter for avian insectivores (Nagy et al., 1999) and then dividing by 1000.
[c] An exclusive soil invertebrate diet was selected.
[d] In the absence of data for the robin, the incidental soil ingestion rate is based on 50th percentile value for woodcock (USEPA, 2007a).
[e] Water ingestion rate of 0.14 L/day (USEPA, 1993) multiplied by average body weight.

ATTACHMENT C TABLE 1
EXPOSURE PARAMETERS FOR WILDLIFE RECEPTORS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Notes for Marsh Wren
[a] Average of adult body weights listed by USEPA (1993).
[b] Food ingestion rate calculated using algorithm for insectivorous birds developed by Nagy, 2001 [FIR (g_{dw}/day) = 0.540*$BW^{0.705}$] using average body weight.
[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.
[d] In the absence of data for the wren, the incidental soil ingestion rate is based on the mallard based on dietary similarities (USACHPPM, 2004).
[e] Water ingestion rate calculated using algorithm for all birds developed by Calder and Braun, 1983 [WIR (kg/day) = 0.059*$BW^{0.67}$] using average body weight.

Notes for Meadow vole
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.33 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0358 kg (USEPA, 1993) and 0.15 to convert to dry weight (grass ingestion).
[c] An exclusive terrestrial plant diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for vole (USEPA, 2007a).
[e] Maximum water ingestion rate of 0.21 L/day (USEPA, 1993) multiplied by average body weight.

Notes for Short-tailed shrew
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.555 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0161 kg (USEPA, 1993) and 0.16 to convert to dry weight (earthworm ingestion)
[c] An exclusive soil invertebrate diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for shrew (USEPA, 2007a).
[e] Water ingestion rate of 0.223 L/day (USEPA, 1993) multiplied by average body weight.

Notes for Raccoon
[a] Average of adult body weights listed by USEPA (1993; value is average of the average values from three studies).

[b] Food ingestion rate calculated using algorithm for carnivores developed by Nagy, et al. (1999) as follows:
FIR (kJ/day)= (2.23*BW(g) $^{0.85}$) using average body weight of 5.636 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18.7 kJ/g of dry matter for mammalian insectivores (Nagy et al., 1999) and then dividing by 1000.
[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.
[d] The incidental soil ingestion rate is based on the value identified by Beyer (1994) for raccoons.
[e] Water ingestion rate calculated using algorithm for all mammals developed by Calder and Braun, 1983 [WIR (kg/day) = 0.099*$BW^{0.90}$] using average body weight.

ATTACHMENT D

ECOTOXICITY VALUES

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ATTACHMENT D TABLE 1
ECOLOGICAL SCREENING VALUES - SOIL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	ECOLOGICAL SCREENING LEVELS FOR SOIL					
Chemical	**Invertebrates**			**Plants**		
INORGANICS						
Aluminum	pH<5.5		Eco-SSL	pH<5.5		Eco-SSL
Antimony	78		Eco-SSL (inverts)	5		ORNL (plants)
Arsenic	60		ORNL (inverts)	18		Eco-SSL (plants)
Barium	330		Eco-SSL (inverts)	500		ORNL (plants)
Beryllium	40		Eco-SSL (inverts)	10		ORNL (plants)
Cadmium	140		Eco-SSL (inverts)	32		Eco-SSL (plants)
Calcium	NA			NA		
Chromium	64		CCME (residential/parkland)	64		CCME (residential/parkland)
Cobalt	50		CCME (residential/parkland)	13		Eco-SSL (plants)
Copper	80		Eco-SSL (inverts)	70		Eco-SSL (plants)
Iron	pH<5, pH>8		USEPA R4 (unspecified)	pH<5, pH>8		Eco-SSL
Lead	1700		Eco-SSL (inverts)	120		Eco-SSL (plants)
Magnesium	NA			NA		
Manganese	450		Eco-SSL (inverts)	220		Eco-SSL (plants)
Mercury	12		CCME (residential/parkland)	12		CCME (residential/parkland)
Nickel	280		Eco-SSL (inverts)	38		Eco-SSL (plants)
Potassium	NA			NA		
Selenium	4.1		Eco-SSL (inverts)	0.52		Eco-SSL (plants)
Silver	20		CCME (residential/parkland)	560		Eco-SSL (plants)
Sodium	NA			NA		
Thallium	1		TV	1		ORNL (plants)
Vanadium	42		TV	2		ORNL (plants)
Zinc	120		Eco-SSL (inverts)	160		Eco-SSL (plants)
SEMI VOLATILE ORGANIC COMPOUNDS						
1,1-Biphenyl	0.03		USEPA R4 (inverts)	60		ORNL (plants)
2,3,4,6-Tetrachlorophenol	20	(d)	ORNL (inverts)	NA		
2,4,6-Trichlorophenol	0.5		CCME (residential/parkland)	0.5		CCME (residential/parkland)
Atrazine	0.073		USEPA R4 (inverts)	NA		
Bis(2-Ethylhexyl)phthalate	0.23		USEPA R4 (inverts)	NA		
Butyl benzyl phthalate	0.59		USEPA R4 (inverts)	NA		
Carbazole	0.16		USEPA R4 (inverts)	NA		
Dibenzofuran	0.16		USEPA R4 (inverts)	6.1		USEPA R4 (plants)
Hexachlorobenzene	2		CCME (residential/parkland)	2		CCME (residential/parkland)
Total LMW PAHs	29		Eco-SSL (inverts)	NA		
Total HMW PAHs	18		Eco-SSL (inverts)	NA		
VOLATILE ORGANIC COMPOUNDS						
1,1,1-Trichloroethane	5		CCME (residential/parkland)	5		CCME (residential/parkland)
1,2,4-Trichlorobenzene	2		CCME (residential/parkland)	2		CCME (residential/parkland)
1,2-Dichlorobenzene	1		CCME (residential/parkland)	1		CCME (residential/parkland)
1,3-Dichlorobenzene	1		CCME (residential/parkland)	1		CCME (residential/parkland)
1,4-Dichlorobenzene	1		CCME (residential/parkland)	1		CCME (residential/parkland)
2-Butanone	1		USEPA R4 (inverts)	NA		
Acetone	0.04		USEPA R4 (inverts)	NA		
Benzene	31		CCME (residential/parkland)	31		CCME (residential/parkland)
Carbon Disulfide	0.005		USEPA R4 (inverts)	NA		
cis-1,2-Dichloroethene	0.04		USEPA R4 (inverts)	NA		
Dichlorodifluoromethane	NA			NA		
Ethylbenzene	0.27		USEPA R4 (inverts)	NA		
Isopropylbenzene	31	(a)	CCME (residential/parkland)	31	(a)	CCME (residential/parkland)
Methyl acetate	NA			NA		
Toluene	0.15		USEPA R4 (inverts)	200		ORNL (plants)
Total-1,2-Dichloroethene	5		CCME (residential/parkland)	5		CCME (residential/parkland)
Trichloroethene	5		CCME (residential/parkland)	5		CCME (residential/parkland)

ATTACHMENT D TABLE 1
ECOLOGICAL SCREENING VALUES - SOIL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical	ECOLOGICAL SCREENING LEVELS FOR SOIL					
	Invertebrates			Plants		
PESTICIDES						
4,4'-DDD	12	(b)	CCME (commercial)	12	(b)	CCME (commercial)
4,4'-DDT	12	(b)	CCME (commercial)	12	(b)	CCME (commercial)
Aldrin	0.0025		USEPA R4 (unspecified)	0.00332		USEPA R5 (plants)
Dieldrin	0.1		USEPA R4 (inverts)	10		USEPA R4 (plants)
Endosulfan I	0.00001	(c)	TV	0.00001	(c)	TV
Endosulfan II	0.00001	(c)	TV	0.00001	(c)	TV
Endosulfan sulfate	0.00001	(c)	TV	0.00001	(c)	TV
Endrin	0.025		USEPA R4 (inverts)	0.0034		USEPA R4 (plants)
Endrin aldehyde	0.025	(e)	USEPA R4 (inverts)	0.0034	(e)	USEPA R4 (plants)
Endrin ketone	0.025	(e)	USEPA R4 (inverts)	0.0034	(e)	USEPA R4 (plants)
Heptachlor epoxide	0.004		USEPA R4 (inverts)	0.4	(f)	USEPA R4 (plants)
Methoxychlor	0.0025		USEPA R4 (inverts)	NA		
POLYCHLORINATED BIPHENYLs						
Total PCBs	33		CCME (commercial)	40		ORNL (plants)

Notes:
All screening values reported in milligrams per kilogram (mg/kg).
CCME - Canadian Council of Ministers of the Environment (2002; 2015). Commercial value based on direct contact. Residential/parkland value based on soil and food ingestion. Values for environmental health selected.
Eco-SSL - Ecological Soil Screening Level. Derived by USEPA according to USEPA guidance (2005a).
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
NA - Not available/applicable.
ORNL - Oak Ridge National Laboratory (Efroymson, et al., 1997a and b).
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
TV - Target Value (Dutch standards presented in Buchman, 2008).
USEPA - United States Environmental Protection Agency.
USEPA R4 - USEPA Region 4 recommended ecological screening values for soil (USEPA, 2015).

(a) Value for benzene used as a surrogate due to structural similarities.
(b) Value for DDT (Total) used as a surrogate.
(c) Value for endosulfan used as a surrogate due to structural similarities.
(d) Value for 2,3,4,5-tetrachlorophenol used as a surrogate due to structural similarities.
(e) Value for endrin used as a surrogate due to structural similarities.
(f) Value for heptachlor used as a surrogate due to structural similarities.

ATTACHMENT D TABLE 2
ECOLOGICAL SCREENING VALUES - FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical	ECOLOGICAL SCREENING LEVELS FOR SEDIMENT				
	Threshold Effect Screening Levels			Probable Effect Screening Level	
INORGANICS					
Aluminum	25500		NOAA SQuiRT (TEL)	NA	
Antimony	2		USEPA R3	3	NOAA SQuiRT (UET)
Arsenic	9.79		MacDonald (TEC)	33	MacDonald (PEC)
Barium	48	(b)	NOAA SQuiRT (Marine; AET)	NA	
Beryllium	NA			NA	
Cadmium	0.99		MacDonald (TEC)	4.98	MacDonald (PEC)
Calcium	NA			NA	
Chromium	43.4		MacDonald (TEC)	111	MacDonald (PEC)
Cobalt	50		USEPA R3	NA	
Copper	31.6		MacDonald (TEC)	149	MacDonald (PEC)
Iron	20000		USEPA R3	40000	NOAA SQuiRT (SEL)
Lead	35.8		MacDonald (TEC)	128	MacDonald (PEC)
Magnesium	NA			NA	
Manganese	460		USEPA R3	1100	NOAA SQuiRT (SEL)
Mercury	0.18		MacDonald (TEC)	1.06	MacDonald (PEC)
Nickel	22.7		MacDonald (TEC)	48.6	MacDonald (PEC)
Potassium	NA			NA	
Selenium	2		USEPA R3	NA	
Silver	1		USEPA R3	4.5	NOAA SQuiRT (UET)
Sodium	NA			NA	
Thallium	NA			NA	
Vanadium	57	(b)	NOAA SQuiRT (Marine; AET)	NA	
Zinc	121		MacDonald (TEC)	459	MacDonald (PEC)
SEMI VOLATILE ORGANIC COMPOUNDS					
1,4-Dioxane	0.119		USEPA R5	NA	
2,3,4,6-Tetrachlorophenol	0.284		USEPA R3	NA	
2,4,6-Trichlorophenol	0.213	(a)	USEPA R3	NA	
2,4-Dichlorophenol	0.117	(a)	USEPA R3	NA	
2,4-Dinitrotoluene	0.0416	(a)	USEPA R3	NA	
3-Methylphenol & 4-Methylphenol	0.67	(d)	USEPA R3	NA	
Atrazine	0.00662		USEPA R3	NA	
Bis(2-Ethylhexyl)phthalate	0.18		USEPA R3	0.75	NOAA SQuiRT (UET)
Butyl benzyl phthalate	10.9	(a)	USEPA R3	NA	
Carbazole	NA			NA	
Dibenzofuran	0.415	(a)	USEPA R3	5.1	NOAA SQuiRT (UET)
Di-n-butyl phthalate	6.47	(a)	USEPA R3	NA	
Hexachloroethane	1.027	(a)	USEPA R3	NA	
Pentachlorophenol	0.504	(a)	USEPA R3	NA	
Total PAHs	1.61		MacDonald (TEC)	22.8	MacDonald (PEC)
VOLATILE ORGANIC COMPOUNDS					
1,1-Biphenyl	1.22		USEPA R3	NA	
Acetone	0.0087	(a)	ORNL SCV	NA	
cis-1,2-Dichloroethene	NA			NA	
Ethylbenzene	1.1	(a)	USEPA R3	NA	
Isopropylbenzene	0.086	(a)	USEPA R3	NA	
Methylcyclohexane	NA			NA	
Toluene	0.05	(a)	ORNL SCV	NA	
Total-1,2-Dichloroethene	0.4	(a)	ORNL SCV	NA	

ATTACHMENT D TABLE 2
ECOLOGICAL SCREENING VALUES - FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical	ECOLOGICAL SCREENING LEVELS FOR SEDIMENT					
	Threshold Effect Screening Levels			Probable Effect Screening Level		
PESTICIDES						
4,4'-DDD	0.00488		MacDonald (TEC)	0.028		MacDonald (PEC)
4,4'-DDE	0.00316		MacDonald (TEC)	0.0313		MacDonald (PEC)
4,4'-DDT	0.00416		MacDonald (TEC)	0.0629		MacDonald (PEC)
Dieldrin	0.0019		MacDonald (TEC)	0.0618		MacDonald (PEC)
Endosulfan I	0.0029		USEPA R3	NA		
Endosulfan II	0.014		USEPA R3	NA		
Endosulfan sulfate	0.0054	(a)	USEPA R3	NA		
Endrin aldehyde	0.00222	(c)	MacDonald (TEC)	0.207	(c)	MacDonald (PEC)
Endrin ketone	0.00222	(c)	MacDonald (TEC)	0.207	(c)	MacDonald (PEC)
POLYCHLORINATED BIPHENYLs						
Total PCBs	0.0598		MacDonald (TEC)	0.676		MacDonald (PEC)

Notes:
All screening values reported in milligrams per kilogram (mg/kg).
AET - Apparent Effect Threshold.
EqP - Equilibrium Partitioning (1% organic carbon assumed).
NA - Not available/applicable.
NOAA SQuiRT - National Oceanic and Atmospheric Administration Screening Quick Reference Tables (Buchman, 2008).
ORNL SCV - Oak Ridge National Laboratory screening value based on surface water secondary chronic value (Jones, et al., 1997).
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
PEC - Probable Effect Concentration (MacDonald, et al., 2000).
SEL - Severe Effect Level.
TEC - Threshold Effect Concentration (MacDonald, et al., 2000).
TEL - Threshold Effect Level.
UET - Upper Effect Threshold (at 1% organic carbon).
USEPA - United States Environmental Protection Agency.
USEPA R3 - USEPA Region 3 freshwater sediment screening values (USEPA, 2006a).
USEPA R5 - USEPA Region 5 ecological screening levels for sediment (USEPA, 2003).

(a) Value derived using the EqP method assuming 1% organic carbon.
(b) Marine value used when freshwater value is not derived.
(c) Value for endrin used as a surrogate due to structural similarities.
(d) Value for 4-methylphenol used. Value for 3-methylphenol not identified.

ATTACHMENT D TABLE 3
ECOLOGICAL SCREENING VALUES - FRESHWATER SURFACE WATER
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical	ECOLOGICAL SCREENING LEVELS FOR SURFACE WATER					
	Chronic Screening Value			Acute Screening Value		
INORGANICS						
Aluminum	87	(b)	USEPA AWQC	750	(b)	USEPA AWQC
Antimony	30	(a)	USEPA R3	180	(a)	ORNL SAV
Arsenic	150	(a)	USEPA AWQC	340	(a)	USEPA AWQC
Barium	4	(a)	USEPA R3	110	(a)	ORNL SAV
Cadmium	0.26	(a,d)	USEPA AWQC	2.2	(a,d)	USEPA AWQC
Calcium	116000	(a)	USEPA R3	NA		
Cobalt	23	(a)	USEPA R3	290	(a)	ORNL SAV
Copper	9.8	(a,d)	USEPA AWQC	14.8	(a,d)	USEPA AWQC
Iron	1000		USEPA AWQC	NA		
Lead	2.8	(a,d)	USEPA AWQC	72.0	(a,d)	USEPA AWQC
Magnesium	82000	(a)	USEPA R3	NA		
Manganese	120	(a)	USEPA R3	2300	(a)	ORNL SAV
Mercury	0.77	(a)	USEPA AWQC	1.4	(a)	USEPA AWQC
Nickel	56.6	(a,d)	USEPA AWQC	510	(a,d)	USEPA AWQC
Potassium	53000	(a)	USEPA R3	NA		
Selenium	5		USEPA AWQC	12.8	(e)	USEPA AWQC
Sodium	680000	(a)	USEPA R3	NA		
Zinc	129	(a,d)	USEPA AWQC	128	(a,d)	USEPA AWQC
SEMI VOLATILE ORGANIC COMPOUNDS						
1,2,4,5-Tetrachlorobenzene	3		USEPA R3	75		USEPA R4
2,4,6-Trichlorophenol	4.9	(a)	USEPA R3	NA		
Atrazine	1.8		USEPA R3	NA		
Bis(2-chloroethyl) ether	19000		USEPA R5	NA		
Dibenzofuran	3.7	(a)	USEPA R3	66	(a)	ORNL SAV
Benzo(a)anthracene	0.018		USEPA R3	0.49	(a)	ORNL SAV
Benzo(a)pyrene	0.015		USEPA R3	0.24	(a)	ORNL SAV
Benzo(k)fluoranthene	0.015	(c)	USEPA R3	0.24	(a,c)	ORNL SAV
Indeno(1,2,3-cd)pyrene	0.015	(c)	USEPA R3	0.24	(a,c)	ORNL SAV
Naphthalene	1.1		USEPA R3	190	(a)	ORNL SAV
Phenanthrene	0.4		USEPA R3	13	(a,d)	ORNL SAV
VOLATILE ORGANIC COMPOUNDS						
Acetone	1500	(a)	USEPA R3	28000	(a)	ORNL SAV
Toluene	2		USEPA R3	120	(a)	ORNL SAV
POLYCHLORINATED BIPHENYLs						
Total PCBs	0.014		USEPA AWQC	NA		

Notes:
All screening values reported in micrograms per liter (ug/L).
AWQC - Ambient Water Quality Criteria (USEPA, 2009).
NA - Not available/applicable.
ORNL SAV - Oak Ridge National Laboratory Secondary Acute Value (Suter and Tsao, 1996).
PCB - Polychlorinated Biphenyl.
SAV - Secondary Acute Value.
USEPA - United States Environmental Protection Agency.
USEPA R3 - USEPA Region 3 freshwater screening values (USEPA, 2006b).
USEPA R4 - EPA Region 4 recommended ecological screening values for surface water (USEPA, 2015).
USEPA R5 - USEPA Region 5 ecological screening levels for surface water (USEPA, 2003).

(a) Value is for dissolved phase.
(b) Applies to waters with pH between 6.5 and 9.
(c) Value for benzo(a)pyrene used as a surrogate due to structural similarities (high molecular weight polycyclic aromatic hydrocarbons).
(d) Value is hardness dependant. The site specific average hardness of 111 mg/L $CaCO_3$ was used.
(e) Acute AWQC is equal to 1/[(f1/CMC1) + (f2/CMC2)] where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 ug/L and 12.82 ug/L, respectively. A consevative assumption of 100% selenate has been made.

ATTACHMENT D TABLE 4
TOXICITY REFERENCE VALUES FOR FOOD CHAIN MODELS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical	Mammalian TRV (mg/kg bw/day)		Avian TRV (mg/kg bw/day)	
	NOAEL	LOAEL	NOAEL	LOAEL
INORGANICS				
Arsenic	1.04	4.55	2.24	4.51
Cadmium	0.77	6.9	1.47	6.35
Chromium, total	2.4	58.17	2.66	15.63
Copper	5.6	82.7	4.05	34.87
Lead	4.7	186.4	1.63	44.63
Mercury	0.032	0.16	0.0064	0.064
Nickel	1.7	14.77	6.71	18.57
Selenium	0.143	0.66	0.29	0.82
Silver	6.02	118.6	2.02	60.47
Zinc	75.4	298	66.1	171
SEMI VOLATILE ORGANIC COMPOUNDS				
Total HMW PAHs	0.615	38.4	2	20
Total LMW PAHs	65.6	356	2	20
PESTICIDES				
4,4-DDD	0.147	5.56	0.227	2.7
4,4-DDE	0.147	5.56	0.227	2.7
4,4-DDT	0.147	5.56	0.227	2.7
Aldrin	0.2	1	0.0709	0.87
Dieldrin	0.015	1.27	0.0709	0.87
Endosulfan I	0.15	1.5	10	100
Endosulfan II	0.15	1.5	10	100
Endosulfan Sulfate	0.15	1.5	10	100
Endrin	0.092	0.92	NV	NV
Endrin Aldehyde	0.92	0.92	0.01035	0.1035
Endrin Ketone	0.92	0.92	0.01035	0.1035
Heptachlor epoxide	0.1	1	NV	NV
Methoxychlor	4	8	25.78	258
POLYCHLORINATED BIPHENYLs				
Total PCBs	0.068	0.68	0.18	1.8

Notes:
NV - No value identified.
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
TRV - Toxicity Reference Value.
The sources of these NOAELs and LOAELs are presented in Table D-5.

The NOAELs and LOAELs in Table D-5 were divided by 10 if a subchronic study was the basis for the value.
NOAELs were estimated if a NOAEL was not identified in the literature. The LOAEL was divided by 10 to derive an estimated NOAEL.
LOAELs were estimated if a LOAEL was not identified in the literature. The NOAEL was multiplied by 10 to derive an estimated LOAEL.
For methoxychlor, LANL (2016) applied an uncertainty factor of 0.01 to extrapolate an acute NOAEL to a chronic NOAEL.

4,4'-DDT used as a surrogate for 4,4'-DDD and 4,4'-DDE.
Dieldrin used as a surrogate for aldrin for birds.
Endosulfan used as a surrogate for endosulfan I and II and endosulfan sulfate.
Endrin used as a surrogate for endrin aldehyde and endrin ketone.
Heptachlor used as a surrogate for heptachlor epoxide.
7,12-Dimethylbenz(a)anthracene used as a surrogate for PAHs for birds.
Aroclor 1254 used as a surrogate for Total PCBs.

ATTACHMENT D TABLE 5
SOURCES AND ENPOINTS FOR DERIVATION OF WILDLIFE TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical	Concentration (mg/kg bw/day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
INORGANICS							
Arsenic	2.24	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005b	
Arsenic	4.51	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005b	
Arsenic	1.04	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005b	
Arsenic	4.55	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005b	
Cadmium	1.47	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005c	
Cadmium	6.35	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005c	
Cadmium	0.77	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005c	
Cadmium	6.9	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005c	
Chromium(III)	2.66	NOAEL	reproduction & growth	chronic	birds	USEPA, 2008	
Chromium(III)	15.63	LOAEL	reproduction & growth	chronic	birds	USEPA, 2008	
Chromium(III)	2.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2008	
Chromium(III)	58.17	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2008	
Copper	4.05	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007a	
Copper	34.87	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007a	
Copper	5.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007a	
Copper	82.7	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007a	
Lead	1.63	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005d	
Lead	44.6	LOAEL	reproduction & growth	chronic	birds	USEPA, 2005d	
Lead	4.7	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005d	
Lead	186.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2005d	
Mercury	0.064	LOAEL	reproductive	chronic	mallard duck	Heinz, 1979	Sample et al., 1996
Mercury	0.032	NOAEL	reproductive	chronic	rat	Verschuuren et al., 1976	Sample et al., 1996
Mercury	0.16	LOAEL	reproductive	chronic	rat	Verschuuren et al., 1976	Sample et al., 1996
Nickel	6.71	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007b	
Nickel	18.57	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007b	
Nickel	1.7	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007b	
Nickel	14.77	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007b	
Selenium	0.29	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007c	
Selenium	0.819	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007c	
Selenium	0.143	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007c	
Selenium	0.661	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007c	
Silver	2.02	NOAEL	reproduction & growth	chronic	birds	USEPA, 2006c	
Silver	60.47	LOAEL	reproduction & growth	chronic	birds	USEPA, 2006c	
Silver	6.02	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2006c	
Silver	118.62	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2006c	
Zinc	75.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007d	
Zinc	297.58	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007d	
Zinc	66.1	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007d	
Zinc	171.44	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007d	
SEMI VOLATILE ORGANIC COMPOUNDS							
Total LMW PAHs	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
Total LMW PAHs	356	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
Total HMW PAHs	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
Total HMW PAHs	38.4	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
7,12-Dimethylbenz(a)anthracene	2	NOAEL	systemic	chronic	nestling/starlings	Trust et al., 1994	
7,12-Dimethylbenz(a)anthracene	20	LOAEL	systemic	chronic	nestling/starlings	Trust et al., 1994	

ATTACHMENT D TABLE 5
SOURCES AND ENPOINTS FOR DERIVATION OF WILDLIFE TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Chemical	Concentration (mg/kg bw/day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
PESTICIDES							
Aldrin	0.2	NOAEL	reproductive	chronic	rat	Treon and Cleveland, 1955	Sample et al., 1996
Aldrin	1	LOAEL	reproductive	chronic	rat	Treon and Cleveland, 1955	Sample et al., 1996
4,4'-DDT	0.147	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f	
4,4'-DDT	5.56	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f	
4,4'-DDT	0.227	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007f	
4,4'-DDT	2.7	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007f	
Dieldrin	0.0709	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007g	
Dieldrin	0.87	LOAEL	reproduction & growth	chronic	birds	USEPA, 2007g	
Dieldrin	0.015	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007g	
Dieldrin	1.27	LOAEL	reproduction & growth	chronic	mammals	USEPA, 2007g	
Endosulfan	1.5	NOAEL	reproduction	subchronic	rat	Dikshith et al., 1984	Sample et al., 1996
Endosulfan	10	NOAEL	reproduction	chronic	gray partridge	Abiola, 1992	Sample et al., 1996
Endrin	0.92	LOAEL	reproduction	chronic	mouse	Good and Ware, 1969	Sample et al., 1996
Endrin	0.1035	LOAEL	reproduction	chronic	screech owl	Fleming et al., 1982	Sample et al., 1996
Heptachlor	1	LOAEL	reproduction	chronic	mink	Crum et al., 1993	Sample et al., 1996
Methoxychlor	2578	NOAEL	mortality	acute	Japanese quail	Hill and Camardese, 1986	LANL, 2015
Methoxychlor	4	NOAEL	reproduction	chronic	rat	Gray et al., 1988	Sample et al., 1996
Methoxychlor	8	LOAEL	reproduction	chronic	rat	Gray et al., 1988	Sample et al., 1996
POLYCHLORINATED BIPHENYLs							
Aroclor 1254	1.8	LOAEL	reproduction	chronic	pheasant	Dahlgren et al., 1972	Sample et al., 1996
Aroclor 1254	0.68	LOAEL	reproduction	chronic	mouse	McCoy et al., 1995	Sample et al., 1996

Notes:
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
PAH - Polycyclic Aromatic Hydrocarbon.
TRV - Toxicity Reference Value.

LOAEL values from USEPA Eco-SSL documents were calculated as the geometric mean of growth and reproduction LOAEL values.

ATTACHMENT D TABLE 6
REFERENCES FOR ECOTOXICITY VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT D TABLE 6
REFERENCES FOR ECOTOXICITY VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT E

SCREENING-LEVEL FOOD WEB MODEL – TERRESTRIAL EXPOSURE AREA

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ATTACHMENT E
SCREENING LEVEL FOOD WEB MODEL - TERRESTRIAL EXPOSURE AREA
TABLE OF CONTENTS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ATTACHMENT E TABLE 1
EXPOSURE PARAMETERS FOR ECOLOGICAL RECEPTORS IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Receptor Species	Average Body Weight (kg)	Food Ingestion Rate (kg_{dw}/day)	Dietary Assumptions for Use in SRA (%; kg_{dw}/day)		Incidental Soil/Sediment Ingestion (%; kg_{dw}/day)	Water Ingestion Rate (L/day)
			Terrestrial Plants	Soil Invertebrates		
Birds						
Bobwhite quail *(Colinus virginianus)*	0.1751 [a]	0.00204 [b]	100% [c] 0.00204	--	6.1% [d] 0.00012	0.0228 [e]
American robin *(Turdus migratorius)*	0.0804 [a]	0.0119 [b]	--	100% [c] 0.0119	6.4% [d] 0.00076	0.0113 [e]
Mammals						
Meadow vole *(Microtus pennsylvanicus)*	0.0358 [a]	0.00174 [b]	100% [c] 0.00174	--	1.2% [d] 0.000021	0.0075 [e]
Short-tailed shrew *(Blarina brevicauda)*	0.0161 [a]	0.00143 [b]	--	100% [c] 0.0014	0.90% [d] 0.000013	0.0036 [e]

General Notes:

See individual organism notes for source, units, and conversion.

All receptors assumed to be present and actively foraging year-round in screening level evaluation (area use factor [AUF] and exposure duration [ED] set at 100%).

BW - Body Weight.

DW - Dry Weight.

FIR - Food Ingestion Rate.

SRA - Screening Risk Assessment.

Notes for Bobwhite quail
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.078 g/g/day (USEPA, 1993) multiplied by average body weight of 0.1751 kg (USEPA, 1993) and 0.15 to convert to dry weight (grass ingestion).
[c] An exclusive terrestrial plant diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for mourning dove (USEPA, 2007a).
[e] Water ingestion rate of 0.13 L/day (USEPA, 1993) multiplied by average body weight.

Notes for American robin
[a] Average of adult body weights listed by USEPA (1993).
[b] Food ingestion rates were calculated from Nagy et al. (1999) for insectivorous birds as follows:
FIR (kJ/day)= (9.7*BW(g) $^{0.705}$) using average body weight of 0.0804 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18 kJ/g of dry matter for avian insectivores (Nagy et al., 1999) and then dividing by 1000.
[c] An exclusive soil invertebrate diet was selected.
[d] In the absence of data for the robin, the incidental soil ingestion rate is based on 50th percentile value for woodcock (USEPA, 2007a).
[e] Water ingestion rate of 0.14 L/day (USEPA, 1993) multiplied by average body weight.

Notes for Meadow vole
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.33 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0358 kg (USEPA, 1993) and 0.15 to convert to dry weight (grass ingestion).
[c] An exclusive terrestrial plant diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for vole (USEPA, 2007a).
[e] Maximum water ingestion rate of 0.21 L/day (USEPA, 1993) multiplied by average body weight.

Notes for Short-tailed shrew
[a] Average of adult body weights listed by USEPA (1993).
[b] Average food ingestion rate of 0.555 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0161 kg (USEPA, 1993) and 0.16 to convert to dry weight (earthworm ingestion).
[c] An exclusive soil invertebrate diet was selected.
[d] The incidental soil ingestion rate is based on 50th percentile value for shrew (USEPA, 2007a).
[e] Water ingestion rate of 0.223 L/day (USEPA, 1993) multiplied by average body weight.

ATTACHMENT E TABLE 2
TERRESTRIAL MEDIA CONCENTRATIONS IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	Measured Media Concentrations [a]		**Estimated Soil Invertebrate Tissue**		**Estimated Terrestrial Plant Tissue**	
COPC	Maximum Soil EPC (mg/kg_{dw})	Maximum Surface Water EPC [Total] (mg/L)	Soil-to-Invertebrate Uptake Factor	Maximum Invertebrate Tissue EPC (mg/kg_{dw})	Soil-to-Plant Uptake Factor	Maximum Plant Tissue EPC (mg/kg_{dw})
ARSENIC	12.0	0.0079	Eco-SSL regression [c]	1.4	0.03752 [f]	0.45
CADMIUM	1.3	0.0021	Site-specific regression [b]	86.3	Eco-SSL regression [f]	0.72
CHROMIUM, TOTAL	42.3	ND	Site-specific regression [b]	65.9	0.041 [f]	1.7
COPPER	32.1	0.0094	0.515 [c]	16.5	Eco-SSL regression [f]	7.7
LEAD	47.5	0.0021	Site-specific regression [b]	95.6	Eco-SSL regression [f]	2.3
MERCURY	0.21	ND	1.693 [d]	0.36	0.652 [k]	0.14
NICKEL	32.2	0.0081	1.059 [d]	34.1	Eco-SSL regression [f]	1.5
SELENIUM	6.4	0.00082	Site-specific regression [b]	334	Eco-SSL regression [f]	3.9
SILVER	0.22	0.00011	2.045 [c]	0.45	0.014 [f]	0.0031
ZINC	72.0	0.023	Site-specific regression [b]	1996	Eco-SSL regression [f]	51.6
Organics						
TOTAL LMW PAHs	15.0	0.0002	3.04 [c]	45.6	Eco-SSL regression [f]	0.91
TOTAL HMW PAHs	57.0	0.00026	2.6 [c]	148	Eco-SSL regression [f]	8.4
TOTAL PCBs	610	0.00038	Site-specific regression [b]	1513	0.00865 [g,h]	5.3
4,4-DDD	0.0092	NA	Eco-SSL regression [c]	0.12	0.0124 [g]	0.00011
4,4-DDT	0.76	NA	Eco-SSL regression [c]	6.6	0.00378 [g]	0.0029
ALDRIN	0.00016	NA	26.6 [e]	0.0043	0.00654 [g]	0.0000010
DIELDRIN	0.48	NA	14.7 [c]	7.1	0.41 [f]	0.20
ENDOSULFAN I	0.00044	NA	0.61 [e,i]	0.00027	0.231 [g,i]	0.00010
ENDOSULFAN II	0.020	NA	0.61 [e,i]	0.012	0.231 [g,i]	0.0046
ENDOSULFAN SULFATE	0.22	NA	0.61 [e,i]	0.134	0.231 [g,i]	0.0508
ENDRIN	0.13	NA	19.5 [e]	2.54	0.0371 [g]	0.0048
ENDRIN ALDEHYDE	0.017	NA	19.5 [e,j]	0.33	0.0371 [g,j]	0.00063
ENDRIN KETONE	3.0	NA	19.5 [e,j]	58.5	0.0371 [g,j]	0.11
HEPTACHLOR EPOXIDE	0.087	NA	8.4 [e,l]	0.73	0.0498 [g]	0.0043
METHOXYCHLOR	1.6	NA	3.86 [e]	6.2	0.0436 [g]	0.0698

Notes:
Maximum EPCs for screening level evaluation represent maximum detected concentrations. Moisture content assumed to be 84% for soil invertebrates (USEPA, 1993).
Unless otherwise noted, uptake factors derive tissue concentrations on a dry weight basis.

COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
NA - Not Analyzed
ND - Not Detected.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
USEPA - United States Environmental Protection Agency.

ATTACHMENT E TABLE 2
TERRESTRIAL MEDIA CONCENTRATIONS IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

[a] Media summary statistics presented in Attachment B of the Ecological Risk Assessment appendix.

[b] Site-specific soil-to-worm regression equation derived for the Very Low Frequency (VLF) Peninsula (Resolution, 2015) adjusted to present dry weight tissue concentration assuming 84% moisture.

cadmium	tissue concentration = [9.235 * (soil concentration) + 1.801]/(1-% moisture)]
chromium	tissue concentration = [0.3008 * (soil concentration) - 2.1796]/(1-% moisture)]
lead	tissue concentration = [0.7107 * (soil concentration) - 18.466]/(1-% moisture)]
selenium	tissue concentration = [8.07 * (soil concentration) + 1.762]/(1-% moisture)]
zinc	tissue concentration = [1.6262 * (soil concentration) + 202.26]/(1-% moisture)]
Total PCBs	tissue concentration = [0.3967 * (soil concentration) + 0.0536]/(1-% moisture)]

[c] Soil-to-invertebrate uptake factors and regression equations recommended by USEPA in development of Ecological Soil Screening Levels (USEPA, 2007a)

arsenic	ln(tissue concentration) = 0.706 * ln(soil concentration) - 1.421
4,4-DDD	ln(tissue concentration) = 0.69754 * ln(soil concentration) + 1.1613
4,4-DDT	ln(tissue concentration) = 0.8689 * ln(soil concentration) + 2.1247

[d] Soil-to-earthworm uptake factors from Sample, et al (1998) - median value from Table 11.

[e] Soil to invertebrate transfer factors from the LANL Ecorisk Database (Release 3.3) (LANL, 2015). Heptachlor values based on laboratory study; others values calculated based on Kd and Kow assuming 1% organic carbon in soil.

[f] Soil-to-plant uptake factors and regression equations recommended by USEPA in development of Ecological Soil Screening Levels (USEPA, 2007a)

cadmium	ln(tissue concentration) = 0.546 * ln(soil concentration) - 0.475
copper	ln(tissue concentration) = 0.394 * ln(soil concentration) + 0.668
lead	ln(tissue concentration) = 0.561 * ln(soil concentration) - 1.328
nickel	ln(tissue concentration) = 0.748 * ln(soil concentration) - 2.223
selenium	ln(tissue concentration) = 1.104 * ln(soil concentration) - 0.677
zinc	ln(tissue concentration) = 0.554 * ln(soil concentration) + 1.575
Total LMW PAHs	ln(tissue concentration) = 0.4544 * ln(soil concentration) - 1.3205
Total HMW PAHs	ln(tissue concentration) = 0.9469 * ln(soil concentration) - 1.7026

[g] Values identified using the Risk Assessment Information System (http://rais.ornl.gov/cgi-bin/tools/TOX_search?select=chem_spef; accessed September 13, 2016).

[h] Value for Aroclor 1254 used for Total PCBs.

[i] Value for endosulfan used as a surrogate due to structural similarity.

[j] Value for endrin used as a surrogate due to structural similarity.

[k] Soil-to-plant uptake factors from Bechtel Jacobs (1998) - median value from Table 6.

[l] Value for heptachlor used as a surrogate due to structural similarity.

ATTACHMENT E TABLE 3
TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	TRV (mg/kg $_{bw}$/day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Inorganics							
ARSENIC	2.24	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005a	
ARSENIC	*4.51*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005a*	
ARSENIC	1.04	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005a	
ARSENIC	*4.55*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005a*	
CADMIUM	1.47	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005b	
CADMIUM	*6.35*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005b*	
CADMIUM	0.77	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005b	
CADMIUM	*6.9*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005b*	
CHROMIUM, TOTAL	2.66	NOAEL	reproduction & growth	chronic	birds	USEPA, 2008	
CHROMIUM, TOTAL	*15.63*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2008*	
CHROMIUM, TOTAL	2.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2008	
CHROMIUM, TOTAL	*58.17*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2008*	
COPPER	4.05	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007b	
COPPER	*34.87*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007b*	
COPPER	5.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007b	
COPPER	*82.7*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007b*	
LEAD	1.63	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005c	
LEAD	*44.6*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005c*	
LEAD	4.7	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005c	
LEAD	*186.4*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005c*	
MERCURY	0.0064	estimated NOAEL	reproductive	chronic	mallard duck	Heinz, 1979	Sample et al., 1996
MERCURY	*0.064*	*LOAEL*	*reproductive*	*chronic*	*mallard duck*	*Heinz, 1979*	*Sample et al., 1996*
MERCURY	0.032	NOAEL	reproductive	chronic	rat	Verschuuren et al., 1976	Sample et al., 1996
MERCURY	*0.16*	*LOAEL*	*reproductive*	*chronic*	*rat*	*Verschuuren et al., 1976*	*Sample et al., 1996*
NICKEL	6.71	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007c	
NICKEL	*18.57*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007c*	
NICKEL	1.7	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007c	
NICKEL	*14.77*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007c*	
SELENIUM	0.29	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007d	
SELENIUM	*0.819*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007d*	
SELENIUM	0.143	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007d	
SELENIUM	*0.661*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007d*	
SILVER	2.02	NOAEL	reproduction & growth	chronic	birds	USEPA, 2006	
SILVER	*60.47*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2006*	
SILVER	6.02	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2006	
SILVER	*118.62*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2006*	
ZINC	66.1	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007e	
ZINC	*171.44*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007e*	
ZINC	75.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
ZINC	*297.58*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007e*	
Organics							
TOTAL HMW PAHs	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f	
TOTAL HMW PAHs	*38.4*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007f*	
TOTAL LMW PAHs	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f	
TOTAL LMW PAHs	*356*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007f*	
TOTAL LMW PAHs / HMW PAHs	*2*	NOAEL	systemic	chronic	nestling/starlings	Trust et al., 1994 [a]	
TOTAL LMW PAHs / HMW PAHs	*20*	*LOAEL*	*systemic*	*chronic*	*nestling/starlings*	*Trust et al., 1994 [a]*	
4,4-DDD	0.227	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007g [b]	
4,4-DDD	*2.7*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007g [b]*	
4,4-DDD	0.147	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007g [b]	
4,4-DDD	*5.56*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007g [b]*	
4,4-DDT	0.227	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007g	
4,4-DDT	*2.7*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007g*	
4,4-DDT	0.147	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007g	
4,4-DDT	*5.56*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007g*	
ALDRIN	0.0709	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007h [c]	
ALDRIN	*0.87*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007h [c]*	
ALDRIN	0.2	NOAEL	reproductive	chronic	rat	Treon and Cleveland, 1955	Sample et al., 1996
ALDRIN	*1*	*LOAEL*	*reproductive*	*chronic*	*rat*	*Treon and Cleveland, 1955*	*Sample et al., 1996*

ATTACHMENT E TABLE 3
TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	TRV ($mg/kg_{bw}/day$)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
DIELDRIN	0.0709	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007h	
DIELDRIN	*0.87*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007h*	
DIELDRIN	0.0150	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007h	
DIELDRIN	*1.27*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007h*	
ENDOSULFAN I	10	NOAEL	reproduction	chronic	gray partridge	Abiola, 1992 [d]	Sample et al., 1996
ENDOSULFAN I	*100*	*estimated LOAEL*	*reproduction*	*chronic*	*gray partridge*	*Abiola, 1992 [d]*	*Sample et al., 1996*
ENDOSULFAN I	0.15	NOAEL	reproduction	subchronic	rat	Dikshith et al., 1984 [d]	Sample et al., 1996
ENDOSULFAN I	*1.5*	*estimated LOAEL*	*reproduction*	*subchronic*	*rat*	*Dikshith et al., 1984 [d]*	*Sample et al., 1996*
ENDOSULFAN II	10	NOAEL	reproduction	chronic	gray partridge	Abiola, 1992 [d]	Sample et al., 1996
ENDOSULFAN II	*100*	*estimated LOAEL*	*reproduction*	*chronic*	*gray partridge*	*Abiola, 1992 [d]*	*Sample et al., 1996*
ENDOSULFAN II	0.15	NOAEL	reproduction	subchronic	rat	Dikshith et al., 1984 [d]	Sample et al., 1996
ENDOSULFAN II	*1.5*	*estimated LOAEL*	*reproduction*	*subchronic*	*rat*	*Dikshith et al., 1984 [d]*	*Sample et al., 1996*
ENDOSULFAN SULFATE	10	NOAEL	reproduction	chronic	gray partridge	Abiola, 1992 [d]	Sample et al., 1996
ENDOSULFAN SULFATE	0.15	NOAEL	reproduction	subchronic	rat	Dikshith et al., 1984 [d]	Sample et al., 1996
ENDOSULFAN SULFATE	*100*	*estimated LOAEL*	*reproduction*	*chronic*	*gray partridge*	*Abiola, 1992 [d]*	*Sample et al., 1996*
ENDOSULFAN SULFATE	*1.5*	*estimated LOAEL*	*reproduction*	*subchronic*	*rat*	*Dikshith et al., 1984 [d]*	*Sample et al., 1996*
ENDRIN	0.01035	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982	Sample et al., 1996
ENDRIN	*0.1035*	*estimated LOAEL*	*reproduction*	*chronic*	*screech owl*	*Fleming et al., 1982*	*Sample et al., 1996*
ENDRIN	0.092	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969	Sample et al., 1996
ENDRIN	*0.92*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*Good and Ware, 1969*	*Sample et al., 1996*
ENDRIN ALDEHYDE	0.01035	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982 [e]	Sample et al., 1996
ENDRIN ALDEHYDE	*0.1035*	*LOAEL*	*reproduction*	*chronic*	*screech owl*	*Fleming et al., 1982 [e]*	*Sample et al., 1996*
ENDRIN ALDEHYDE	0.092	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969 [e]	Sample et al., 1996
ENDRIN ALDEHYDE	*0.92*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*Good and Ware, 1969 [e]*	*Sample et al., 1996*
ENDRIN KETONE	0.0104	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982 [e]	Sample et al., 1996
ENDRIN KETONE	*0.1035*	*LOAEL*	*reproduction*	*chronic*	*screech owl*	*Fleming et al., 1982 [e]*	*Sample et al., 1996*
ENDRIN KETONE	0.0920	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969 [e]	Sample et al., 1996
ENDRIN KETONE	*0.92*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*Good and Ware, 1969 [e]*	*Sample et al., 1996*
HEPTACHLOR EPOXIDE	0.1	estimated NOAEL	reproduction	chronic	mink	Crum et al., 1993 [f]	Sample et al., 1996
HEPTACHLOR EPOXIDE	*1*	*LOAEL*	*reproduction*	*chronic*	*mink*	*Crum et al., 1993 [f]*	*Sample et al., 1996*
METHOXYCHLOR	25.78	estimated NOAEL	mortality	acute	Japanese quail	Hill and Camardese, 1986	LANL, 2016
METHOXYCHLOR	*258*	*estimated LOAEL*	*mortality*	*acute*	*Japanese quail*	*Hill and Camardese, 1986*	*LANL, 2016*
METHOXYCHLOR	4	NOAEL	reproduction	chronic	rat	Gray et al., 1988	Sample et al., 1996
METHOXYCHLOR	*8*	*LOAEL*	*reproduction*	*chronic*	*rat*	*Gray et al., 1988*	*Sample et al., 1996*
TOTAL PCBs	0.18	estimated NOAEL	reproduction	chronic	pheasant	Dahlgren et al., 1972 [g]	Sample et al., 1996
TOTAL PCBs	*1.8*	*LOAEL*	*reproduction*	*chronic*	*pheasant*	*Dahlgren et al., 1972 [g]*	*Sample et al., 1996*
TOTAL PCBs	0.068	estimated NOAEL	reproduction	chronic	mouse	McCoy et al., 1995 [g]	Sample et al., 1996
TOTAL PCBs	*0.68*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*McCoy et al., 1995 [g]*	*Sample et al., 1996*

Notes:
Avian TRVs are not available for heptachlor
NOAELs were estimated if a NOAEL was not identified in the literature. The LOAEL was divided by 10 to derive an estimated NOAEL.
LOAELs were estimated if a LOAEL was not identified in the literature. The NOAEL was multiplied by 10 to derive an estimated LOAEL.
LOAEL values from USEPA Eco-SSL documents were calculated as the geometric mean of growth and reproduction LOAEL values.
Additional LOAELs were identified in Sample et al (1996) and in other literature sources used to identify the NOAEL-based TRVs.

COPC - Chemical of Potential Concern.
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicological Reference Value

[a] 7,12-Dimethylbenz(a)anthracene used as a surrogate for PAHs.
[b] 4,4'-DDT used as a surrogate for 4,4'-DDD.
[c] Dieldrin used as a surrogate for aldrin.
[d] Endosulfan used as a surrogate for endosulfan I, endosulfan II and endosulfan sulfate.
[e] Endrin used as a surrogate for endrin aldehyde and endrin ketone.
[f] Heptachlor used as a surrogate for heptachlor epoxide.
[g] Aroclor 1254 used as a surrogate for Total PCBs.

ATTACHMENT E TABLE 4

POTENTIAL RISKS TO THE BOBWHITE QUAIL IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE BOBWHITE QUAIL	
Average Body Weight (kg)	0.175
Exposure Duration	1
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.00012
Water Consumption Rate (kg/day)	0.0228
Terrestrial Plant Consumption Rate (kg_{dw}/day)	0.0020

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HMW - High Molecular Weight.
HQ - Hazard Quotient (Dose/TRV).
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effect Level.
MATC - Maximum Allowable Toxicant Concentration.
NA - Not Analyzed.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

SUPPORTING CALCULATIONS

FOOD WEB MODEL - MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)					
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Terrestrial Plant (mg/kg_{dw})	Soil	Surface Water	Terrestrial Plant	Total	MATC-based TRV (mg/kg_{bw}/day)	MATC-based HQ
Inorganics									
ARSENIC	1.2E+01	7.9E-03	4.5E-01	8.5E-03	1.0E-03	5.2E-03	1.5E-02	3.2E+00	4.7E-03
CADMIUM	1.3E+00	2.1E-03	7.2E-01	9.2E-04	2.8E-04	8.4E-03	9.6E-03	3.1E+00	3.1E-03
CHROMIUM, TOTAL	4.2E+01	ND	1.7E+00	3.0E-02	NC	2.0E-02	5.0E-02	6.4E+00	7.8E-03
COPPER	3.2E+01	9.4E-03	7.7E+00	2.3E-02	1.2E-03	8.9E-02	1.1E-01	1.2E+01	9.5E-03
LEAD	4.8E+01	2.1E-03	2.3E+00	3.4E-02	2.7E-04	2.7E-02	6.1E-02	8.5E+00	7.1E-03
MERCURY	2.1E-01	ND	1.4E-01	1.5E-04	NC	1.6E-03	1.7E-03	2.0E-02	8.6E-02
NICKEL	3.2E+01	8.1E-03	1.5E+00	2.3E-02	1.1E-03	1.7E-02	4.1E-02	1.1E+01	3.7E-03
SELENIUM	6.4E+00	8.2E-04	3.9E+00	4.5E-03	1.1E-04	4.6E-02	5.1E-02	4.9E-01	1.0E-01
SILVER	2.2E-01	1.1E-04	3.1E-03	1.6E-04	1.4E-05	3.6E-05	2.1E-04	1.1E+01	1.9E-05
ZINC	7.2E+01	2.3E-02	5.2E+01	5.1E-02	3.0E-03	6.0E-01	6.6E-01	1.1E+02	6.2E-03
Organics									
TOTAL LMW PAHs	1.5E+01	2.0E-04	9.1E-01	1.1E-02	2.6E-05	1.1E-02	2.1E-02	6.3E+00	3.4E-03
TOTAL HMW PAHs	5.7E+01	2.6E-04	8.4E+00	4.1E-02	3.4E-05	9.8E-02	1.4E-01	6.3E+00	2.2E-02
TOTAL PCBs	6.1E+02	3.8E-04	5.3E+00	4.3E-01	4.9E-05	6.1E-02	5.0E-01	5.7E-01	8.7E-01
4,4-DDD	9.2E-03	NA	1.1E-04	6.5E-06	NC	1.3E-06	7.9E-06	7.8E-01	1.0E-05
4,4-DDT	7.6E-01	NA	2.9E-03	5.4E-04	NC	3.3E-05	5.7E-04	7.8E-01	7.3E-04
ALDRIN	1.6E-04	NA	1.0E-06	1.1E-07	NC	1.2E-08	1.3E-07	2.5E-01	5.1E-07
DIELDRIN	4.8E-01	NA	2.0E-01	3.4E-04	NC	2.3E-03	2.6E-03	2.5E-01	1.1E-02
ENDOSULFAN I	4.4E-04	NA	1.0E-04	3.1E-07	NC	1.2E-06	1.5E-06	3.2E+01	4.7E-08
ENDOSULFAN II	2.0E-02	NA	4.6E-03	1.4E-05	NC	5.4E-05	6.8E-05	3.2E+01	2.2E-06
ENDOSULFAN SULFATE	2.2E-01	NA	5.1E-02	1.6E-04	NC	5.9E-04	7.5E-04	3.2E+01	2.4E-05
ENDRIN	1.3E-01	NA	4.8E-03	9.2E-05	NC	5.6E-05	1.5E-04	3.3E-02	4.5E-03
ENDRIN ALDEHYDE	1.7E-02	NA	6.3E-04	1.2E-05	NC	7.3E-06	1.9E-05	3.3E-02	5.9E-04
ENDRIN KETONE	3.0E+00	NA	1.1E-01	2.1E-03	NC	1.3E-03	3.4E-03	3.3E-02	1.0E-01
HEPTACHLOR EPOXIDE	8.7E-02	NA	4.3E-03	6.2E-05	NC	5.0E-05	1.1E-04	NC	NC
METHOXYCHLOR	1.6E+00	NA	7.0E-02	1.1E-03	NC	8.1E-04	1.9E-03	8.2E+01	2.4E-05

ATTACHMENT E TABLE 5

POTENTIAL RISKS TO THE AMERICAN ROBIN IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE AMERICAN ROBIN	
Average Body Weight (kg)	0.080
Exposure Duration	1
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.00076
Water Consumption Rate (kg/day)	0.0113
Soil Invt. Consumption Rate (kg_{dw}/day)	0.012

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HMW - High Molecular Weight.
HQ - Hazard Quotient (Dose/TRV).
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effect Level.
MATC - Maximum Allowable Toxicant Concentration.
NA - Not Analyzed.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

SUPPORTING CALCULATIONS

FOOD WEB MODEL - MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)					
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Soil Invertebrate (mg/kg_{dw})	Soil	Surface Water	Soil Invertebrate	Total	MATC-based TRV (mg/kg_{bw}/day)	MATC-based HQ
Inorganics									
ARSENIC	1.2E+01	7.9E-03	1.4E+00	1.1E-01	1.1E-03	2.1E-01	3.2E-01	3.2E+00	1.0E-01
CADMIUM	1.3E+00	2.1E-03	8.6E+01	1.2E-02	3.0E-04	1.3E+01	1.3E+01	3.1E+00	**4.2E+00**
CHROMIUM, TOTAL	4.2E+01	ND	6.6E+01	4.0E-01	NC	9.7E+00	1.0E+01	6.4E+00	**1.6E+00**
COPPER	3.2E+01	9.4E-03	1.7E+01	3.0E-01	1.3E-03	2.4E+00	2.7E+00	1.2E+01	2.3E-01
LEAD	4.8E+01	2.1E-03	9.6E+01	4.5E-01	2.9E-04	1.4E+01	1.5E+01	8.5E+00	**1.7E+00**
MERCURY	2.1E-01	ND	3.6E-01	2.0E-03	NC	5.3E-02	5.5E-02	2.0E-02	**2.7E+00**
NICKEL	3.2E+01	8.1E-03	3.4E+01	3.0E-01	1.1E-03	5.0E+00	5.3E+00	1.1E+01	4.8E-01
SELENIUM	6.4E+00	8.2E-04	3.3E+02	6.1E-02	1.1E-04	4.9E+01	4.9E+01	4.9E-01	**1.0E+02**
SILVER	2.2E-01	1.1E-04	4.5E-01	2.1E-03	1.5E-05	6.6E-02	6.9E-02	1.1E+01	6.2E-03
ZINC	7.2E+01	2.3E-02	2.0E+03	6.8E-01	3.2E-03	2.9E+02	3.0E+02	1.1E+02	**2.8E+00**
Organics									
TOTAL LMW PAHs	1.5E+01	2.0E-04	4.6E+01	1.4E-01	2.8E-05	6.7E+00	6.9E+00	6.3E+00	**1.1E+00**
TOTAL HMW PAHs	5.7E+01	2.6E-04	1.5E+02	5.4E-01	3.6E-05	2.2E+01	2.2E+01	6.3E+00	**3.5E+00**
TOTAL PCBs	6.1E+02	3.8E-04	1.5E+03	5.8E+00	5.3E-05	2.2E+02	2.3E+02	5.7E-01	**4.0E+02**
4,4-DDD	9.2E-03	NA	1.2E-01	8.7E-05	NC	1.8E-02	1.8E-02	7.8E-01	2.3E-02
4,4-DDT	7.6E-01	NA	6.6E+00	7.2E-03	NC	9.7E-01	9.8E-01	7.8E-01	**1.3E+00**
ALDRIN	1.6E-04	NA	4.3E-03	1.5E-06	NC	6.3E-04	6.3E-04	2.5E-01	2.5E-03
DIELDRIN	4.8E-01	NA	7.1E+00	4.5E-03	NC	1.0E+00	1.0E+00	2.5E-01	**4.2E+00**
ENDOSULFAN I	4.4E-04	NA	2.7E-04	4.2E-06	NC	4.0E-05	4.4E-05	3.2E+01	1.4E-06
ENDOSULFAN II	2.0E-02	NA	1.2E-02	1.9E-04	NC	1.8E-03	2.0E-03	3.2E+01	6.3E-05
ENDOSULFAN SULFATE	2.2E-01	NA	1.3E-01	2.1E-03	NC	2.0E-02	2.2E-02	3.2E+01	6.9E-04
ENDRIN	1.3E-01	NA	2.5E+00	1.2E-03	NC	3.7E-01	3.8E-01	3.3E-02	**1.1E+01**
ENDRIN ALDEHYDE	1.7E-02	NA	3.3E-01	1.6E-04	NC	4.9E-02	4.9E-02	3.3E-02	**1.5E+00**
ENDRIN KETONE	3.0E+00	NA	5.9E+01	2.8E-02	NC	8.6E+00	8.7E+00	3.3E-02	**2.6E+02**
HEPTACHLOR EPOXIDE	8.7E-02	NA	7.3E-01	8.2E-04	NC	1.1E-01	1.1E-01	NC	NC
METHOXYCHLOR	1.6E+00	NA	6.2E+00	1.5E-02	NC	9.1E-01	9.3E-01	8.2E+01	1.1E-02

ATTACHMENT E TABLE 6

POTENTIAL RISKS TO THE MEADOW VOLE IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE MEADOW VOLE	
Average Body Weight (kg)	0.036
Exposure Duration	1
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.000021
Water Consumption Rate (kg/day)	0.0075
Terrestrial Plant Consumption Rate (kg_{dw}/day)	0.0017

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HMW - High Molecular Weight.
HQ - Hazard Quotient (Dose/TRV).
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effect Level.
MATC - Maximum Allowable Toxicant Concentration.
NA - Not Analyzed.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

FOOD WEB MODEL - MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)					
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Terrestrial Plant (mg/kg_{dw})	Soil	Surface Water	Terrestrial Plant	Total	MATC-based TRV (mg/kg_{bw}/day)	MATC-based HQ
Inorganics									
ARSENIC	1.2E+01	7.9E-03	4.5E-01	7.0E-03	1.7E-03	2.2E-02	3.1E-02	2.2E+00	1.4E-02
CADMIUM	1.3E+00	2.1E-03	7.2E-01	7.6E-04	4.5E-04	3.5E-02	3.6E-02	2.3E+00	1.6E-02
CHROMIUM, TOTAL	4.2E+01	ND	1.7E+00	2.5E-02	NC	8.4E-02	1.1E-01	1.2E+01	9.2E-03
COPPER	3.2E+01	9.4E-03	7.7E+00	1.9E-02	2.0E-03	3.7E-01	3.9E-01	2.2E+01	1.8E-02
LEAD	4.8E+01	2.1E-03	2.3E+00	2.8E-02	4.4E-04	1.1E-01	1.4E-01	3.0E+01	4.8E-03
MERCURY	2.1E-01	ND	1.4E-01	1.2E-04	NC	6.7E-03	6.8E-03	7.2E-02	9.5E-02
NICKEL	3.2E+01	8.1E-03	1.5E+00	1.9E-02	1.7E-03	7.1E-02	9.1E-02	5.0E+00	1.8E-02
SELENIUM	6.4E+00	8.2E-04	3.9E+00	3.7E-03	1.7E-04	1.9E-01	2.0E-01	3.1E-01	6.4E-01
SILVER	2.2E-01	1.1E-04	3.1E-03	1.3E-04	2.3E-05	1.5E-04	3.0E-04	2.7E+01	1.1E-05
ZINC	7.2E+01	2.3E-02	5.2E+01	4.2E-02	4.8E-03	2.5E+00	2.6E+00	1.5E+02	1.7E-02
Organics									
TOTAL LMW PAHs	1.5E+01	2.0E-04	9.1E-01	8.8E-03	4.2E-05	4.5E-02	5.3E-02	1.5E+02	3.5E-04
TOTAL HMW PAHs	5.7E+01	2.6E-04	8.4E+00	3.3E-02	5.5E-05	4.1E-01	4.4E-01	4.9E+00	9.1E-02
TOTAL PCBs	6.1E+02	3.8E-04	5.3E+00	3.6E-01	8.0E-05	2.6E-01	6.1E-01	2.2E-01	**2.9E+00**
4,4-DDD	9.2E-03	NA	1.1E-04	5.4E-06	NC	5.6E-06	1.1E-05	9.0E-01	1.2E-05
4,4-DDT	7.6E-01	NA	2.9E-03	4.4E-04	NC	1.4E-04	5.8E-04	9.0E-01	6.5E-04
ALDRIN	1.6E-04	NA	1.0E-06	9.4E-08	NC	5.1E-08	1.4E-07	4.5E-01	3.2E-07
DIELDRIN	4.8E-01	NA	2.0E-01	2.8E-04	NC	9.6E-03	9.9E-03	1.4E-01	7.1E-02
ENDOSULFAN I	4.4E-04	NA	1.0E-04	2.6E-07	NC	5.0E-06	5.2E-06	4.7E-01	1.1E-05
ENDOSULFAN II	2.0E-02	NA	4.6E-03	1.2E-05	NC	2.3E-04	2.4E-04	4.7E-01	5.0E-04
ENDOSULFAN SULFATE	2.2E-01	NA	5.1E-02	1.3E-04	NC	2.5E-03	2.6E-03	4.7E-01	5.5E-03
ENDRIN	1.3E-01	NA	4.8E-03	7.6E-05	NC	2.3E-04	3.1E-04	2.9E-01	1.1E-03
ENDRIN ALDEHYDE	1.7E-02	NA	6.3E-04	9.9E-06	NC	3.1E-05	4.1E-05	2.9E-01	1.4E-04
ENDRIN KETONE	3.0E+00	NA	1.1E-01	1.8E-03	NC	5.4E-03	7.2E-03	2.9E-01	2.5E-02
HEPTACHLOR EPOXIDE	8.7E-02	NA	4.3E-03	5.1E-05	NC	2.1E-04	2.6E-04	3.2E-01	8.3E-04
METHOXYCHLOR	1.6E+00	NA	7.0E-02	9.4E-04	NC	3.4E-03	4.3E-03	5.7E+00	7.7E-04

ATTACHMENT E TABLE 7

POTENTIAL RISKS TO THE SHORT-TAILED SHREW IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE SHORT-TAILED SHREW	
Average Body Weight (kg)	0.0161
Exposure Duration	1
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.000013
Water Consumption Rate (kg/day)	0.0036
Soil Invt. Consumption Rate (kg_{dw}/day)	0.0014

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HMW - High Molecular Weight.
HQ - Hazard Quotient (Dose/TRV).
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effect Level.
MATC - Maximum Allowable Toxicant Concentration.
NA - Not Analyzed.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

SUPPORTING CALCULATIONS

FOOD WEB MODEL - MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)					
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Soil Invertebrate (mg/kg_{dw})	Soil	Surface Water	Soil Invertebrate	Total	MATC-based TRV (mg/kg_{bw}/day)	MATC-based HQ
Inorganics									
ARSENIC	1.2E+01	7.9E-03	1.4E+00	9.6E-03	1.8E-03	1.2E-01	1.4E-01	2.2E+00	6.2E-02
CADMIUM	1.3E+00	2.1E-03	8.6E+01	1.0E-03	4.8E-04	7.7E+00	7.7E+00	2.3E+00	**3.3E+00**
CHROMIUM, TOTAL	4.2E+01	ND	6.6E+01	3.4E-02	NC	5.9E+00	5.9E+00	1.2E+01	5.0E-01
COPPER	3.2E+01	9.4E-03	1.7E+01	2.6E-02	2.1E-03	1.5E+00	1.5E+00	2.2E+01	7.0E-02
LEAD	4.8E+01	2.1E-03	9.6E+01	3.8E-02	4.7E-04	8.5E+00	8.5E+00	3.0E+01	2.9E-01
MERCURY	2.1E-01	ND	3.6E-01	1.7E-04	NC	3.2E-02	3.2E-02	7.2E-02	4.4E-01
NICKEL	3.2E+01	8.1E-03	3.4E+01	2.6E-02	1.8E-03	3.0E+00	3.1E+00	5.0E+00	6.1E-01
SELENIUM	6.4E+00	8.2E-04	3.3E+02	5.1E-03	1.8E-04	3.0E+01	3.0E+01	3.1E-01	**9.6E+01**
SILVER	2.2E-01	1.1E-04	4.5E-01	1.8E-04	2.5E-05	4.0E-02	4.0E-02	2.7E+01	1.5E-03
ZINC	7.2E+01	2.3E-02	2.0E+03	5.8E-02	5.1E-03	1.8E+02	1.8E+02	1.5E+02	**1.2E+00**
Organics									
TOTAL LMW PAHs	1.5E+01	2.0E-04	4.6E+01	1.2E-02	4.5E-05	4.1E+00	4.1E+00	1.5E+02	2.7E-02
TOTAL HMW PAHs	5.7E+01	2.6E-04	1.5E+02	4.6E-02	5.8E-05	1.3E+01	1.3E+01	4.9E+00	**2.7E+00**
TOTAL PCBs	6.1E+02	3.8E-04	1.5E+03	4.9E-01	8.5E-05	1.3E+02	1.3E+02	2.2E-01	**6.3E+02**
4,4-DDD	9.2E-03	NA	1.2E-01	7.4E-06	NC	1.1E-02	1.1E-02	9.0E-01	1.2E-02
4,4-DDT	7.6E-01	NA	6.6E+00	6.1E-04	NC	5.9E-01	5.9E-01	9.0E-01	6.5E-01
ALDRIN	1.6E-04	NA	4.3E-03	1.3E-07	NC	3.8E-04	3.8E-04	4.5E-01	8.5E-04
DIELDRIN	4.8E-01	NA	7.1E+00	3.8E-04	NC	6.3E-01	6.3E-01	1.4E-01	**4.5E+00**
ENDOSULFAN I	4.4E-04	NA	2.7E-04	3.5E-07	NC	2.4E-05	2.4E-05	4.7E-01	5.1E-05
ENDOSULFAN II	2.0E-02	NA	1.2E-02	1.6E-05	NC	1.1E-03	1.1E-03	4.7E-01	2.3E-03
ENDOSULFAN SULFATE	2.2E-01	NA	1.3E-01	1.8E-04	NC	1.2E-02	1.2E-02	4.7E-01	2.5E-02
ENDRIN	1.3E-01	NA	2.5E+00	1.0E-04	NC	2.3E-01	2.3E-01	2.9E-01	7.7E-01
ENDRIN ALDEHYDE	1.7E-02	NA	3.3E-01	1.4E-05	NC	2.9E-02	2.9E-02	2.9E-01	1.0E-01
ENDRIN KETONE	3.0E+00	NA	5.9E+01	2.4E-03	NC	5.2E+00	5.2E+00	2.9E-01	**1.8E+01**
HEPTACHLOR EPOXIDE	8.7E-02	NA	7.3E-01	7.0E-05	NC	6.5E-02	6.5E-02	3.2E-01	2.1E-01
METHOXYCHLOR	1.6E+00	NA	6.2E+00	1.3E-03	NC	5.5E-01	5.5E-01	5.7E+00	9.7E-02

ATTACHMENT E TABLE 8
SUMMARY OF POTENTIAL RISKS TO WILDLIFE IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	MATC-based HQs - Maximum Concentrations			
COPC	**Bobwhite Quail**	**American Robin**	**Meadow Vole**	**Short-tailed Shrew**
Inorganics				
ARSENIC	4.7E-03	1.0E-01	1.4E-02	6.2E-02
CADMIUM	3.1E-03	**4.2E+00**	1.6E-02	**3.3E+00**
CHROMIUM, TOTAL	7.8E-03	**1.6E+00**	9.2E-03	5.0E-01
COPPER	9.5E-03	2.3E-01	1.8E-02	7.0E-02
LEAD	7.1E-03	**1.7E+00**	4.8E-03	2.9E-01
MERCURY	8.6E-02	**2.7E+00**	9.5E-02	4.4E-01
NICKEL	3.7E-03	4.8E-01	1.8E-02	6.1E-01
SELENIUM	1.0E-01	**1.0E+02**	6.4E-01	**9.6E+01**
SILVER	1.9E-05	6.2E-03	1.1E-05	1.5E-03
ZINC	6.2E-03	**2.8E+00**	1.7E-02	**1.2E+00**
Organics				
TOTAL LMW PAHs	3.4E-03	**1.1E+00**	3.5E-04	2.7E-02
TOTAL HMW PAHs	2.2E-02	**3.5E+00**	9.1E-02	**2.7E+00**
TOTAL PCBs	8.7E-01	**4.0E+02**	**2.9E+00**	**6.3E+02**
4,4-DDD	1.0E-05	2.3E-02	1.2E-05	1.2E-02
4,4-DDT	7.3E-04	**1.3E+00**	6.5E-04	6.5E-01
ALDRIN	5.1E-07	2.5E-03	3.2E-07	8.5E-04
DIELDRIN	1.1E-02	**4.2E+00**	7.1E-02	**4.5E+00**
ENDOSULFAN I	4.7E-08	1.4E-06	1.1E-05	5.1E-05
ENDOSULFAN II	2.2E-06	6.3E-05	5.0E-04	2.3E-03
ENDOSULFAN SULFATE	2.4E-05	6.9E-04	5.5E-03	2.5E-02
ENDRIN	4.5E-03	**1.1E+01**	1.1E-03	7.7E-01
ENDRIN ALDEHYDE	5.9E-04	**1.5E+00**	1.4E-04	1.0E-01
ENDRIN KETONE	1.0E-01	**2.6E+02**	2.5E-02	**1.8E+01**
HEPTACHLOR EPOXIDE	0.0E+00	0.0E+00	8.3E-04	2.1E-01
METHOXYCHLOR	2.4E-05	1.1E-02	7.7E-04	9.7E-02

Notes:
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
Potential risk is calculated using the maximum detected concentrations and MATC-based TRVs.
HQs above 1 are bolded and highlighted. COPCs with HQs above 1 in the screening level evaluation were retained for the COPC refinement stage.
MATC-based TRVs represent the geometric mean of the NOAEL- and LOAEL-based TRVs.

COPC - Chemical of Potential Concern.
HMW - High Molecular Weight.
HQ - Hazard Quotient (Dose/TRV).
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effect Level.
MATC - Maximum Allowable Toxicant Concentration.
NC - Not Calculated. Avian TRV not available.
NOAEL - No Observed Adverse Effect Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicity Reference Value.

ATTACHMENT E TABLE 9
REFERENCES CITED FOR TERRESTRIAL EXPOSURE AREA FOOD WEB MODEL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT E TABLE 9
REFERENCES CITED FOR TERRESTRIAL EXPOSURE AREA FOOD WEB MODEL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT F

SCREENING LEVEL FOOD WEB MODEL – WETLAND EXPOSURE AREA

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ATTACHMENT F
SCREENING LEVEL FOOD WEB MODEL - WETLAND EXPOSURE AREA
TABLE OF CONTENTS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ATTACHMENT F TABLE 1
EXPOSURE PARAMETERS FOR ECOLOGICAL RECEPTORS IN WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Receptor Species	Average Body Weight (kg)	Food Ingestion Rate (kg_{dw}/day)	Dietary Assumptions (%; kg_{dw}/day)			Incidental Soil/Sediment Ingestion (%; kg_{dw}/day)	Water Ingestion Rate (L/day)
			Terrestrial Plants	Soil Invertebrates	Benthic Invertebrates		
Birds							
Marsh wren *(Cistothorus palustris)*	0.011 [a]	0.0029 [b]	--	--	100% [c] 0.0029	3.3% [d] 0.000094	0.0028 [e]
Mammals							
Raccoon *(Procyon lotor)*	5.636 [a]	0.1840 [b]	--	--	100% [c] 0.1840	9.4% [d] 0.017	0.47 [e]

General Notes:

See individual organism notes for source, units, and conversion.

All receptors assumed to be present and actively foraging year-round in screening level evaluation (area use factor [AUF] and exposure duration [ED] set at 100%).

BW - Body Weight.

DW - Dry Weight.

FIR - Food Ingestion Rate.

Kg - Kilogram.

L/day - Liters per Day.

Notes for Marsh Wren

[a] Average of adult body weights listed by USEPA (1993).

[b] Food ingestion rate calculated using algorithm for insectivorous birds developed by Nagy, 2001 [FIR (g_{dw}/day) = $0.540*BW^{0.705}$] using average body weight.

[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.

[d] In the absence of data for the wren, the incidental soil ingestion rate is based on the mallard based on dietary similarities (USACHPPM, 2004).

[e] Water ingestion rate calculated using algorithm for all birds developed by Calder and Braun, 1983 [WIR (kg/day) = $0.059*BW^{0.67}$] using average body weight.

Notes for Raccoon

[a] Average of adult body weights listed by USEPA (1993; value is average of the average values from three studies).

[b] Food ingestion rate calculated using algorithm for carnivores developed by Nagy, et al. (1999) as follows:

FIR (kJ/day)= $(2.23*BW(g)^{0.85})$ using average body weight of 5.636 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18.7 kJ/g of dry matter for mammalian insectivores (Nagy et al., 1999) and then dividing by 1000.

[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.

[d] The incidental soil ingestion rate is based on the value identified by Beyer (1994) for raccoons.

[e] Water ingestion rate calculated using algorithm for all mammals developed by Calder and Braun, 1983 [WIR (kg/day) = $0.099*BW^{0.90}$] using average body weight.

ATTACHMENT F TABLE 2
MEDIA AND TISSUE CONCENTRATIONS FOR WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	Measured Media Concentrations [a]		**Estimated Benthic Invertebrate Tissue**		
COPC	Maximum Sediment EPC (mg/kg_{dw})	Maximum Surface Water EPC [Total] (mg/L)	Sediment-to-Invertebrate Uptake Factor		Maximum Benthic Invertebrate Tissue EPC (mg/kg_{dw})
Inorganics					
ARSENIC	19.0	0.0079	0.14	[b]	2.7
CADMIUM	0.67	0.0021	0.60	[b]	0.40
CHROMIUM, TOTAL	33.7	ND	0.10	[b]	3.4
COPPER	108	0.0094	1.556	[b]	168
LEAD	25.6	0.0021	0.071	[b]	1.8
MERCURY	0.32	ND	1.1	[b]	0.36
NICKEL	34.5	0.0081	0.486	[b]	16.8
SELENIUM	5.5	0.00082	0.9	[d,e]	22.5
SILVER	2.3	0.00011	0.9	[d,e]	9.6
ZINC	198	0.023	1.936	[b]	383
Organics					
TOTAL LMW PAHs	12.0	0.00020	0.014	[c]	0.076
TOTAL HMW PAHs	30.0	0.0003	0.0035	[c]	0.047
TOTAL PCBs	2.1	0.000380	0.72	[c]	1.8
4,4-DDD	0.043	NA	0.40	[c]	0.0024
4,4-DDE	0.0061	NA	0.91	[c]	0.0014
4,4-DDT	0.043	NA	0.54	[c]	0.0032
DIELDRIN	0.0078	NA	0.28	[c]	0.00028
ENDOSULFAN I	0.00073	NA	0.28	[c,f]	0.000026
ENDOSULFAN II	0.013	NA	0.28	[c,f]	0.00046
ENDOSULFAN SULFATE	0.035	NA	0.28	[c,f]	0.0012
ENDRIN ALDEHYDE	0.0072	NA	0.28	[c,f]	0.00026
ENDRIN KETONE	0.29	NA	0.28	[c,f]	0.010

Notes:
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
Moisture content assumed to be 78% for benthic invertebrates (USEPA, 1993).
Surface water used as a drinking water source.
Notes continued on following page.

ATTACHMENT F TABLE 2
MEDIA AND TISSUE CONCENTRATIONS FOR WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
NA - Not Analyzed
ND - Not Detected.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
USEPA - United States Environmental Protection Agency.

[a] Media summary statistics presented in Attachment B of Ecological Risk Assessment appendix.
[b] Benthic invertebrate uptake factors obtained from Bechtel Jacobs (1998; Table 2; all data). Value selected is median uptake factor for depurated and non-depurated invertebrates combined expressed on a dry weight basis.

Invertebrate tissue $_{dw}$ = (uptake factor x sediment concentration)

[c] Median biota-sediment accumulation factor (BSAF) and lipids content for benthic invertebrates obtained from BSAF Data Set available at http://www.epa.gov/med/Prods_Pubs/bsaf.htm. See Attachment F Table 3 for summary.

Median lipid values from supporting studies and median site-specific sediment organic carbon used to determine tissue levels.

Median lipid levels for benthic invertebrates were -
1.6% (0.016 fraction lipids) for HMW and LMW PAHs
4.2% (0.042 fraction lipids) for PCBs
0.50% (0.0050 fraction lipids) for DDD
0.88% (0.0088 fraction lipids) for DDE
0.48% (0.0048 fraction lipids) for DDT
0.45% (0.0045 fraction lipids) for dieldrin

Median site-specific TOC is 16% (0.16 fraction organic carbon) based on 8 samples (see Attachment A for data)..

Invertebrate tissue $_{dw}$ = [BSAF x sediment concentration x (fraction lipid/fraction organic carbon)]/(1-% moisture)

[d] Sediment to invertebrate factors obtained from Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities: Appendix C, Media-to-Receptor Bioconcentration Factors (USEPA, 1999). Factor calculates tissue on a wet weight basis so tissue concentration is converted to dry weight assuming 78% moisture.

Invertebrate tissue $_{dw}$ = (uptake factor x sediment concentration)/(1-% moisture)

[e] Value for metals without empirical data. Value based on arithmetic average for cadmium, chromium, copper, lead, inorganic mercury, and zinc.
[f] BSAF not available. BSAF and associated information for dieldrin used as a surrogate.

ATTACHMENT F TABLE 3
BSAFs FOR ORGANIC COMPOUNDS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	1.2000	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.5165	0.0088
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	1.1824	0.0027
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.3967	0.0034
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.3095	0.0052
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.1030	0.0280
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.1801	0.0045
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.2561	0.0043
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	1.7029	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.1274	0.0035
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.7826	0.0050
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.1672	0.0050
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDD	0.6441	0.0093
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDD	44.9588	0.0291
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDD	0.0343	0.0233
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDD	1.7259	0.0197
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDD	0.2550	0.0270
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDD	2.3343	0.0034
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDD	0.0464	0.0063
					MEDIAN FOR DDD	**0.40**	**0.0050**

ATTACHMENT F TABLE 3
BSAFs FOR ORGANIC COMPOUNDS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.5446	0.0211
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.4737	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.1345	0.0088
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.5311	0.0027
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.2600	0.0034
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.3030	0.0052
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.0712	0.0280
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.0702	0.0045
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.3084	0.0043
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	1.2682	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.1398	0.0035
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	1.0588	0.0050
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.1815	0.0050
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDE	0.9621	0.0093
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.6859	0.0291
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.7381	0.0233
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	1.7638	0.0230
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	1.8954	0.0314
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.9144	0.0377
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.5429	0.0266
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	2.5387	0.0197
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	2.5122	0.0249
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	1.1784	0.0286
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.5888	0.0256
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.4140	0.0270
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.5446	0.0211
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	7.5294	0.0085
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.9356	0.0110
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	5.4176	0.0081
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	1.8750	0.0068
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	2.0221	0.0034
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	11.2041	0.0079
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	2.2303	0.0100
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	1.1141	0.0047
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	0.3925	0.0063
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDE	2.4231	0.0130
					MEDIAN FOR p,p'-DDE	**0.91**	**0.0088**

ATTACHMENT F TABLE 3
BSAFs FOR ORGANIC COMPOUNDS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	1.3674	0.0043
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	2.0571	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.5937	0.0088
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	1.4370	0.0027
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.8575	0.0034
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.2838	0.0280
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.4149	0.0045
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	1.6952	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.4490	0.0035
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.3458	0.0052
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	1.1815	0.0050
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.4864	0.0050
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	p,p'-DDT	0.9237	0.0093
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDT	0.1802	0.0047
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDT	0.1355	0.0062
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	p,p'-DDT	0.0027	0.0063
					MEDIAN FOR p,p'-DDT	**0.54**	**0.0048**

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	1.9400	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	0.8847	0.0034
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	0.1746	0.0280
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	0.1778	0.0045
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	0.7442	0.0043
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	5.4004	0.0033
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	0.2034	0.0035
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	0.3800	0.0050
AMTL01	AMTL Charles River	alewife floater	Anodonta implicata	composite	dieldrin	0.0931	0.0093
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	dieldrin	0.2633	0.0291
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	dieldrin	0.2786	0.0197
					MEDIAN FOR DIELDRIN	**0.28**	**0.0045**

ATTACHMENT F TABLE 3
BSAFs FOR ORGANIC COMPOUNDS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	benzo(a)anthracene	0.0020	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(a)anthracene	0.0009	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(a)anthracene	0.0115	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(a)pyrene	0.0084	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	benzo(b)fluoranthene	0.0017	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(b)fluoranthene	0.0014	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(b)fluoranthene	0.0105	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(g,h,i)perylene	0.0031	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	benzo(g,h,i)perylene	0.0035	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(g,h,i)perylene	0.0155	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(k)fluoranthene	0.0023	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	benzo(k)fluoranthene	0.0029	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	benzo(k)fluoranthene	0.0148	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	chrysene	0.0071	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	fluoranthene	0.0014	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	fluoranthene	0.0029	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	fluoranthene	0.0095	0.0150
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	fluoranthene	0.0888	0.0110
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	pyrene	0.0026	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	pyrene	0.0089	0.0150
					MEDIAN FOR HMW PAHs	**0.0035**	**0.016**

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	acenaphthene	0.0442	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	acenaphthene	0.0014	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	acenaphthylene	0.0149	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	acenaphthylene	0.0375	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	acenaphthylene	0.0085	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	anthracene	0.0140	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	anthracene	0.0026	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	anthracene	0.0387	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	fluorene	0.0547	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	fluorene	0.0014	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	fluorene	0.0360	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	naphthalene	0.0112	0.0150
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	naphthalene	0.0004	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	naphthalene	0.0519	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	single or multiple organisms	phenanthrene	0.0062	0.0390
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	phenanthrene	0.0010	0.0160
MCBX01	McCormick & Baxter	crayfish (probably Pacifasticus leniusculus)	probably Pacifasticus leniusculus	composite	phenanthrene	0.0239	0.0150
					MEDIAN FOR LMW PAHs	**0.014**	**0.016**

ATTACHMENT F TABLE 3
BSAFs FOR ORGANIC COMPOUNDS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
CENT01	Centredale Manor	emerging insects	emerging insects	composite	TotalPCB	0.4175	0.0249
CENT01	Centredale Manor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	0.2358	0.0270
KALZ01	Kalamazoo River	arachnid	arachnid	NR	TotalPCB	0.1120	0.0379
KALZ01	Kalamazoo River	coleoptera benthic invertebrate	coleoptera benthic invertebrate	NR	TotalPCB	1.9443	0.0550
KALZ01	Kalamazoo River	coleoptera emerging insect	coleoptera emerging insect	NR	TotalPCB	0.1006	0.0419
KALZ01	Kalamazoo River	coleoptera emerging insect	coleoptera emerging insect	NR	TotalPCB	0.1052	0.1050
KALZ01	Kalamazoo River	crayfish	crayfish	NR	TotalPCB	5.1667	0.0065
KALZ01	Kalamazoo River	crayfish	crayfish	NR	TotalPCB	0.6348	0.1898
KALZ01	Kalamazoo River	crayfish	crayfish	NR	TotalPCB	0.5532	0.0330
KALZ01	Kalamazoo River	crayfish	crayfish	NR	TotalPCB	1.6085	0.0118
KALZ01	Kalamazoo River	diptera benthic invertebrate	diptera benthic invertebrate	NR	TotalPCB	1.1199	0.0275
KALZ01	Kalamazoo River	diptera emerging insect	diptera emerging insect	NR	TotalPCB	0.2199	0.0849
KALZ01	Kalamazoo River	diptera emerging insect	diptera emerging insect	NR	TotalPCB	0.1547	0.0764
KALZ01	Kalamazoo River	ephemeroptera benthic invertebrate	ephemeroptera benthic invertebrate	NR	TotalPCB	1.6143	0.0489
KALZ01	Kalamazoo River	ephemeroptera benthic invertebrate	ephemeroptera benthic invertebrate	NR	TotalPCB	1.0226	0.0705
KALZ01	Kalamazoo River	hemiptera emerging insect	hemiptera emerging insect	NR	TotalPCB	0.0530	0.0590
KALZ01	Kalamazoo River	hymenoptera emerging insect	hymenoptera emerging insect	NR	TotalPCB	1.7020	0.0282
KALZ01	Kalamazoo River	hymenoptera emerging insect	hymenoptera emerging insect	NR	TotalPCB	1.2682	0.0465
KALZ01	Kalamazoo River	isopoda	isopoda	NR	TotalPCB	0.9242	0.0710
KALZ01	Kalamazoo River	isopoda	isopoda	NR	TotalPCB	0.7180	0.0425
KALZ01	Kalamazoo River	leech	leech	NR	TotalPCB	0.8873	0.0236
KALZ01	Kalamazoo River	megaloptera benthic invertebrate	megaloptera benthic invertebrate	NR	TotalPCB	1.5849	0.0465
KALZ01	Kalamazoo River	megaloptera benthic invertebrate	megaloptera benthic invertebrate	NR	TotalPCB	2.1846	0.0473
KALZ01	Kalamazoo River	megaloptera benthic invertebrate	megaloptera benthic invertebrate	NR	TotalPCB	0.5720	0.0273
KALZ01	Kalamazoo River	megaloptera benthic invertebrate	megaloptera benthic invertebrate	NR	TotalPCB	0.8519	0.0226
KALZ01	Kalamazoo River	megaloptera benthic invertebrate	megaloptera benthic invertebrate	NR	TotalPCB	0.2562	0.0434
KALZ01	Kalamazoo River	megaloptera emerging insect	megaloptera emerging insect	NR	TotalPCB	0.6601	0.0616
KALZ01	Kalamazoo River	mixed benthic invertebrates	mixed benthic invertebrates	NR	TotalPCB	3.1518	0.0213
KALZ01	Kalamazoo River	mixed benthic invertebrates	mixed benthic invertebrates	NR	TotalPCB	2.6583	0.0883
KALZ01	Kalamazoo River	mixed benthic invertebrates	mixed benthic invertebrates	NR	TotalPCB	0.7967	0.0140
KALZ01	Kalamazoo River	mixed benthic invertebrates	mixed benthic invertebrates	NR	TotalPCB	0.0317	0.5302
KALZ01	Kalamazoo River	mixed emerging insects	mixed emerging insects	NR	TotalPCB	0.7614	0.0667
KALZ01	Kalamazoo River	molluska	molluska	NR	TotalPCB	4.7473	0.0275
KALZ01	Kalamazoo River	neuroptera benthic invertebrate	neuroptera benthic invertebrate	NR	TotalPCB	1.8437	0.0336
KALZ01	Kalamazoo River	odonata benthic invertebrate	odonata benthic invertebrate	NR	TotalPCB	0.2502	0.0493
KALZ01	Kalamazoo River	odonata benthic invertebrate	odonata benthic invertebrate	NR	TotalPCB	0.2015	0.0229
KALZ01	Kalamazoo River	odonata benthic invertebrate	odonata benthic invertebrate	NR	TotalPCB	0.2755	0.0157
KALZ01	Kalamazoo River	orthoptera emerging insect	orthoptera emerging insect	NR	TotalPCB	0.0143	0.0422
KALZ01	Kalamazoo River	orthoptera emerging insect	orthoptera emerging insect	NR	TotalPCB	0.0072	0.0294
KALZ01	Kalamazoo River	plecoptera benthic invertebrate	plecoptera benthic invertebrate	NR	TotalPCB	2.8936	0.0423
KALZ01	Kalamazoo River	plecoptera benthic invertebrate	plecoptera benthic invertebrate	NR	TotalPCB	1.9590	0.0244
KALZ01	Kalamazoo River	plecoptera benthic invertebrate	plecoptera benthic invertebrate	NR	TotalPCB	1.0579	0.0352
KALZ01	Kalamazoo River	plecoptera benthic invertebrate	plecoptera benthic invertebrate	NR	TotalPCB	1.1502	0.0254
KALZ01	Kalamazoo River	scuds	scuds	NR	TotalPCB	1.0822	0.0602
KALZ01	Kalamazoo River	scuds	scuds	NR	TotalPCB	0.2718	0.0969
KALZ01	Kalamazoo River	trichoptera benthic invertebrate	trichoptera benthic invertebrate	NR	TotalPCB	2.4026	0.0421

ATTACHMENT F TABLE 3
BSAFs FOR ORGANIC COMPOUNDS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Site ID	Superfund Site	Organism Common Name	Organism Latin Name	Biota Tissue Supplemental	Chemical	BSAF	Lipid content (fraction)
KALZ01	Kalamazoo River	trichoptera benthic invertebrate	trichoptera benthic invertebrate	NR	TotalPCB	2.0432	0.0447
KALZ01	Kalamazoo River	trichoptera benthic invertebrate	trichoptera benthic invertebrate	NR	TotalPCB	0.3942	0.1091
KALZ01	Kalamazoo River	trichoptera emerging insect	trichoptera emerging insect	NR	TotalPCB	1.4508	0.0789
KALZ01	Kalamazoo River	trichoptera emerging insect	trichoptera emerging insect	NR	TotalPCB	1.5418	0.0530
KALZ01	Kalamazoo River	trichoptera emerging insect	trichoptera emerging insect	NR	TotalPCB	0.4184	0.0933
KALZ01	Kalamazoo River	trichoptera emerging insect	trichoptera emerging insect	NR	TotalPCB	0.4642	0.0743
KALZ01	Kalamazoo River	trichoptera emerging insect	trichoptera emerging insect	NR	TotalPCB	0.0651	0.1070
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	0.5755	0.0045
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	0.0656	0.0090
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	2.3919	0.0034
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	0.1466	0.0063
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	0.3795	0.0100
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	0.6509	0.0094
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	9.8160	0.0081
PORT01	Portland Harbor	unidentified crayfish	unidentified crayfish	composite	TotalPCB	0.2129	0.0070
					MEDIAN FOR TOTAL PCBs	**0.72**	**0.042**

Notes:
Source of information is the BSAF Data Set available at http://www.epa.gov/med/Prods_Pubs/bsaf.htm.
Information presented for whole body freshwater invertebrates.

HMW - High Molecular Weight.
LMW - Low Molecular Weight.
NR - Not Reported.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.

ATTACHMENT F TABLE 4
TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	TRV ($mg/kg_{bw}/day$)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Inorganics							
ARSENIC	2.24	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005a	
ARSENIC	*4.51*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005a*	
ARSENIC	1.04	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005a	
ARSENIC	*4.55*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005a*	
CADMIUM	1.47	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005b	
CADMIUM	*6.35*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005b*	
CADMIUM	0.77	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005b	
CADMIUM	*6.9*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005b*	
CHROMIUM, TOTAL	2.66	NOAEL	reproduction & growth	chronic	birds	USEPA, 2008	
CHROMIUM, TOTAL	*15.63*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2008*	
CHROMIUM, TOTAL	2.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2008	
CHROMIUM, TOTAL	*58.17*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2008*	
COPPER	4.05	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007a	
COPPER	*34.87*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007a*	
COPPER	5.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007a	
COPPER	*82.7*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007a*	
LEAD	1.63	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005c	
LEAD	*44.6*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005c*	
LEAD	4.7	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005c	
LEAD	*186.4*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005c*	
MERCURY	0.0064	estimated NOAEL	reproductive	chronic	mallard duck	Heinz, 1979	Sample et al., 1996
MERCURY	*0.064*	*LOAEL*	*reproductive*	*chronic*	*mallard duck*	*Heinz, 1979*	*Sample et al., 1996*
MERCURY	0.032	NOAEL	reproductive	chronic	rat	Verschuuren et al., 1976	Sample et al., 1996
MERCURY	*0.16*	*LOAEL*	*reproductive*	*chronic*	*rat*	*Verschuuren et al., 1976*	*Sample et al., 1996*
NICKEL	6.71	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007b	
NICKEL	*18.57*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007b*	
NICKEL	1.7	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007b	
NICKEL	*14.77*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007b*	
SELENIUM	0.29	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007c	
SELENIUM	*0.819*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007c*	
SELENIUM	0.143	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007c	
SELENIUM	*0.661*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007c*	
SILVER	2.02	NOAEL	reproduction & growth	chronic	birds	USEPA, 2006	
SILVER	*60.47*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2006*	
SILVER	6.02	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2006	
SILVER	*118.62*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2006*	
ZINC	66.1	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007d	
ZINC	75.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007d	
ZINC	*297.58*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007d*	
ZINC	*171.44*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007d*	
Organics							
TOTAL HMW PAHs	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
TOTAL HMW PAHs	*38.4*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007e*	
TOTAL LMW PAHs	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
TOTAL LMW PAHs	*356*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007e*	
TOTAL LMW PAHs / HMW PAHs	2	NOAEL	systemic	chronic	nestling/starlings	Trust et al., 1994 [a]	
TOTAL LMW PAHs / HMW PAHs	*20*	*LOAEL*	*systemic*	*chronic*	*nestling/starlings*	*Trust et al., 1994 [a]*	

ATTACHMENT F TABLE 4
TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	TRV (mg/kg $_{bw}$/day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
4,4-DDD	0.147	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f [b]	
4,4-DDD	*5.56*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007f [b]*	
4,4-DDD	0.227	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007f [b]	
4,4-DDD	*2.7*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007f [b]*	
4,4-DDE	0.147	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f [b]	
4,4-DDE	*5.56*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007f [b]*	
4,4-DDE	0.227	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007f [b]	
4,4-DDE	*2.7*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007f [b]*	
4,4-DDT	0.147	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f [b]	
4,4-DDT	*5.56*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007f [b]*	
4,4-DDT	0.227	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007f [b]	
4,4-DDT	*2.7*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007f [b]*	
DIELDRIN	0.0709	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007g	
DIELDRIN	*0.87*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007g*	
DIELDRIN	0.0150	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007g	
DIELDRIN	*1.27*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007g*	
ENDOSULFAN I	0.15	NOAEL	reproduction	subchronic	rat	Dikshith et al., 1984 [c]	Sample et al., 1996
ENDOSULFAN I	10	NOAEL	reproduction	chronic	gray partridge	Abiola, 1992 [c]	Sample et al., 1996
ENDOSULFAN I	*1.5*	*estimated LOAEL*	*reproduction*	*subchronic*	*rat*	*Dikshith et al., 1984 [c]*	*Sample et al., 1996*
ENDOSULFAN I	*100*	*estimated LOAEL*	*reproduction*	*chronic*	*gray partridge*	*Abiola, 1992 [c]*	*Sample et al., 1996*
ENDOSULFAN II	0.15	NOAEL	reproduction	subchronic	rat	Dikshith et al., 1984 [c]	Sample et al., 1996
ENDOSULFAN II	10	NOAEL	reproduction	chronic	gray partridge	Abiola, 1992 [c]	Sample et al., 1996
ENDOSULFAN II	*1.5*	*estimated LOAEL*	*reproduction*	*subchronic*	*rat*	*Dikshith et al., 1984 [c]*	*Sample et al., 1996*
ENDOSULFAN II	*100*	*estimated LOAEL*	*reproduction*	*chronic*	*gray partridge*	*Abiola, 1992 [c]*	*Sample et al., 1996*
ENDOSULFAN SULFATE	0.15	NOAEL	reproduction	subchronic	rat	Dikshith et al., 1984 [c]	Sample et al., 1996
ENDOSULFAN SULFATE	10	NOAEL	reproduction	chronic	gray partridge	Abiola, 1992 [c]	Sample et al., 1996
ENDOSULFAN SULFATE	*1.5*	*estimated LOAEL*	*reproduction*	*subchronic*	*rat*	*Dikshith et al., 1984 [c]*	*Sample et al., 1996*
ENDOSULFAN SULFATE	*100*	*estimated LOAEL*	*reproduction*	*chronic*	*gray partridge*	*Abiola, 1992 [c]*	*Sample et al., 1996*
ENDRIN ALDEHYDE	0.092	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969 [d]	Sample et al., 1996
ENDRIN ALDEHYDE	0.01035	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982 [d]	Sample et al., 1996
ENDRIN ALDEHYDE	*0.92*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*Good and Ware, 1969 [d]*	*Sample et al., 1996*
ENDRIN ALDEHYDE	*0.1035*	*LOAEL*	*reproduction*	*chronic*	*screech owl*	*Fleming et al., 1982 [d]*	*Sample et al., 1996*
ENDRIN KETONE	0.0920	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969 [d]	Sample et al., 1996
ENDRIN KETONE	*0.92*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*Good and Ware, 1969 [d]*	*Sample et al., 1996*
ENDRIN KETONE	0.0104	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982 [d]	Sample et al., 1996
ENDRIN KETONE	*0.1035*	*LOAEL*	*reproduction*	*chronic*	*screech owl*	*Fleming et al., 1982 [d]*	*Sample et al., 1996*
TOTAL PCBs	0.18	estimated NOAEL	reproduction	chronic	mouse	McCoy et al., 1995 [e]	Sample et al., 1996
TOTAL PCBs	*0.68*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*McCoy et al., 1995 [e]*	*Sample et al., 1996*
TOTAL PCBs	0.18	estimated NOAEL	reproduction	chronic	pheasant	Dahlgren et al., 1972 [e]	Sample et al., 1996
TOTAL PCBs	*1.8*	*LOAEL*	*reproduction*	*chronic*	*pheasant*	*Dahlgren et al., 1972 [e]*	*Sample et al., 1996*

Notes:
NOAELs were estimated if a NOAEL was not identified in the literature. The LOAEL was divided by 10 to derive an estimated NOAEL.
LOAELs were estimated if a LOAEL was not identified in the literature. The NOAEL was multiplied by 10 to derive an estimated LOAEL.
LOAEL values from USEPA Eco-SSL documents were calculated as the geometric mean of growth and reproduction LOAEL values.
Additional LOAELs were identified in Sample et al (1996) and in other literature sources used to identify the NOAEL-based TRVs.

COPC - Chemical of Potential Concern.
HMW - High Molecular Weight.
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicological Reference Value

[a] 7,12-Dimethylbenz(a)anthracene used as a surrogate for PAHs.
[b] 4,4'-DDT used as a surrogate for 4,4'-DDD and 4,4'-DDE.
[c] Endolsulfan used as a surrogate for endosulfan I, endosulfan II, and endosulfan sulfate.
[d] Endrin used as a surrogate for endrin aldehyde and endrin ketone.
[e] Aroclor 1254 used as a surrogate for Total PCBs.

ATTACHMENT F TABLE 5
POTENTIAL RISKS TO THE MARSH WREN IN WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ASSUMPTIONS FOR THE MARSH WREN	
Average Body Weight (kg)	0.011
Exposure Duration	1
Area Use Factor	1
Sediment Consumption Rate (kg_{dw}/day)	0.000094
Water Consumption Rate (kg/day)	0.0028
Invertebrate Consumption Rate (kg_{dw}/day)	0.0029

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
MATC - Maximum Allowable Toxicant Concentration.
NA - Not Analyzed.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

SUPPORTING CALCULATIONS

FOOD WEB MODEL - MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{bw}/day)					
COPC	Sediment (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Benthic Invertebrate (mg/kg_{dw})	Sediment	Benthic Invertebrate	Surface Water	Total	MATC-based TRV (mg/kg_{bw}/day)	MATC-based HQ
Inorganics									
ARSENIC	1.9E+01	7.9E-03	2.7E+00	1.7E-01	7.3E-01	2.1E-03	9.0E-01	3.2E+00	2.8E-01
CADMIUM	6.7E-01	2.1E-03	4.0E-01	6.0E-03	1.1E-01	5.7E-04	1.2E-01	3.1E+00	3.8E-02
CHROMIUM, TOTAL	3.4E+01	ND	3.4E+00	3.0E-01	9.1E-01	NC	1.2E+00	6.4E+00	1.9E-01
COPPER	1.1E+02	9.4E-03	1.7E+02	9.6E-01	4.5E+01	2.5E-03	4.6E+01	1.2E+01	**3.9E+00**
LEAD	2.6E+01	2.1E-03	1.8E+00	2.3E-01	4.9E-01	5.6E-04	7.2E-01	8.5E+00	8.4E-02
MERCURY	3.2E-01	ND	3.6E-01	2.8E-03	9.8E-02	NC	1.0E-01	2.0E-02	**5.0E+00**
NICKEL	3.5E+01	8.1E-03	1.7E+01	3.1E-01	4.5E+00	2.1E-03	4.8E+00	1.1E+01	4.3E-01
SELENIUM	5.5E+00	8.2E-04	2.3E+01	4.9E-02	6.1E+00	2.2E-04	6.1E+00	4.9E-01	**1.3E+01**
SILVER	2.3E+00	1.1E-04	9.6E+00	2.1E-02	2.6E+00	2.9E-05	2.6E+00	1.1E+01	2.3E-01
ZINC	2.0E+02	2.3E-02	3.8E+02	1.8E+00	1.0E+02	6.1E-03	1.0E+02	1.1E+02	9.8E-01
Organics									
TOTAL LMW PAHs	1.2E+01	2.0E-04	7.6E-02	1.1E-01	2.1E-02	5.3E-05	1.3E-01	6.3E+00	2.0E-02
TOTAL HMW PAHs	3.0E+01	2.6E-04	4.7E-02	2.7E-01	1.3E-02	6.9E-05	2.8E-01	6.3E+00	4.4E-02
TOTAL PCBs	2.1E+00	3.8E-04	1.8E+00	1.9E-02	4.8E-01	1.0E-04	5.0E-01	5.7E-01	8.8E-01
4,4-DDD	4.3E-02	NA	2.4E-03	3.8E-04	6.5E-04	NC	1.0E-03	7.8E-01	1.3E-03
4,4-DDE	6.1E-03	NA	1.4E-03	5.4E-05	3.7E-04	NC	4.3E-04	7.8E-01	5.5E-04
4,4-DDT	4.3E-02	NA	3.2E-03	3.8E-04	8.6E-04	NC	1.2E-03	7.8E-01	1.6E-03
DIELDRIN	7.8E-03	NA	2.8E-04	6.9E-05	7.5E-05	NC	1.4E-04	2.5E-01	5.8E-04
ENDOSULFAN I	7.3E-04	NA	2.6E-05	6.5E-06	7.0E-06	NC	1.3E-05	3.2E+01	4.3E-07
ENDOSULFAN II	1.3E-02	NA	4.6E-04	1.2E-04	1.2E-04	NC	2.4E-04	3.2E+01	7.6E-06
ENDOSULFAN SULFATE	3.5E-02	NA	1.2E-03	3.1E-04	3.4E-04	NC	6.5E-04	3.2E+01	2.0E-05
ENDRIN ALDEHYDE	7.2E-03	NA	2.6E-04	6.4E-05	6.9E-05	NC	1.3E-04	3.3E-02	4.1E-03
ENDRIN KETONE	2.9E-01	NA	1.0E-02	2.6E-03	2.8E-03	NC	5.4E-03	3.3E-02	1.6E-01

ATTACHMENT F TABLE 6
POTENTIAL RISKS TO THE RACCOON IN WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ASSUMPTIONS FOR THE RACCOON	
Average Body Weight (kg)	5.636
Exposure Duration	1
Area Use Factor	1
Sediment Consumption Rate (kg_{dw}/day)	0.0173
Water Consumption Rate (kg/day)	0.4694
Invertebrate Consumption Rate (kg_{dw}/day)	0.184

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
MATC - Maximum Allowable Toxicant Concentration.
NA - Not Analyzed.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

SUPPORTING CALCULATIONS

FOOD WEB MODEL - MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{bw}/day)					
COPC	Sediment (mg/kg_{dw})	Recoverable Phase Surface (mg/L)	Benthic Invertebrate (mg/kg_{dw})	Sediment	Benthic Invertebrate	Surface Water	Total	MATC-based TRV (mg/kg_{bw}/day)	MATC-based HQ
Inorganics									
ARSENIC	1.9E+01	7.9E-03	2.7E+00	5.8E-02	8.9E-02	6.6E-04	1.5E-01	2.2E+00	6.8E-02
CADMIUM	6.7E-01	2.1E-03	4.0E-01	2.1E-03	1.3E-02	1.8E-04	1.5E-02	2.3E+00	6.7E-03
CHROMIUM, TOTAL	3.4E+01	ND	3.4E+00	1.0E-01	1.1E-01	NC	2.1E-01	1.2E+01	1.8E-02
COPPER	1.1E+02	9.4E-03	1.7E+02	3.3E-01	5.5E+00	7.8E-04	5.8E+00	2.2E+01	2.7E-01
LEAD	2.6E+01	2.1E-03	1.8E+00	7.9E-02	5.9E-02	1.7E-04	1.4E-01	3.0E+01	4.7E-03
MERCURY	3.2E-01	ND	3.6E-01	9.8E-04	1.2E-02	NC	1.3E-02	7.2E-02	1.8E-01
NICKEL	3.5E+01	8.1E-03	1.7E+01	1.1E-01	5.5E-01	6.7E-04	6.5E-01	5.0E+00	1.3E-01
SELENIUM	5.5E+00	8.2E-04	2.3E+01	1.7E-02	7.3E-01	6.8E-05	7.5E-01	3.1E-01	**2.4E+00**
SILVER	2.3E+00	1.1E-04	9.6E+00	7.2E-03	3.1E-01	9.2E-06	3.2E-01	2.7E+01	1.2E-02
ZINC	2.0E+02	2.3E-02	3.8E+02	6.1E-01	1.3E+01	1.9E-03	1.3E+01	1.5E+02	8.8E-02
Organics									
TOTAL LMW PAHs	1.2E+01	2.0E-04	7.6E-02	3.7E-02	2.5E-03	1.7E-05	3.9E-02	1.5E+02	2.6E-04
TOTAL HMW PAHs	3.0E+01	2.6E-04	4.7E-02	9.2E-02	1.5E-03	2.2E-05	9.4E-02	4.9E+00	1.9E-02
TOTAL PCBs	2.1E+00	3.8E-04	1.8E+00	6.4E-03	5.9E-02	3.2E-05	6.5E-02	3.5E-01	1.9E-01
4,4-DDD	4.3E-02	NA	2.4E-03	1.3E-04	7.9E-05	NC	2.1E-04	9.0E-01	2.3E-04
4,4-DDE	6.1E-03	NA	1.4E-03	1.9E-05	4.6E-05	NC	6.4E-05	9.0E-01	7.1E-05
4,4-DDT	4.3E-02	NA	3.2E-03	1.3E-04	1.0E-04	NC	2.4E-04	9.0E-01	2.6E-04
DIELDRIN	7.8E-03	NA	2.8E-04	2.4E-05	9.1E-06	NC	3.3E-05	1.4E-01	2.4E-04
ENDOSULFAN I	7.3E-04	NA	2.6E-05	2.2E-06	8.5E-07	NC	3.1E-06	4.7E-01	6.5E-06
ENDOSULFAN II	1.3E-02	NA	4.6E-04	4.0E-05	1.5E-05	NC	5.5E-05	4.7E-01	1.2E-04
ENDOSULFAN SULFATE	3.5E-02	NA	1.2E-03	1.1E-04	4.1E-05	NC	1.5E-04	4.7E-01	3.1E-04
ENDRIN ALDEHYDE	7.2E-03	NA	2.6E-04	2.2E-05	8.4E-06	NC	3.0E-05	2.9E-01	1.0E-04
ENDRIN KETONE	2.9E-01	NA	1.0E-02	8.9E-04	3.4E-04	NC	1.2E-03	2.9E-01	4.2E-03

ATTACHMENT F TABLE 7
SUMMARY OF POTENTIAL RISKS TO WILDLIFE IN WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	MATC-based HQs - Maximum Concentrations	
COPC	**Marsh Wren**	**Raccoon**
Inorganics		
ARSENIC	2.8E-01	6.8E-02
CADMIUM	3.8E-02	6.7E-03
CHROMIUM, TOTAL	1.9E-01	1.8E-02
COPPER	**3.9E+00**	2.7E-01
LEAD	8.4E-02	4.7E-03
MERCURY	**5.0E+00**	1.8E-01
NICKEL	4.3E-01	1.3E-01
SELENIUM	**1.3E+01**	**2.4E+00**
SILVER	2.3E-01	1.2E-02
ZINC	9.8E-01	8.8E-02
Organics		
TOTAL LMW PAHs	2.0E-02	2.6E-04
TOTAL HMW PAHs	4.4E-02	1.9E-02
TOTAL PCBs	8.8E-01	1.9E-01
4,4-DDD	1.3E-03	2.3E-04
4,4-DDE	5.5E-04	7.1E-05
4,4-DDT	1.6E-03	2.6E-04
DIELDRIN	5.8E-04	2.4E-04
ENDOSULFAN I	4.3E-07	6.5E-06
ENDOSULFAN II	7.6E-06	1.2E-04
ENDOSULFAN SULFATE	2.0E-05	3.1E-04
ENDRIN ALDEHYDE	4.1E-03	1.0E-04
ENDRIN KETONE	1.6E-01	4.2E-03

Notes:
Maximum EPCs for screening level evaluation represent maximum detected concentrations.
Potential risk is calculated using the maximum detected concentrations and MATC-based TRVs.
HQs above 1 are bolded and highlighted. COPCs with HQs above 1 in the screening level evaluation were retained for the COPC refinement stage.
MATC-based TRV represents the geometric mean of the NOAEL- and LOAEL-based TRVs.

COPC - Chemical of Potential Concern.
HMW - High Molecular Weight.
HQ - Hazard Quotient (Dose/TRV).
LMW - Low Molecular Weight.
LOAEL - Lowest Observed Adverse Effects Level.
MATC - Maximum Allowable Toxicant Concentration.
NOAEL - No Observed Adverse Effect Level.
PAHs - Polycyclic Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicity Reference Value.

ATTACHMENT F TABLE 8
REFERENCES CITED FOR WETLAND EXPOSURE AREA FOOD WEB MODEL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT F TABLE 8
REFERENCES CITED FOR WETLAND EXPOSURE AREA FOOD WEB MODEL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT G

TIER 2, STEP 3A EXPOSURE POINT CONCENTRATIONS AND SUPPORTING DOCUMENTATION

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ATTACHMENT G TABLE 1
SELECTION OF EXPOSURE POINT CONCENTRATIONS
SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD (a)	Detected Concentrations Minimum (b, e)		Mean (c, e)	Maximum (d, e)		Location of Maximum Detect	Kaplan-Meier Method Mean (f)	UCL Selected (e, g)	UCL (e, g)	Average EPC (h)	Refined Maximum EPC (i)
Inorganics												
ARSENIC	37 : 37	3.60E+00	J	7.60E+00	1.20E+01	J	FTA-SB-205 (0 - 2 ft)	NC	95% Student's-t UCL	8.15E+00	7.60E+00	8.15E+00
CADMIUM	37 : 37	4.00E-02	J	1.48E-01	1.30E+00	J	FTA-SB-201 (0 - 2 ft)	1.48E-01	95% Chebyshev (Mean, Sd) UCL	3.10E-01	1.48E-01	3.10E-01
CHROMIUM, TOTAL	47 : 48	1.39E+01	J	2.72E+01	4.23E+01	J	FTA-AREAA-02 (0 - 2 ft)	2.68E+01	95% KM (t) UCL	2.84E+01	2.68E+01	2.84E+01
COBALT	37 : 37	6.80E+00		1.12E+01	2.42E+01	J	FTA-SB-201 (0 - 2 ft)	NC	95% Adjusted Gamma UCL	1.32E+01	1.12E+01	1.32E+01
COPPER	37 : 37	6.30E+00		2.12E+01	3.21E+01		FTA-SB-216 (0 - 2 ft)	NC	95% Student's-t UCL	2.41E+01	2.12E+01	2.41E+01
LEAD	37 : 37	5.20E+00	J	1.26E+01	4.75E+01	J	FTA-AREAA-02 (0 - 2 ft)	NC	95% Modified-t UCL	1.45E+01	1.26E+01	1.45E+01
MANGANESE	37 : 37	3.15E+02		8.24E+02	8.60E+03	J	FTA-SB-201 (0 - 2 ft)	NC	95% Chebyshev (Mean, Sd) UCL	1.82E+03	8.24E+02	1.82E+03
MERCURY	29 : 37	4.30E-03	J	2.70E-02	2.10E-01	J	FTA-SB-200 (0 - 2 ft)	2.29E-02	95% KM (Chebyshev) UCL	5.09E-02	2.29E-02	5.09E-02
NICKEL	36 : 37	7.10E+00		2.35E+01	3.22E+01	J	FTA-AREAI-01 (0 - 2 ft)	2.31E+01	95% KM (t) UCL	2.48E+01	2.31E+01	2.48E+01
SELENIUM	25 : 37	5.60E-02	J	5.87E-01	6.40E+00	J	FTA-SB-201 (0 - 2 ft)	4.59E-01	95% KM (Chebyshev) UCL	1.24E+00	4.59E-01	1.24E+00
SILVER	37 : 37	2.00E-02	J	4.90E-02	2.20E-01		FTA-SB-216 (0 - 2 ft)	4.89E-02	95% Modified-t UCL	5.93E-02	4.89E-02	5.93E-02
VANADIUM	37 : 37	1.78E+01	J	3.35E+01	4.70E+01		FTA-SB-210 (0 - 2 ft)	NC	95% Student's-t UCL	3.53E+01	3.35E+01	3.53E+01
ZINC	37 : 37	3.45E+01		4.96E+01	7.20E+01		FTA-SB-210 (0 - 2 ft)	NC	95% Student's-t UCL	5.21E+01	4.96E+01	5.21E+01
Polychlorinated Biphenyls (PCBs)												
TOTAL PCB AROCLORS	103 : 107	1.50E-02		1.85E+01	6.10E+02		PCBAREA1-013 (1 - 1 ft)	1.78E+01	KM H-UCL	6.89E+01	1.78E+01	6.89E+01
PESTICIDES												
4,4-DDD	1 : 30	9.20E-03	J	9.20E-03	9.20E-03	J	FTA-AREAH-01 (0 - 2 ft)	NC	NC	NC	9.20E-03	9.20E-03
4,4-DDT	10 : 30	3.20E-03	J	1.50E-01	7.60E-01	J	FTA-AREAG-03 (0 - 2 ft)	5.18E-02	95% Adjusted Gamma KM-UCL	1.73E-01	5.18E-02	1.73E-01
ALDRIN	1 : 30	1.60E-04	J	1.60E-04	1.60E-04	J	FTA-AREAF-01 (0 - 2 ft)	NC	NC	NC	1.60E-04	1.60E-04
DIELDRIN	11 : 30	1.80E-03	J	6.80E-02	4.80E-01	J	FTA-AREAG-03 (0 - 2 ft)	2.59E-02	95% Adjusted Gamma KM-UCL	1.05E-01	2.59E-02	1.05E-01
ENDOSULFAN I	2 : 30	2.60E-04	J	3.50E-04	4.40E-04	J	FTA-AREAG-02 (0 - 2 ft)	NC	NC	NC	3.50E-04	4.40E-04
ENDOSULFAN II	2 : 30	5.80E-03		1.30E-02	2.00E-02	J	FTA-AREAA-02 (0 - 2 ft)	NC	NC	NC	1.30E-02	2.00E-02
ENDOSULFAN SULFATE	7 : 30	2.50E-03	J	5.90E-02	2.20E-01	J	FTA-AREAB-02 (0 - 2 ft)	1.45E-02	95% Gamma Adjusted KM-UCL	5.44E-02	1.45E-02	5.44E-02
ENDRIN	5 : 30	5.00E-04	J	3.40E-02	1.30E-01	J	FTA-AREAG-03 (0 - 2 ft)	NC	NC	NC	3.40E-02	1.30E-01
ENDRIN ALDEHYDE	1 : 30	1.70E-02	J	1.70E-02	1.70E-02	J	FTA-AREAF-01 (0 - 2 ft)	NC	NC	NC	1.70E-02	1.70E-02
ENDRIN KETONE	25 : 30	1.10E-03	J	3.30E-01	3.00E+00	J	FTA-SB-211 (0 - 2 ft)	2.78E-01	97.5% KM (Chebyshev) UCL	1.03E+00	2.78E-01	1.03E+00
HEPTACHLOR EPOXIDE	3 : 30	3.10E-03	J	3.20E-02	8.70E-02	J	FTA-AREAG-03 (0 - 2 ft)	NC	NC	NC	3.20E-02	8.70E-02
METHOXYCHLOR	6 : 30	1.20E-02	J	4.20E-01	1.60E+00	J	FTA-AREAB-02 (0 - 2 ft)	8.82E-02	95% KM (t) UCL	1.95E-01	8.82E-02	1.95E-01
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)												
1,1-BIPHENYL	9 : 41	1.40E-03	J	8.80E-02	6.40E-01		FTA-SB-203 (0 - 2 ft)	2.16E-02	95% Gamma Adjusted KM-UCL	9.98E-02	2.16E-02	9.98E-02
BIS(2-ETHYLHEXYL)PHTHALATE	3 : 41	1.50E-01	J	3.30E-01	6.10E-01		FTA-SB-220 (0 - 2 ft)	NC	NC	NC	3.30E-01	6.10E-01
CARBAZOLE	1 : 41	7.60E-01		7.60E-01	7.60E-01		FTA-SB-216 (0 - 2 ft)	NC	NC	NC	7.60E-01	7.60E-01
DIBENZOFURAN	1 : 41	6.20E-01		6.20E-01	6.20E-01		FTA-SB-216 (0 - 2 ft)	NC	NC	NC	6.20E-01	6.20E-01
HPAH, TOTAL	26 : 37	2.00E-03		2.40E+00	5.70E+01		FTA-SB-216 (0 - 2 ft)	1.70E+00	97.5% KM (Chebyshev) UCL	1.14E+01	1.70E+00	1.14E+01
LPAH, TOTAL	9 : 37	2.70E-03		2.30E+00	1.50E+01		FTA-SB-216 (0 - 2 ft)	6.18E-01	95% Gamma Adjusted KM-UCL	2.67E+00	6.18E-01	2.67E+00

ATTACHMENT G TABLE 1
SELECTION OF EXPOSURE POINT CONCENTRATIONS
SURFACE SOIL (0 - 2 ft)
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD (a)	Detected Concentrations					Location of Maximum Detect	Kaplan-Meier Method Mean (f)	UCL Selected (e, g)	UCL (e, g)	Average EPC (h)	Refined Maximum EPC (i)
		Minimum (b, e)		Mean (c, e)	Maximum (d, e)							
VOLATILE ORGANIC COMPOUNDS (VOCs)												
ACETONE	25 : 41	3.70E-02	J	2.60E-01	2.00E+00	J	FTA-SB-201 (0 - 2 ft)	1.72E-01	95% KM (Chebyshev) UCL	4.31E-01	1.72E-01	4.31E-01
CARBON DISULFIDE	2 : 4	8.00E-03		2.30E-02	3.80E-02		A31-SB01 (0 - 2 ft)	NC	NC	NC	2.30E-02	3.80E-02
DICHLORODIFLUOROMETHANE	1 : 5	1.00E-03	J	1.00E-03	1.00E-03	J	A31-SB03 (0 - 2 ft)	NC	NC	NC	1.00E-03	1.00E-03
METHYL ACETATE	1 : 4	3.70E-02	J	3.70E-02	3.70E-02	J	A31-SB03 (0 - 2 ft)	NC	NC	NC	3.70E-02	3.70E-02

Notes:
All concentrations are reported in milligrams per kilogram (mg/kg).
COPC - Chemical of Potential Concern.
EPC - Exposure Point Concentration.
FOD - Frequency of Detection.
J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.
NC - Not calculated due to low FOD. At least 10 samples and 6 detects were required to run a UCL. Maximum detected concentration was used as the refined maximum EPC when UCL could not be calculated.
PCBs - Polychlorinated Biphenyls.
SVOCs - Semi-volatile Organic Compounds.
UCL - Upper Confidence Level.
VOCs - Volatile Organic Compounds.

(a) Number of samples detected: Total number of samples.
(b) Minimum detected concentration for each constituent.
(c) Mean of detected concentrations for each constituent.
(d) Maximum detected concentration for each constituent.
(e) Calculated after results for duplicate samples have been resolved as follows: 1) where both the sample and the duplicate are not detected, the resulting value is the average of the limits of detection (LOD); 2) where both the sample and the duplicate are detected, the resulting value is the average of the detected results; and 3) where one of the pair is reported as not detected and the other is detected, the detected concentration will be used.
(f) Kaplan-Meier method mean only calculated for datasets containing non-detects.
(g) Recommended UCL on the arithmetic mean for each constituent, after duplicates have been treated, calculated using ProUCL Version 5.1 with recommended detection limit substitution method for datasets with nondetects (USEPA, 2013). If more than one UCL was recommended, the higher UCL was used.
(h) Arithmetic mean of detects (after duplicates have been averaged) or Kaplan-Meier mean if calculated (datasets containing non-detects).
(i) Lowest of the recommended UCL and the maximum detected concentration.
(j) ProUCL computes and outputs the H-statistic based UCLs for historic reasons only as it often results in unstable (both low and high) values (USEPA, 2010). As such, the 95% Chebyshev UCL was used to estimate the 95% UCL for this data set.

ATTACHMENT G TABLE 2
SELECTION OF EXPOSURE POINT CONCENTRATIONS
FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD (a)	Detected Concentrations			Location of Maximum Detect	Kaplan-Meier Method Mean (f)	UCL Selected (e, g)	UCL (e, g)	Average EPC (h)	Refined Maximum EPC (i)
		Minimum (b, e)	Mean (c, e)	Maximum (d, e)						
INORGANICS										
ARSENIC	16 : 16	1.60E+00 J	6.64E+00	1.90E+01	FTA-SED-04 (0 - 0.5 ft)	NC	95% Student's-t UCL	8.34E+00	6.64E+00	8.34E+00
BARIUM	16 : 16	1.52E+01 J	4.34E+01	8.91E+01 J	FTA-SED-06 (0 - 0.5 ft)	NC	95% Student's-t UCL	5.38E+01	4.34E+01	5.38E+01
BERYLLIUM	16 : 16	2.40E-01	4.31E-01	8.40E-01 J	FTA-SED-07 (0 - 0.5 ft)	NC	95% Adjusted Gamma UCL	5.38E-01	4.31E-01	5.38E-01
COPPER	16 : 16	5.59E+00	4.31E+01	1.08E+02 J	FTA-SED-06 (0 - 0.5 ft)	NC	95% Student's-t UCL	5.71E+01	4.31E+01	5.71E+01
IRON	16 : 16	8.10E+03 J	1.53E+04	2.56E+04	FTA-SED-04 (0 - 0.5 ft)	NC	95% Student's-t UCL	1.74E+04	1.53E+04	1.74E+04
MANGANESE	16 : 16	1.16E+02 J	3.93E+02	7.14E+02	FTA-SED-04 (0 - 0.5 ft)	NC	95% Student's-t UCL	4.59E+02	3.93E+02	4.59E+02
MERCURY	16 : 16	1.00E-02 J	8.80E-02	3.20E-01 J	FTA-SED-06 (0 - 0.5 ft)	NC	95% Adjusted Gamma UCL	1.39E-01	8.80E-02	1.39E-01
NICKEL	16 : 16	7.55E+00 J	1.74E+01	3.45E+01	FTA-SED-04 (0 - 0.5 ft)	NC	95% Student's-t UCL	2.07E+01	1.74E+01	2.07E+01
SELENIUM	8 : 16	3.30E-01	1.60E+00	5.50E+00 J	FTA-SED-07 (0 - 0.5 ft)	9.47E-01	95% Gamma Adjusted KM-UCL	2.23E+00	9.47E-01	2.23E+00
SILVER	14 : 16	6.00E-02 J	5.75E-01	2.34E+00 J	FTA-SED-05 (0 - 0.5 ft)	5.08E-01	95% KM (Chebyshev) UCL	1.24E+00	5.08E-01	1.24E+00
THALLIUM	15 : 16	6.00E-02 J	1.04E-01	3.00E-01	FTA-SED-03 (0 - 0.5 ft)	1.02E-01	95% KM (Chebyshev) UCL	1.75E-01	1.02E-01	1.75E-01
ZINC	16 : 16	2.57E+01	8.00E+01	1.98E+02 J	FTA-SED-06 (0 - 0.5 ft)	NC	95% Adjusted Gamma UCL	1.11E+02	8.00E+01	1.11E+02
POLYCHLORINATED BIPHENYLS (PCBs)										
TOTAL AROCLORS	15 : 16	2.80E-02	6.50E-01	2.10E+00	FTA-SED-04 (0 - 0.5 ft)	6.11E-01	95% KM (t) UCL	8.80E-01	6.11E-01	8.80E-01
PESTICIDES										
4,4-DDD	6 : 16	1.60E-03 J	1.60E-02	4.30E-02 J	FTA-SED-04 (0 - 0.5 ft)	6.49E-03	95% KM (t) UCL	1.21E-02	6.49E-03	1.21E-02
4,4-DDE	7 : 16	8.60E-04 J	2.40E-03	6.10E-03 J	FTA-SED-08 (0 - 0.5 ft)	1.54E-03	95% KM (t) UCL	2.26E-03	1.54E-03	2.26E-03
4,4-DDT	7 : 16	3.10E-03 J	1.50E-02	4.30E-02 J	FTA-SED-04 (0 - 0.5 ft)	7.09E-03	95% Gamma Adjusted KM-UCL	1.94E-02	7.09E-03	1.94E-02
DIELDRIN	2 : 16	7.10E-03 J	7.50E-03	7.80E-03 J	FTA-SED-06 (0 - 0.5 ft)	NC	NC	NC	7.50E-03	7.80E-03
ENDOSULFAN SULFATE	2 : 16	7.00E-03 J	2.10E-02	3.50E-02 J	FTA-SED-06 (0 - 0.5 ft)	NC	NC	NC	2.10E-02	3.50E-02
ENDRIN ALDEHYDE	1 : 16	7.20E-03 J	7.20E-03	7.20E-03 J	FTA-SED-03 (0 - 0.5 ft)	NC	NC	NC	7.20E-03	7.20E-03
ENDRIN KETONE	10 : 16	1.40E-02 J	1.10E-01	2.90E-01 J	FTA-SED-04 (0 - 0.5 ft)	6.81E-02	95% KM (t) UCL	1.08E-01	6.81E-02	1.08E-01
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)										
1,4-DIOXANE	1 : 16	1.30E-02 J	1.30E-02	1.30E-02 J	FTA-SED-06 (0 - 0.5 ft)	NC	NC	NC	1.30E-02	1.30E-02
2,4-DINITROTOLUENE	3 : 16	1.80E-02 J	6.50E-02	1.50E-01	FTA-SED-04 (0 - 0.5 ft)	NC	NC	NC	6.50E-02	1.50E-01
BIS(2-ETHYLHEXYL)PHTHALATE	5 : 16	4.80E-01 J	1.30E+00	2.90E+00 J	FTA-SED-05 (0 - 0.5 ft)	NC	NC	NC	1.30E+00	2.90E+00
CARBAZOLE	1 : 16	1.20E+00	1.20E+00	1.20E+00	FTA-SED-01 (0 - 0.5 ft)	NC	NC	NC	1.20E+00	1.20E+00
DIBENZOFURAN	1 : 16	7.90E-01	7.90E-01	7.90E-01	FTA-SED-01 (0 - 0.5 ft)	NC	NC	NC	7.90E-01	7.90E-01
PAH, TOTAL	16 : 16	4.00E-02	3.80E+00	4.30E+01	FTA-SED-01 (0 - 0.5 ft)	NC	95% Adjusted Gamma UCL	1.02E+01	3.80E+00	1.02E+01

ATTACHMENT G TABLE 2
SELECTION OF EXPOSURE POINT CONCENTRATIONS
FRESHWATER SEDIMENT
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD (a)	Detected Concentrations			Location of Maximum Detect	Kaplan-Meier Method Mean (f)	UCL Selected (e, g)	UCL (e, g)	Average EPC (h)	Refined Maximum EPC (i)
		Minimum (b, e)	Mean (c, e)	Maximum (d, e)						
VOLATILE ORGANIC COMPOUNDS (VOCs)										
ACETONE	14 : 16	2.60E-02 J	9.10E-01	3.00E+00 J	FTA-SED-05 (0 - 0.5 ft)	8.01E-01	Gamma Adjusted KM-UCL	1.61E+00	8.01E-01	1.61E+00
CIS-1,2-DICHLOROETHENE	1 : 16	6.00E-03 J	6.00E-03	6.00E-03 J	FTA-SED-07 (0 - 0.5 ft)	NC	NC	NC	6.00E-03	6.00E-03
METHYL CYCLOHEXANE	1 : 16	2.80E-03 J	2.80E-03	2.80E-03 J	FTA-SED-04 (0 - 0.5 ft)	NC	NC	NC	2.80E-03	2.80E-03
TOLUENE	14 : 16	2.90E-03 J	5.30E-02	3.10E-01 J	FTA-SED-05 (0 - 0.5 ft)	4.64E-02	95% KM (Chebyshev) UCL	1.37E-01	4.64E-02	1.37E-01

Notes:
All concentrations are reported in milligrams per kilogram (mg/kg).
COPC - Chemical of Potential Concern.
EPC - Exposure Point Concentration.
FOD - Frequency of Detection.
J - The compound was positively identified; however, the associated numerical value is an estimated concentration only.
NC - Not calculated due to low FOD. At least 10 samples and 6 detects were required to run a UCL. Maximum detected concentration was used as the refined maximum EPC when UCL could not be calculated.
PCBs - Polychlorinated Biphenyls.
UCL - Upper Confidence Level.
VOCs - Volatile Organic Compounds.

(a) Number of samples detected: Total number of samples.
(b) Minimum detected concentration for each constituent.
(c) Mean of detected concentrations for each constituent.
(d) Maximum detected concentration for each constituent.
(e) Calculated after results for duplicate samples have been resolved as follows: 1) where both the sample and the duplicate are not detected, the resulting value is the average of the limits of detection (LOD); 2) where both the sample and the duplicate are detected, the resulting value is the average of the detected results; and 3) where one of the pair is reported as not detected and the other is detected, the detected concentration will be used.
(f) Kaplan-Meier method mean only calculated for datasets of sufficient sample size containing non-detects.
(g) Recommended UCL on the arithmetic mean for each constituent, after duplicates have been treated, calculated using ProUCL Version 5.0 with recommended detection limit substitution method for datasets with nondetects (USEPA, 2013). If more than one UCL was recommended, the higher UCL was used.
(h) Arithmetic mean of detects (after duplicates have been averaged) or Kaplan-Meier mean if calculated (datasets of sufficient size containing non-detects).
(i) Lowest of the recommended UCL and the maximum detected concentration.

ATTACHMENT G TABLE 3
SELECTION OF EXPOSURE POINT CONCENTRATIONS
SURFACE WATER
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD (a)	Detected Concentrations			Location of Maximum Detect	Kaplan-Meier Method Mean (f)	UCL Selected (c, g)	UCL (c, g)	Average EPC (h)	Refined Maximum EPC (i)
		Minimum Detect (b, c)	Mean (d, c)	Maximum Detect (e, c)						
INORGANICS - DISSOLVED										
ARSENIC	9:14	3.10E+00 J	4.30E+00	7.00E+00	FTA-SW-06	4.01E+00	KM Student's t	4.898	4.01E+00	4.90E+00
BARIUM	13:14	6.80E-01 J	4.14E+00	1.36E+01	FTA-SW-03	3.99E+00	95% KM Chebyshev UCL [j]	8.499	3.99E+00	8.50E+00
CADMIUM	1:14	4.00E-02 J	4.00E-02	4.00E-02 J	FTA-SW-02	NC	NC	NC	4.00E-02	4.00E-02
COPPER	11:14	9.80E-01 J	2.34E+00	6.60E+00	FTA-SW-02	2.12E+00	95% KM (t) UCL	2.87E+00	2.12E+00	2.87E+00
IRON	13:14	9.15E+01 J	7.18E+02	3.57E+03	FTA-SW-04	6.73E+02	95% KM Bootstrap t UCL	1.59E+03	6.73E+02	1.59E+03
LEAD	1:14	4.60E-01 J	4.60E-01	4.60E-01 J	FTA-SW-03	NC	NC	NC	4.60E-01	4.60E-01
MANGANESE	14:14	1.10E+01	3.63E+02	1.12E+03	FTA-SW-04	NC	95% Adjusted Gamma UCL	7.86E+02	3.63E+02	7.86E+02
NICKEL	12:14	9.20E-01 J	1.40E+00	2.15E+00 J	FTA-SW-06	1.35E+00	95% KM (t) UCL	1.55E+00	1.35E+00	1.55E+00
SELENIUM	7:14	2.30E-01 J	4.30E-01	6.70E-01 J	FTA-SW-01	4.29E-01	95% KM (t) UCL	5.49E-01	4.29E-01	5.49E-01
ZINC	7:14	1.90E+00 J	5.20E+00	1.04E+01 J	FTA-SW-03	4.77E+00	95% KM (t) UCL	6.361	4.77E+00	6.36E+00
INORGANICS - TOTAL RECOVERABLE										
ALUMINUM	11:14	4.42E+01 J	3.06E+02	1.59E+03	FTA-SW-02	2.55E+02	95% KM Bootstrap t UCL	1.01E+03	2.55E+02	1.01E+03
ARSENIC	9:14	3.30E+00 J	5.00E+00	7.90E+00	FTA-SW-06FTA-SW-07	4.40E+00	95% KM (t) UCL	5.196	4.40E+00	5.20E+00
BARIUM	14:14	9.90E-01 J	8.09E+00	2.06E+01	FTA-SW-04	NC	95% Adjusted Gamma UCL	13.82	8.09E+00	1.38E+01
CADMIUM	6:14	3.00E-02 J	4.37E-01	2.14E+00	FTA-SW-02	2.42E-01	99% KM (Chebyshev) UCL	1.80E+00	2.42E-01	1.80E+00
COPPER	12:14	1.30E+00 J	4.62E+00	9.42E+00	FTA-SW-02	4.20E+00	95% KM Adjusted Gamma UCL	6.55E+00	4.20E+00	6.55E+00
IRON	14:14	2.91E+02	1.75E+03	6.48E+03	FTA-SW-06	NC	95% Adjusted Gamma UCL	3.15E+03	1.75E+03	3.15E+03
LEAD	8:14	7.00E-02 J	1.07E+00	2.10E+00	FTA-SW-03	7.25E-01	95% KM (t) UCL	1.09E+00	7.25E-01	1.09E+00
MANGANESE	14:14	2.83E+01	4.07E+02	1.19E+03	FTA-SW-04	NC	95% Adjusted Gamma UCL	8.48E+02	4.07E+02	8.48E+02
NICKEL	12:14	9.30E-01 J	2.10E+00	8.09E+00	FTA-SW-02	1.95E+00	95% KM Chebyshev UCL [j]	4.08E+00	1.95E+00	4.08E+00
SELENIUM	5:14	3.50E-01 J	5.90E-01	8.20E-01 J	FTA-SW-01	NC	NC	NC	5.90E-01	8.20E-01
SILVER	3:14	7.00E-02 J	9.30E-02	1.10E-01 J	FTA-SW-04	NC	NC	NC	9.30E-02	1.10E-01
ZINC	9:14	2.20E+00 J	9.56E+00	2.30E+01	FTA-SW-04	7.95E+00	95% KM (t) UCL	11.09	7.95E+00	1.11E+01
POLYCHLORINATED BIPHENYLS (PCBS)										
TOTAL PCB AROCLORS	1:6	3.80E-01	3.80E-01	3.80E-01	FTA-SW-06	NC	NC	NC	3.80E-01	3.80E-01
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)										
BENZO[A]ANTHRACENE	1:14	6.50E-02 J	6.50E-02	6.50E-02 J	FTA-SW-06	NC	NC	NC	6.50E-02	6.50E-02
BENZO[A]PYRENE	1:14	7.60E-02 J	7.60E-02	7.60E-02 J	FTA-SW-06	NC	NC	NC	7.60E-02	7.60E-02
BENZO[K]FLUORANTHENE	1:14	5.20E-02 J	5.20E-02	5.20E-02 J	FTA-SW-06	NC	NC	NC	5.20E-02	5.20E-02
INDENO[1,2,3-CD]PYRENE	4:14	1.20E-01 J	1.40E-01	1.60E-01 J	FTA-SW-06	NC	NC	NC	1.40E-01	1.60E-01
PHENANTHRENE	1:14	9.50E-02 J	9.50E-02	9.50E-02 J	FTA-SW-06	NC	NC	NC	9.50E-02	9.50E-02
HPAH, TOTAL	4:14	1.40E-01	1.90E-01	2.60E-01	FTA-SW-06	NC	NC	NC	1.90E-01	2.60E-01
LPAH, TOTAL	1:14	2.00E-01	2.00E-01	2.00E-01	FTA-SW-06	NC	NC	NC	2.00E-01	2.00E-01

ATTACHMENT G TABLE 3
SELECTION OF EXPOSURE POINT CONCENTRATIONS
SURFACE WATER
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	FOD (a)	Detected Concentrations			Location of Maximum Detect	Kaplan-Meier Method Mean (f)	UCL Selected (c, g)	UCL (c, g)	Average EPC (h)	Refined Maximum EPC (i)
		Minimum Detect (b, c)	Mean (d, c)	Maximum Detect (e, c)						
VOLATILE ORGANIC COMPOUNDS (VOCs)										
TOLUENE	5:14	3.50E-01 J	1.70E+00	5.10E+00	FTA-SW-07	NC	NC	NC	1.70E+00	5.10E+00

Notes:
All concentrations are reported in micrograms per liter (ug/L).
COPC - Chemical of Potential Concern.
EPC - Exposure Point Concentration.
FOD - Frequency of Detection.
NC - Not calculated due to low FOD. At least 10 samples and 6 detects were required to run a UCL. Maximum detected concentration was used as the refined maximum EPC when UCL could not be calculated.
PCB - Polychlorinated Biphenyl.
SVOCs - Semi-volatile Organic Compound.
UCL - Upper Confidence Limit.
VOC - Volatile Organic Compound.

[a] Number of samples detected: Total number of samples.
[b] Minimum detected concentration for each constituent.
[c] Calculated after results for duplicate samples have been resolved as follows: 1) where both the sample and the duplicate are not detected, the resulting value is the higher of the limit of detection (LOD); 2) where both the sample and the duplicate are detected, the resulting value is the higher of the detected results; and 3) where one of the pair is reported as not detected and the other is detected, the detected concentration will be used.
[d] Mean of detected concentrations for each constituent.
[e] Maximum detected concentration for each constituent.
[f] Kaplan-Meier method mean only calculated for datasets of sufficient sample size containing non-detects.
[g] Recommended UCL on the arithmetic mean for each constituent, after duplicates have been treated, calculated using ProUCL Version 5.0 with recommended detection limit substitution method for datasets with nondetects (U.S.EPA, 2013). If more than one UCL was recommended, the higher UCL was used.
[h] Lowest of the recommended UCL and the maximum detected concentration.
[i] Arithmethic mean of detects (after duplicates have been averaged) or Kaplan-Meier mean if calculated (datasets of sufficient size containing non-detects).
[j] ProUCL computes and outputs the H-statistic based UCLs for historic reasons only as it often results in unstable (both low and high) values (USEPA, 2010).
As such, the 95% Chebyshev UCL was used to estimate the 95% UCL for this data set.

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/23/2016 12:10:42 PM
From File	ProUCL Inputs_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

FFTA_RA_SE_Metals|SELENIUM

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	8	Number of Non-Detects	8
Number of Distinct Detects	8	Number of Distinct Non-Detects	8
Minimum Detect	0.33	Minimum Non-Detect	0.21
Maximum Detect	5.5	Maximum Non-Detect	1.5
Variance Detects	3.395	Percent Non-Detects	50%
Mean Detects	1.554	SD Detects	1.843
Median Detects	0.695	CV Detects	1.186
Skewness Detects	1.837	Kurtosis Detects	2.706
Mean of Logged Detects	-0.0429	SD of Logged Detects	0.978

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.699	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.368	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.947	KM Standard Error of Mean	0.368
KM SD	1.368	95% KM (BCA) UCL	1.608
95% KM (t) UCL	1.592	95% KM (Percentile Bootstrap) UCL	1.594
95% KM (z) UCL	1.552	95% KM Bootstrap t UCL	3.486
90% KM Chebyshev UCL	2.05	95% KM Chebyshev UCL	2.55
97.5% KM Chebyshev UCL	3.243	99% KM Chebyshev UCL	4.605

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.79	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.733	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.299	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.301	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.173	k star (bias corrected MLE)	0.816
Theta hat (MLE)	1.325	Theta star (bias corrected MLE)	1.904
nu hat (MLE)	18.76	nu star (bias corrected)	13.06
Mean (detects)	1.554		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.782
Maximum	5.5	Median	0.17
SD	1.49	CV	1.906
k hat (MLE)	0.327	k star (bias corrected MLE)	0.308
Theta hat (MLE)	2.39	Theta star (bias corrected MLE)	2.543
nu hat (MLE)	10.47	nu star (bias corrected)	9.84
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (9.84, α)	3.842	Adjusted Chi Square Value (9.84, β)	3.426
95% Gamma Approximate UCL (use when n>=50)	2.002	95% Gamma Adjusted UCL (use when n<50)	2.246

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.947	SD (KM)	1.368
Variance (KM)	1.873	SE of Mean (KM)	0.368
k hat (KM)	0.479	k star (KM)	0.431
nu hat (KM)	15.33	nu star (KM)	13.79
theta hat (KM)	1.977	theta star (KM)	2.198
80% gamma percentile (KM)	1.54	90% gamma percentile (KM)	2.639
95% gamma percentile (KM)	3.835	99% gamma percentile (KM)	6.818

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (13.79, α)	6.426	Adjusted Chi Square Value (13.79, β)	5.862
95% Gamma Approximate KM-UCL (use when n>=50)	2.032	95% Gamma Adjusted KM-UCL (use when n<50)	2.228

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.251	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.89	Mean in Log Scale	-0.82
SD in Original Scale	1.435	SD in Log Scale	1.104
95% t UCL (assumes normality of ROS data)	1.519	95% Percentile Bootstrap UCL	1.513
95% BCA Bootstrap UCL	1.781	95% Bootstrap t UCL	3.82
95% H-UCL (Log ROS)	1.834		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.623	KM Geo Mean	0.537
KM SD (logged)	0.93	95% Critical H Value (KM-Log)	2.598
KM Standard Error of Mean (logged)	0.265	95% H-UCL (KM -Log)	1.542
KM SD (logged)	0.93	95% Critical H Value (KM-Log)	2.598
KM Standard Error of Mean (logged)	0.265		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.963	Mean in Log Scale	-0.629
SD in Original Scale	1.409	SD in Log Scale	1.037
95% t UCL (Assumes normality)	1.58	95% H-Stat UCL	1.91

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	2.228

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|SILVER

General Statistics

Total Number of Observations	16	Number of Distinct Observations	15
Number of Detects	14	Number of Non-Detects	2
Number of Distinct Detects	13	Number of Distinct Non-Detects	2
Minimum Detect	0.06	Minimum Non-Detect	0.033
Maximum Detect	2.34	Maximum Non-Detect	0.0608
Variance Detects	0.481	Percent Non-Detects	12.5%
Mean Detects	0.575	SD Detects	0.693
Median Detects	0.225	CV Detects	1.206
Skewness Detects	1.719	Kurtosis Detects	2.183
Mean of Logged Detects	-1.129	SD of Logged Detects	1.076

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.719	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.34	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.508	KM Standard Error of Mean	0.168
KM SD	0.649	95% KM (BCA) UCL	0.798
95% KM (t) UCL	0.803	95% KM (Percentile Bootstrap) UCL	0.809
95% KM (z) UCL	0.785	95% KM Bootstrap t UCL	1.112
90% KM Chebyshev UCL	1.013	95% KM Chebyshev UCL	1.242
97.5% KM Chebyshev UCL	1.56	99% KM Chebyshev UCL	2.184

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.975	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.76	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.256	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.235	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.004	k star (bias corrected MLE)	0.836
Theta hat (MLE)	0.573	Theta star (bias corrected MLE)	0.687
nu hat (MLE)	28.1	nu star (bias corrected)	23.41
Mean (detects)	0.575		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.504
Maximum	2.34	Median	0.2
SD	0.674	CV	1.336
k hat (MLE)	0.689	k star (bias corrected MLE)	0.602
Theta hat (MLE)	0.731	Theta star (bias corrected MLE)	0.838
nu hat (MLE)	22.06	nu star (bias corrected)	19.26
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (19.26, α)	10.31	Adjusted Chi Square Value (19.26, β)	9.567
95% Gamma Approximate UCL (use when n>=50)	0.942	95% Gamma Adjusted UCL (use when n<50)	1.015

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.508	SD (KM)	0.649
Variance (KM)	0.422	SE of Mean (KM)	0.168
k hat (KM)	0.611	k star (KM)	0.538
nu hat (KM)	19.56	nu star (KM)	17.23
theta hat (KM)	0.831	theta star (KM)	0.943
80% gamma percentile (KM)	0.836	90% gamma percentile (KM)	1.353
95% gamma percentile (KM)	1.9	99% gamma percentile (KM)	3.236

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (17.23, α)	8.834	Adjusted Chi Square Value (17.23, β)	8.157
95% Gamma Approximate KM-UCL (use when n>=50)	0.99	95% Gamma Adjusted KM-UCL (use when n<50)	1.072

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.92	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.196	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.507	Mean in Log Scale	-1.424
SD in Original Scale	0.672	SD in Log Scale	1.289
95% t UCL (assumes normality of ROS data)	0.801	95% Percentile Bootstrap UCL	0.795
95% BCA Bootstrap UCL	0.877	95% Bootstrap t UCL	1.031
95% H-UCL (Log ROS)	1.588		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.396	KM Geo Mean	0.248
KM SD (logged)	1.203	95% Critical H Value (KM-Log)	3.029
KM Standard Error of Mean (logged)	0.313	95% H-UCL (KM -Log)	1.307
KM SD (logged)	1.203	95% Critical H Value (KM-Log)	3.029
KM Standard Error of Mean (logged)	0.313		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.506	Mean in Log Scale	-1.463
SD in Original Scale	0.672	SD in Log Scale	1.359
95% t UCL (Assumes normality)	0.8	95% H-Stat UCL	1.853

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 1.242

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|THALLIUM

General Statistics

Total Number of Observations	16	Number of Distinct Observations	13
Number of Detects	15	Number of Non-Detects	1
Number of Distinct Detects	12	Number of Distinct Non-Detects	1
Minimum Detect	0.06	Minimum Non-Detect	0.074
Maximum Detect	0.3	Maximum Non-Detect	0.074
Variance Detects	0.00465	Percent Non-Detects	6.25%
Mean Detects	0.104	SD Detects	0.0682
Median Detects	0.075	CV Detects	0.654
Skewness Detects	2.036	Kurtosis Detects	4.143
Mean of Logged Detects	-2.401	SD of Logged Detects	0.505

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.697	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.334	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.22	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.102	KM Standard Error of Mean	0.0167
KM SD	0.0646	95% KM (BCA) UCL	0.132
95% KM (t) UCL	0.131	95% KM (Percentile Bootstrap) UCL	0.13
95% KM (z) UCL	0.129	95% KM Bootstrap t UCL	0.157
90% KM Chebyshev UCL	0.152	95% KM Chebyshev UCL	0.175
97.5% KM Chebyshev UCL	0.206	99% KM Chebyshev UCL	0.268

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.49	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.741	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.298	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.223	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.707	k star (bias corrected MLE)	3.01
Theta hat (MLE)	0.0281	Theta star (bias corrected MLE)	0.0347
nu hat (MLE)	111.2	nu star (bias corrected)	90.31
Mean (detects)	0.104		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0537	Mean	0.101
Maximum	0.3	Median	0.0725
SD	0.0671	CV	0.663
k hat (MLE)	3.66	k star (bias corrected MLE)	3.015
Theta hat (MLE)	0.0276	Theta star (bias corrected MLE)	0.0335
nu hat (MLE)	117.1	nu star (bias corrected)	96.49
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (96.49, α)	74.83	Adjusted Chi Square Value (96.49, β)	72.66
95% Gamma Approximate UCL (use when n>=50)	0.13	95% Gamma Adjusted UCL (use when n<50)	0.134

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.102	SD (KM)	0.0646
Variance (KM)	0.00417	SE of Mean (KM)	0.0167
k hat (KM)	2.483	k star (KM)	2.059
nu hat (KM)	79.46	nu star (KM)	65.9
theta hat (KM)	0.041	theta star (KM)	0.0494
80% gamma percentile (KM)	0.152	90% gamma percentile (KM)	0.197
95% gamma percentile (KM)	0.239	99% gamma percentile (KM)	0.333

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (65.90, α)	48.22	Adjusted Chi Square Value (65.90, β)	46.5
95% Gamma Approximate KM-UCL (use when n>=50)	0.139	95% Gamma Adjusted KM-UCL (use when n<50)	0.144

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.798	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.265	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.102	Mean in Log Scale	-2.424
SD in Original Scale	0.0667	SD in Log Scale	0.496
95% t UCL (assumes normality of ROS data)	0.131	95% Percentile Bootstrap UCL	0.131
95% BCA Bootstrap UCL	0.141	95% Bootstrap t UCL	0.156
95% H-UCL (Log ROS)	0.13		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.424	KM Geo Mean	0.0886
KM SD (logged)	0.481	95% Critical H Value (KM-Log)	2.031
KM Standard Error of Mean (logged)	0.125	95% H-UCL (KM -Log)	0.128
KM SD (logged)	0.481	95% Critical H Value (KM-Log)	2.031
KM Standard Error of Mean (logged)	0.125		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.1	Mean in Log Scale	-2.457
SD in Original Scale	0.068	SD in Log Scale	0.537
95% t UCL (Assumes normality)	0.13	95% H-Stat UCL	0.132

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 0.175

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_PestPCBs|TOTAL AROCLORS

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	15	Number of Non-Detects	1
Number of Distinct Detects	15	Number of Distinct Non-Detects	1
Minimum Detect	0.028	Minimum Non-Detect	0.026
Maximum Detect	2.1	Maximum Non-Detect	0.026
Variance Detects	0.377	Percent Non-Detects	6.25%
Mean Detects	0.65	SD Detects	0.614
Median Detects	0.44	CV Detects	0.946
Skewness Detects	1.059	Kurtosis Detects	0.499
Mean of Logged Detects	-1.007	SD of Logged Detects	1.269

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.88	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.188	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.611	KM Standard Error of Mean	0.154
KM SD	0.594	95% KM (BCA) UCL	0.884
95% KM (t) UCL	0.88	95% KM (Percentile Bootstrap) UCL	0.86
95% KM (z) UCL	0.863	95% KM Bootstrap t UCL	0.954
90% KM Chebyshev UCL	1.072	95% KM Chebyshev UCL	1.281
97.5% KM Chebyshev UCL	1.571	99% KM Chebyshev UCL	2.14

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.207	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.763	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.109	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.228	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.002	k star (bias corrected MLE)	0.846
Theta hat (MLE)	0.648	Theta star (bias corrected MLE)	0.768
nu hat (MLE)	30.07	nu star (bias corrected)	25.39
Mean (detects)	0.65		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.61
Maximum	2.1	Median	0.365
SD	0.615	CV	1.008
k hat (MLE)	0.805	k star (bias corrected MLE)	0.695
Theta hat (MLE)	0.758	Theta star (bias corrected MLE)	0.877
nu hat (MLE)	25.75	nu star (bias corrected)	22.25
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (22.25, α)	12.53	Adjusted Chi Square Value (22.25, β)	11.7
95% Gamma Approximate UCL (use when n>=50)	1.083	95% Gamma Adjusted UCL (use when n<50)	1.159

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.611	SD (KM)	0.594
Variance (KM)	0.353	SE of Mean (KM)	0.154
k hat (KM)	1.056	k star (KM)	0.9
nu hat (KM)	33.8	nu star (KM)	28.8
theta hat (KM)	0.578	theta star (KM)	0.678
80% gamma percentile (KM)	0.991	90% gamma percentile (KM)	1.443
95% gamma percentile (KM)	1.899	99% gamma percentile (KM)	2.966

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (28.80, α)	17.55	Adjusted Chi Square Value (28.80, β)	16.56
95% Gamma Approximate KM-UCL (use when n>=50)	1.002	95% Gamma Adjusted KM-UCL (use when n<50)	1.062

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.953	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.881	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.119	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.22	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.61	Mean in Log Scale	-1.2
SD in Original Scale	0.614	SD in Log Scale	1.447
95% t UCL (assumes normality of ROS data)	0.879	95% Percentile Bootstrap UCL	0.864
95% BCA Bootstrap UCL	0.897	95% Bootstrap t UCL	0.941
95% H-UCL (Log ROS)	3.115		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.172	KM Geo Mean	0.31
KM SD (logged)	1.348	95% Critical H Value (KM-Log)	3.276
KM Standard Error of Mean (logged)	0.349	95% H-UCL (KM -Log)	2.403
KM SD (logged)	1.348	95% Critical H Value (KM-Log)	3.276
KM Standard Error of Mean (logged)	0.349		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.61	Mean in Log Scale	-1.216
SD in Original Scale	0.614	SD in Log Scale	1.482
95% t UCL (Assumes normality)	0.879	95% H-Stat UCL	3.413

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.88

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_PestPCBs|4,4-DDD

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	6	Number of Non-Detects	10
Number of Distinct Detects	6	Number of Distinct Non-Detects	10
Minimum Detect	0.0016	Minimum Non-Detect	4.0000E-4
Maximum Detect	0.043	Maximum Non-Detect	0.0063
Variance Detects	2.5313E-4	Percent Non-Detects	62.5%
Mean Detects	0.0163	SD Detects	0.0159
Median Detects	0.0123	CV Detects	0.979
Skewness Detects	1.036	Kurtosis Detects	0.381
Mean of Logged Detects	-4.692	SD of Logged Detects	1.318

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.9	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.198	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00649	KM Standard Error of Mean	0.0032
KM SD	0.0117	95% KM (BCA) UCL	0.0119
95% KM (t) UCL	0.0121	95% KM (Percentile Bootstrap) UCL	0.0116
95% KM (z) UCL	0.0118	95% KM Bootstrap t UCL	0.0144
90% KM Chebyshev UCL	0.0161	95% KM Chebyshev UCL	0.0204
97.5% KM Chebyshev UCL	0.0265	99% KM Chebyshev UCL	0.0384

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.238	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.715	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.203	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.341	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.007	k star (bias corrected MLE)	0.615
Theta hat (MLE)	0.0161	Theta star (bias corrected MLE)	0.0264
nu hat (MLE)	12.08	nu star (bias corrected)	7.375
Mean (detects)	0.0163		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0016	Mean	0.0123
Maximum	0.043	Median	0.01
SD	0.0097	CV	0.786
k hat (MLE)	2.207	k star (bias corrected MLE)	1.835
Theta hat (MLE)	0.00559	Theta star (bias corrected MLE)	0.00673
nu hat (MLE)	70.64	nu star (bias corrected)	58.73
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (58.73, α)	42.11	Adjusted Chi Square Value (58.73, β)	40.51
95% Gamma Approximate UCL (use when n>=50)	0.0172	95% Gamma Adjusted UCL (use when n<50)	0.0179

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00649	SD (KM)	0.0117
Variance (KM)	1.3649E-4	SE of Mean (KM)	0.0032
k hat (KM)	0.308	k star (KM)	0.292
nu hat (KM)	9.862	nu star (KM)	9.346
theta hat (KM)	0.021	theta star (KM)	0.0222
80% gamma percentile (KM)	0.00988	90% gamma percentile (KM)	0.0192
95% gamma percentile (KM)	0.0299	99% gamma percentile (KM)	0.0579

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (9.35, α)	3.537	Adjusted Chi Square Value (9.35, β)	3.141
95% Gamma Approximate KM-UCL (use when n>=50)	0.0171	95% Gamma Adjusted KM-UCL (use when n<50)	0.0193

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.927	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.186	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00627	Mean in Log Scale	-6.902
SD in Original Scale	0.0122	SD in Log Scale	1.947
95% t UCL (assumes normality of ROS data)	0.0116	95% Percentile Bootstrap UCL	0.0113
95% BCA Bootstrap UCL	0.0132	95% Bootstrap t UCL	0.02
95% H-UCL (Log ROS)	0.0601		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.5	KM Geo Mean	0.0015
KM SD (logged)	1.641	95% Critical H Value (KM-Log)	3.799
KM Standard Error of Mean (logged)	0.475	95% H-UCL (KM -Log)	0.0289
KM SD (logged)	1.641	95% Critical H Value (KM-Log)	3.799
KM Standard Error of Mean (logged)	0.475		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00686	Mean in Log Scale	-6.133
SD in Original Scale	0.0119	SD in Log Scale	1.534
95% t UCL (Assumes normality)	0.0121	95% H-Stat UCL	0.0294

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.0121

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_PestPCBs|4,4-DDE

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	7	Number of Non-Detects	9
Number of Distinct Detects	7	Number of Distinct Non-Detects	9
Minimum Detect	8.6000E-4	Minimum Non-Detect	4.0000E-4
Maximum Detect	0.0061	Maximum Non-Detect	0.0046
Variance Detects	3.3046E-6	Percent Non-Detects	56.25%
Mean Detects	0.00243	SD Detects	0.00182
Median Detects	0.0018	CV Detects	0.748
Skewness Detects	1.644	Kurtosis Detects	2.86
Mean of Logged Detects	-6.229	SD of Logged Detects	0.685

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.243	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00154	KM Standard Error of Mean	4.1277E-4
KM SD	0.00144	95% KM (BCA) UCL	0.00221
95% KM (t) UCL	0.00226	95% KM (Percentile Bootstrap) UCL	0.00223
95% KM (z) UCL	0.00222	95% KM Bootstrap t UCL	0.00245
90% KM Chebyshev UCL	0.00278	95% KM Chebyshev UCL	0.00334
97.5% KM Chebyshev UCL	0.00412	99% KM Chebyshev UCL	0.00565

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.291	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.713	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.167	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.314	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.545	k star (bias corrected MLE)	1.55
Theta hat (MLE)	9.5470E-4	Theta star (bias corrected MLE)	0.00157
nu hat (MLE)	35.63	nu star (bias corrected)	21.7
Mean (detects)	0.00243		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	8.6000E-4	Mean	0.00669
Maximum	0.01	Median	0.01
SD	0.00405	CV	0.605
k hat (MLE)	1.771	k star (bias corrected MLE)	1.481
Theta hat (MLE)	0.00378	Theta star (bias corrected MLE)	0.00452
nu hat (MLE)	56.67	nu star (bias corrected)	47.38
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (47.38, α)	32.58	Adjusted Chi Square Value (47.38, β)	31.19
95% Gamma Approximate UCL (use when n>=50)	0.00973	95% Gamma Adjusted UCL (use when n<50)	0.0102

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00154	SD (KM)	0.00144
Variance (KM)	2.0800E-6	SE of Mean (KM)	4.1277E-4
k hat (KM)	1.14	k star (KM)	0.968
nu hat (KM)	36.49	nu star (KM)	30.98
theta hat (KM)	0.00135	theta star (KM)	0.00159
80% gamma percentile (KM)	0.00249	90% gamma percentile (KM)	0.00357
95% gamma percentile (KM)	0.00467	99% gamma percentile (KM)	0.00721

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (30.98, α)	19.27	Adjusted Chi Square Value (30.98, β)	18.22
95% Gamma Approximate KM-UCL (use when n>=50)	0.00248	95% Gamma Adjusted KM-UCL (use when n<50)	0.00262

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.956	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.142	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00149	Mean in Log Scale	-6.8
SD in Original Scale	0.00145	SD in Log Scale	0.724
95% t UCL (assumes normality of ROS data)	0.00212	95% Percentile Bootstrap UCL	0.00213
95% BCA Bootstrap UCL	0.00232	95% Bootstrap t UCL	0.00285
95% H-UCL (Log ROS)	0.00223		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.825	KM Geo Mean	0.00109
KM SD (logged)	0.819	95% Critical H Value (KM-Log)	2.438
KM Standard Error of Mean (logged)	0.263	95% H-UCL (KM -Log)	0.00254
KM SD (logged)	0.819	95% Critical H Value (KM-Log)	2.438
KM Standard Error of Mean (logged)	0.263		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00168	Mean in Log Scale	-6.703
SD in Original Scale	0.00143	SD in Log Scale	0.863
95% t UCL (Assumes normality)	0.00231	95% H-Stat UCL	0.00311

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.00226

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_PestPCBs|4,4-DDT

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	7	Number of Non-Detects	9
Number of Distinct Detects	7	Number of Distinct Non-Detects	9
Minimum Detect	0.0031	Minimum Non-Detect	5.6000E-4
Maximum Detect	0.043	Maximum Non-Detect	0.0063
Variance Detects	2.3920E-4	Percent Non-Detects	56.25%
Mean Detects	0.0152	SD Detects	0.0155
Median Detects	0.0065	CV Detects	1.018
Skewness Detects	1.344	Kurtosis Detects	0.326
Mean of Logged Detects	-4.601	SD of Logged Detects	0.96

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.768	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.321	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.00709	KM Standard Error of Mean	0.00322
KM SD	0.0119	95% KM (BCA) UCL	0.0132
95% KM (t) UCL	0.0127	95% KM (Percentile Bootstrap) UCL	0.0126
95% KM (z) UCL	0.0124	95% KM Bootstrap t UCL	0.0226
90% KM Chebyshev UCL	0.0167	95% KM Chebyshev UCL	0.0211
97.5% KM Chebyshev UCL	0.0272	99% KM Chebyshev UCL	0.0391

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.593	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.723	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.283	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.318	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.348	k star (bias corrected MLE)	0.865
Theta hat (MLE)	0.0113	Theta star (bias corrected MLE)	0.0176
nu hat (MLE)	18.87	nu star (bias corrected)	12.12
Mean (detects)	0.0152		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0031	Mean	0.0123
Maximum	0.043	Median	0.01
SD	0.0101	CV	0.826
k hat (MLE)	2.615	k star (bias corrected MLE)	2.166
Theta hat (MLE)	0.00469	Theta star (bias corrected MLE)	0.00567
nu hat (MLE)	83.67	nu star (bias corrected)	69.32
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (69.32, α)	51.15	Adjusted Chi Square Value (69.32, β)	49.38
95% Gamma Approximate UCL (use when n>=50)	0.0166	95% Gamma Adjusted UCL (use when n<50)	0.0172

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.00709	SD (KM)	0.0119
Variance (KM)	1.4132E-4	SE of Mean (KM)	0.00322
k hat (KM)	0.356	k star (KM)	0.331
nu hat (KM)	11.38	nu star (KM)	10.58
theta hat (KM)	0.0199	theta star (KM)	0.0214
80% gamma percentile (KM)	0.0111	90% gamma percentile (KM)	0.0206
95% gamma percentile (KM)	0.0314	99% gamma percentile (KM)	0.0591

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (10.58, α)	4.308	Adjusted Chi Square Value (10.58, β)	3.862
95% Gamma Approximate KM-UCL (use when n>=50)	0.0174	95% Gamma Adjusted KM-UCL (use when n<50)	0.0194

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.901	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.246	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.00711	Mean in Log Scale	-6.026
SD in Original Scale	0.0122	SD in Log Scale	1.44
95% t UCL (assumes normality of ROS data)	0.0125	95% Percentile Bootstrap UCL	0.0124
95% BCA Bootstrap UCL	0.0141	95% Bootstrap t UCL	0.026
95% H-UCL (Log ROS)	0.0245		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.155	KM Geo Mean	0.00212
KM SD (logged)	1.533	95% Critical H Value (KM-Log)	3.604
KM Standard Error of Mean (logged)	0.426	95% H-UCL (KM -Log)	0.0287
KM SD (logged)	1.533	95% Critical H Value (KM-Log)	3.604
KM Standard Error of Mean (logged)	0.426		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.00748	Mean in Log Scale	-5.781
SD in Original Scale	0.0121	SD in Log Scale	1.335
95% t UCL (Assumes normality)	0.0128	95% H-Stat UCL	0.0231

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1)	0.0194

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_PestPCBs|ENDRIN KETONE

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
Number of Detects	10	Number of Non-Detects	6
Number of Distinct Detects	10	Number of Distinct Non-Detects	6
Minimum Detect	0.014	Minimum Non-Detect	5.0000E-4
Maximum Detect	0.29	Maximum Non-Detect	0.0063
Variance Detects	0.00843	Percent Non-Detects	37.5%
Mean Detects	0.109	SD Detects	0.0918
Median Detects	0.0745	CV Detects	0.845
Skewness Detects	0.938	Kurtosis Detects	-0.0754
Mean of Logged Detects	-2.606	SD of Logged Detects	0.997

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.198	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0681	KM Standard Error of Mean	0.0228
KM SD	0.0865	95% KM (BCA) UCL	0.104
95% KM (t) UCL	0.108	95% KM (Percentile Bootstrap) UCL	0.105
95% KM (z) UCL	0.106	95% KM Bootstrap t UCL	0.12
90% KM Chebyshev UCL	0.137	95% KM Chebyshev UCL	0.168
97.5% KM Chebyshev UCL	0.211	99% KM Chebyshev UCL	0.295

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.182	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.74	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.133	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.271	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.435	k star (bias corrected MLE)	1.071
Theta hat (MLE)	0.0757	Theta star (bias corrected MLE)	0.101
nu hat (MLE)	28.7	nu star (bias corrected)	21.43
Mean (detects)	0.109		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0717
Maximum	0.29	Median	0.0295
SD	0.0866	CV	1.208
k hat (MLE)	0.821	k star (bias corrected MLE)	0.709
Theta hat (MLE)	0.0873	Theta star (bias corrected MLE)	0.101
nu hat (MLE)	26.27	nu star (bias corrected)	22.68
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (22.68, α)	12.85	Adjusted Chi Square Value (22.68, β)	12.01
95% Gamma Approximate UCL (use when n>=50)	0.127	95% Gamma Adjusted UCL (use when n<50)	0.135

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0681	SD (KM)	0.0865
Variance (KM)	0.00749	SE of Mean (KM)	0.0228
k hat (KM)	0.62	k star (KM)	0.545
nu hat (KM)	19.84	nu star (KM)	17.45
theta hat (KM)	0.11	theta star (KM)	0.125
80% gamma percentile (KM)	0.112	90% gamma percentile (KM)	0.181
95% gamma percentile (KM)	0.254	99% gamma percentile (KM)	0.431

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (17.45, α)	8.995	Adjusted Chi Square Value (17.45, β)	8.311
95% Gamma Approximate KM-UCL (use when n>=50)	0.132	95% Gamma Adjusted KM-UCL (use when n<50)	0.143

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.115	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0702	Mean in Log Scale	-3.541
SD in Original Scale	0.0877	SD in Log Scale	1.466
95% t UCL (assumes normality of ROS data)	0.109	95% Percentile Bootstrap UCL	0.108
95% BCA Bootstrap UCL	0.114	95% Bootstrap t UCL	0.127
95% H-UCL (Log ROS)	0.317		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.479	KM Geo Mean	0.0113
KM SD (logged)	2.531	95% Critical H Value (KM-Log)	5.495
KM Standard Error of Mean (logged)	0.667	95% H-UCL (KM -Log)	10.12
KM SD (logged)	2.531	95% Critical H Value (KM-Log)	5.495
KM Standard Error of Mean (logged)	0.667		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0684	Mean in Log Scale	-4.291
SD in Original Scale	0.0891	SD in Log Scale	2.463
95% t UCL (Assumes normality)	0.107	95% H-Stat UCL	8.617

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL	0.108

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_SVOCs|PAH, TOTAL

General Statistics

Total Number of Observations	16	Number of Distinct Observations	15
		Number of Missing Observations	0
Minimum	0.04	Mean	3.805
Maximum	43	Median	0.64
SD	10.53	Std. Error of Mean	2.634
Coefficient of Variation	2.768	Skewness	3.896

Normal GOF Test

Shapiro Wilk Test Statistic	0.373	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.426	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.422	95% Adjusted-CLT UCL (Chen-1995)	10.88
		95% Modified-t UCL (Johnson-1978)	8.849

Gamma GOF Test

A-D Test Statistic	1.082	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.823	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.215	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.231	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.374	k star (bias corrected MLE)	0.345
Theta hat (MLE)	10.18	Theta star (bias corrected MLE)	11.02
nu hat (MLE)	11.96	nu star (bias corrected)	11.05
MLE Mean (bias corrected)	3.805	MLE Sd (bias corrected)	6.475
		Approximate Chi Square Value (0.05)	4.609
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	4.145

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	9.124	95% Adjusted Gamma UCL (use when n<50)	10.15

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.117	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.219	Mean of logged Data	-0.444
Maximum of Logged Data	3.761	SD of logged Data	1.902

Assuming Lognormal Distribution

95% H-UCL	32.16	90% Chebyshev (MVUE) UCL	8.135
95% Chebyshev (MVUE) UCL	10.44	97.5% Chebyshev (MVUE) UCL	13.64
99% Chebyshev (MVUE) UCL	19.92		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.137	95% Jackknife UCL	8.422
95% Standard Bootstrap UCL	7.849	95% Bootstrap-t UCL	33.17
95% Hall's Bootstrap UCL	24.9	95% Percentile Bootstrap UCL	8.9
95% BCA Bootstrap UCL	11.85		
90% Chebyshev(Mean, Sd) UCL	11.71	95% Chebyshev(Mean, Sd) UCL	15.28
97.5% Chebyshev(Mean, Sd) UCL	20.25	99% Chebyshev(Mean, Sd) UCL	30.01

Suggested UCL to Use

95% Adjusted Gamma UCL 10.15

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_VOCs|ACETONE

General Statistics

Total Number of Observations	16	Number of Distinct Observations	15
Number of Detects	14	Number of Non-Detects	2
Number of Distinct Detects	13	Number of Distinct Non-Detects	2
Minimum Detect	0.026	Minimum Non-Detect	0.043
Maximum Detect	3	Maximum Non-Detect	0.06
Variance Detects	1.041	Percent Non-Detects	12.5%
Mean Detects	0.912	SD Detects	1.02
Median Detects	0.4	CV Detects	1.119
Skewness Detects	1.37	Kurtosis Detects	0.493
Mean of Logged Detects	-0.722	SD of Logged Detects	1.273

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.755	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.31	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.801	KM Standard Error of Mean	0.25
KM SD	0.965	95% KM (BCA) UCL	1.266
95% KM (t) UCL	1.24	95% KM (Percentile Bootstrap) UCL	1.206
95% KM (z) UCL	1.213	95% KM Bootstrap t UCL	1.473
90% KM Chebyshev UCL	1.552	95% KM Chebyshev UCL	1.893
97.5% KM Chebyshev UCL	2.365	99% KM Chebyshev UCL	3.293

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.583	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.763	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.226	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.236	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.925	k star (bias corrected MLE)	0.775
Theta hat (MLE)	0.985	Theta star (bias corrected MLE)	1.177
nu hat (MLE)	25.91	nu star (bias corrected)	21.69
Mean (detects)	0.912		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.799
Maximum	3	Median	0.36
SD	0.999	CV	1.25
k hat (MLE)	0.625	k star (bias corrected MLE)	0.549
Theta hat (MLE)	1.279	Theta star (bias corrected MLE)	1.455
nu hat (MLE)	19.99	nu star (bias corrected)	17.58
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (17.58, α)	9.087	Adjusted Chi Square Value (17.58, β)	8.398
95% Gamma Approximate UCL (use when n>=50)	1.546	95% Gamma Adjusted UCL (use when n<50)	1.673

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.801	SD (KM)	0.965
Variance (KM)	0.932	SE of Mean (KM)	0.25
k hat (KM)	0.689	k star (KM)	0.601
nu hat (KM)	22.04	nu star (KM)	19.24
theta hat (KM)	1.163	theta star (KM)	1.332
80% gamma percentile (KM)	1.321	90% gamma percentile (KM)	2.083
95% gamma percentile (KM)	2.881	99% gamma percentile (KM)	4.81

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (19.24, α)	10.29	Adjusted Chi Square Value (19.24, β)	9.554
95% Gamma Approximate KM-UCL (use when n>=50)	1.498	95% Gamma Adjusted KM-UCL (use when n<50)	1.613

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.929	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.171	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.804	Mean in Log Scale	-1.018
SD in Original Scale	0.995	SD in Log Scale	1.435
95% t UCL (assumes normality of ROS data)	1.24	95% Percentile Bootstrap UCL	1.203
95% BCA Bootstrap UCL	1.293	95% Bootstrap t UCL	1.389
95% H-UCL (Log ROS)	3.605		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.088	KM Geo Mean	0.337
KM SD (logged)	1.501	95% Critical H Value (KM-Log)	3.546
KM Standard Error of Mean (logged)	0.389	95% H-UCL (KM -Log)	4.111
KM SD (logged)	1.501	95% Critical H Value (KM-Log)	3.546
KM Standard Error of Mean (logged)	0.389		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.801	Mean in Log Scale	-1.091
SD in Original Scale	0.997	SD in Log Scale	1.557
95% t UCL (Assumes normality)	1.238	95% H-Stat UCL	4.888

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ι Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 1.613

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_VOCs|TOLUENE

General Statistics

Total Number of Observations	16	Number of Distinct Observations	12
Number of Detects	14	Number of Non-Detects	2
Number of Distinct Detects	11	Number of Distinct Non-Detects	2
Minimum Detect	0.0029	Minimum Non-Detect	0.0028
Maximum Detect	0.31	Maximum Non-Detect	0.01
Variance Detects	0.00752	Percent Non-Detects	12.5%
Mean Detects	0.0526	SD Detects	0.0867
Median Detects	0.012	CV Detects	1.648
Skewness Detects	2.398	Kurtosis Detects	5.949
Mean of Logged Detects	-3.975	SD of Logged Detects	1.457

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.623	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.344	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0464	KM Standard Error of Mean	0.0207
KM SD	0.0799	95% KM (BCA) UCL	0.0845
95% KM (t) UCL	0.0827	95% KM (Percentile Bootstrap) UCL	0.0814
95% KM (z) UCL	0.0805	95% KM Bootstrap t UCL	0.122
90% KM Chebyshev UCL	0.109	95% KM Chebyshev UCL	0.137
97.5% KM Chebyshev UCL	0.176	99% KM Chebyshev UCL	0.253

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.994	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.784	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.249	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.24	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.6	k star (bias corrected MLE)	0.519
Theta hat (MLE)	0.0876	Theta star (bias corrected MLE)	0.101
nu hat (MLE)	16.81	nu star (bias corrected)	14.54
Mean (detects)	0.0526		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0029	Mean	0.0473
Maximum	0.31	Median	0.012
SD	0.082	CV	1.735
k hat (MLE)	0.615	k star (bias corrected MLE)	0.541
Theta hat (MLE)	0.0769	Theta star (bias corrected MLE)	0.0873
nu hat (MLE)	19.67	nu star (bias corrected)	17.32
Adjusted Level of Significance (β)	0.0335		
Approximate Chi Square Value (17.32, α)	8.899	Adjusted Chi Square Value (17.32, β)	8.219
95% Gamma Approximate UCL (use when n>=50)	0.092	95% Gamma Adjusted UCL (use when n<50)	0.0996

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0464	SD (KM)	0.0799
Variance (KM)	0.00638	SE of Mean (KM)	0.0207
k hat (KM)	0.337	k star (KM)	0.316
nu hat (KM)	10.8	nu star (KM)	10.11
theta hat (KM)	0.137	theta star (KM)	0.147
80% gamma percentile (KM)	0.072	90% gamma percentile (KM)	0.136
95% gamma percentile (KM)	0.209	99% gamma percentile (KM)	0.397

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (10.11, α)	4.008	Adjusted Chi Square Value (10.11, β)	3.581
95% Gamma Approximate KM-UCL (use when n>=50)	0.117	95% Gamma Adjusted KM-UCL (use when n<50)	0.131

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.192	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0462	Mean in Log Scale	-4.33
SD in Original Scale	0.0826	SD in Log Scale	1.686
95% t UCL (assumes normality of ROS data)	0.0824	95% Percentile Bootstrap UCL	0.0815
95% BCA Bootstrap UCL	0.0976	95% Bootstrap t UCL	0.12
95% H-UCL (Log ROS)	0.296		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.208	KM Geo Mean	0.0149
KM SD (logged)	1.451	95% Critical H Value (KM-Log)	3.456
KM Standard Error of Mean (logged)	0.376	95% H-UCL (KM -Log)	0.156
KM SD (logged)	1.451	95% Critical H Value (KM-Log)	3.456
KM Standard Error of Mean (logged)	0.376		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0464	Mean in Log Scale	-4.22
SD in Original Scale	0.0825	SD in Log Scale	1.53
95% t UCL (Assumes normality)	0.0826	95% H-Stat UCL	0.196

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 0.137

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.15/23/2016 12:24:16 PM
From File	ProUCL Inputs_a.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

FFTA_RA_SE_Metals|ARSENIC

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	1.6	Mean	6.639
Maximum	19	Median	5.91
SD	3.889	Std. Error of Mean	0.972
Coefficient of Variation	0.586	Skewness	2.221

Normal GOF Test

Shapiro Wilk Test Statistic	0.794	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.203	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.343	95% Adjusted-CLT UCL (Chen-1995)	8.815
		95% Modified-t UCL (Johnson-1978)	8.433

Gamma GOF Test

A-D Test Statistic	0.405	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.131	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.909	k star (bias corrected MLE)	3.217
Theta hat (MLE)	1.698	Theta star (bias corrected MLE)	2.063
nu hat (MLE)	125.1	nu star (bias corrected)	103
MLE Mean (bias corrected)	6.639	MLE Sd (bias corrected)	3.701
		Approximate Chi Square Value (0.05)	80.55
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	78.29

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.486	95% Adjusted Gamma UCL (use when n<50)	8.73

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.951	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.149	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	0.47	Mean of logged Data	1.76
Maximum of Logged Data	2.944	SD of logged Data	0.536

Assuming Lognormal Distribution

95% H-UCL	8.96	90% Chebyshev (MVUE) UCL	9.411
95% Chebyshev (MVUE) UCL	10.66	97.5% Chebyshev (MVUE) UCL	12.41
99% Chebyshev (MVUE) UCL	15.82		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.238	95% Jackknife UCL	8.343
95% Standard Bootstrap UCL	8.199	95% Bootstrap-t UCL	9.336
95% Hall's Bootstrap UCL	16.22	95% Percentile Bootstrap UCL	8.333
95% BCA Bootstrap UCL	8.876		
90% Chebyshev(Mean, Sd) UCL	9.556	95% Chebyshev(Mean, Sd) UCL	10.88
97.5% Chebyshev(Mean, Sd) UCL	12.71	99% Chebyshev(Mean, Sd) UCL	16.31

Suggested UCL to Use

95% Student's-t UCL	8.343

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|BARIUM

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	15.2	Mean	43.44
Maximum	89.1	Median	32.65
SD	23.53	Std. Error of Mean	5.883
Coefficient of Variation	0.542	Skewness	0.795

Normal GOF Test

Shapiro Wilk Test Statistic	0.893	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.225	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data Not Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	53.75	95% Adjusted-CLT UCL (Chen-1995)	54.36
		95% Modified-t UCL (Johnson-1978)	53.94

Gamma GOF Test

A-D Test Statistic	0.412	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.184	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.848	k star (bias corrected MLE)	3.168
Theta hat (MLE)	11.29	Theta star (bias corrected MLE)	13.71
nu hat (MLE)	123.1	nu star (bias corrected)	101.4
MLE Mean (bias corrected)	43.44	MLE Sd (bias corrected)	24.4
		Approximate Chi Square Value (0.05)	79.16
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	76.92

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	55.64	95% Adjusted Gamma UCL (use when n<50)	57.25

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.151	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.721	Mean of logged Data	3.636
Maximum of Logged Data	4.49	SD of logged Data	0.539

Assuming Lognormal Distribution

95% H-UCL	58.71	90% Chebyshev (MVUE) UCL	61.63
95% Chebyshev (MVUE) UCL	69.88	97.5% Chebyshev (MVUE) UCL	81.32
99% Chebyshev (MVUE) UCL	103.8		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	53.11	95% Jackknife UCL	53.75
95% Standard Bootstrap UCL	52.86	95% Bootstrap-t UCL	55.33
95% Hall's Bootstrap UCL	52.73	95% Percentile Bootstrap UCL	53.16
95% BCA Bootstrap UCL	54.49		
90% Chebyshev(Mean, Sd) UCL	61.09	95% Chebyshev(Mean, Sd) UCL	69.08
97.5% Chebyshev(Mean, Sd) UCL	80.17	99% Chebyshev(Mean, Sd) UCL	102

Suggested UCL to Use

95% Student's-t UCL 53.75

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|BERYLLIUM

General Statistics

Total Number of Observations	16	Number of Distinct Observations	14
		Number of Missing Observations	0
Minimum	0.24	Mean	0.431
Maximum	0.84	Median	0.356
SD	0.205	Std. Error of Mean	0.0512
Coefficient of Variation	0.476	Skewness	1.296

Normal GOF Test

Shapiro Wilk Test Statistic	0.785	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.248	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.521	95% Adjusted-CLT UCL (Chen-1995)	0.533
		95% Modified-t UCL (Johnson-1978)	0.524

Gamma GOF Test

A-D Test Statistic	0.992	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.741	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.203	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.812	k star (bias corrected MLE)	4.764
Theta hat (MLE)	0.0742	Theta star (bias corrected MLE)	0.0905
nu hat (MLE)	186	nu star (bias corrected)	152.5
MLE Mean (bias corrected)	0.431	MLE Sd (bias corrected)	0.197
		Approximate Chi Square Value (0.05)	124.9
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	122.1

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.526	95% Adjusted Gamma UCL (use when n<50)	0.538

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.876	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.174	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-1.427	Mean of logged Data	-0.93
Maximum of Logged Data	-0.174	SD of logged Data	0.416

Assuming Lognormal Distribution

95% H-UCL	0.531	90% Chebyshev (MVUE) UCL	0.564
95% Chebyshev (MVUE) UCL	0.626	97.5% Chebyshev (MVUE) UCL	0.711
99% Chebyshev (MVUE) UCL	0.88		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.515	95% Jackknife UCL	0.521
95% Standard Bootstrap UCL	0.515	95% Bootstrap-t UCL	0.546
95% Hall's Bootstrap UCL	0.515	95% Percentile Bootstrap UCL	0.519
95% BCA Bootstrap UCL	0.525		
90% Chebyshev(Mean, Sd) UCL	0.585	95% Chebyshev(Mean, Sd) UCL	0.654
97.5% Chebyshev(Mean, Sd) UCL	0.751	99% Chebyshev(Mean, Sd) UCL	0.941

Suggested UCL to Use

95% Adjusted Gamma UCL 0.538

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|IRON

General Statistics

Total Number of Observations	16	Number of Distinct Observations	15
		Number of Missing Observations	0
Minimum	8100	Mean	15313
Maximum	25600	Median	14850
SD	4723	Std. Error of Mean	1181
Coefficient of Variation	0.308	Skewness	0.631

Normal GOF Test

Shapiro Wilk Test Statistic	0.961	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.175	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	17382	95% Adjusted-CLT UCL (Chen-1995)	17453
		95% Modified-t UCL (Johnson-1978)	17413

Gamma GOF Test

A-D Test Statistic	0.173	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.739	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.136	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.215	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	11.45	k star (bias corrected MLE)	9.344
Theta hat (MLE)	1338	Theta star (bias corrected MLE)	1639
nu hat (MLE)	366.4	nu star (bias corrected)	299
MLE Mean (bias corrected)	15313	MLE Sd (bias corrected)	5009
		Approximate Chi Square Value (0.05)	259.9
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	255.8

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	17613	95% Adjusted Gamma UCL (use when n<50)	17898

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.122	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	9	Mean of logged Data	9.592
Maximum of Logged Data	10.15	SD of logged Data	0.309

Assuming Lognormal Distribution

95% H-UCL	17850	90% Chebyshev (MVUE) UCL	18915
95% Chebyshev (MVUE) UCL	20544	97.5% Chebyshev (MVUE) UCL	22805
99% Chebyshev (MVUE) UCL	27246		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	17254	95% Jackknife UCL	17382
95% Standard Bootstrap UCL	17169	95% Bootstrap-t UCL	17751
95% Hall's Bootstrap UCL	17994	95% Percentile Bootstrap UCL	17281
95% BCA Bootstrap UCL	17594		
90% Chebyshev(Mean, Sd) UCL	18854	95% Chebyshev(Mean, Sd) UCL	20459
97.5% Chebyshev(Mean, Sd) UCL	22686	99% Chebyshev(Mean, Sd) UCL	27060

Suggested UCL to Use

95% Student's-t UCL 17382

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|MERCURY

General Statistics

Total Number of Observations	16	Number of Distinct Observations	14
		Number of Missing Observations	0
Minimum	0.01	Mean	0.088
Maximum	0.32	Median	0.0585
SD	0.0829	Std. Error of Mean	0.0207
Coefficient of Variation	0.942	Skewness	1.805

Normal GOF Test

Shapiro Wilk Test Statistic	0.791	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.258	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.213	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.124	95% Adjusted-CLT UCL (Chen-1995)	0.132
		95% Modified-t UCL (Johnson-1978)	0.126

Gamma GOF Test

A-D Test Statistic	0.409	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.754	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.162	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.219	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.522	k star (bias corrected MLE)	1.278
Theta hat (MLE)	0.0578	Theta star (bias corrected MLE)	0.0689
nu hat (MLE)	48.69	nu star (bias corrected)	40.9
MLE Mean (bias corrected)	0.088	MLE Sd (bias corrected)	0.0779
		Approximate Chi Square Value (0.05)	27.24
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	25.97

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	0.132	95% Adjusted Gamma UCL (use when n<50)	0.139

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.119	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-4.605	Mean of logged Data	-2.793
Maximum of Logged Data	-1.139	SD of logged Data	0.892

Assuming Lognormal Distribution

95% H-UCL	0.164	90% Chebyshev (MVUE) UCL	0.152
95% Chebyshev (MVUE) UCL	0.181	97.5% Chebyshev (MVUE) UCL	0.221
99% Chebyshev (MVUE) UCL	0.3		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	0.122	95% Jackknife UCL	0.124
95% Standard Bootstrap UCL	0.121	95% Bootstrap-t UCL	0.144
95% Hall's Bootstrap UCL	0.156	95% Percentile Bootstrap UCL	0.124
95% BCA Bootstrap UCL	0.132		
90% Chebyshev(Mean, Sd) UCL	0.15	95% Chebyshev(Mean, Sd) UCL	0.178
97.5% Chebyshev(Mean, Sd) UCL	0.217	99% Chebyshev(Mean, Sd) UCL	0.294

Suggested UCL to Use

95% Adjusted Gamma UCL	0.139

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|NICKEL

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	7.55	Mean	17.41
Maximum	34.5	Median	16.45
SD	7.492	Std. Error of Mean	1.873
Coefficient of Variation	0.43	Skewness	0.679

Normal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	20.69	95% Adjusted-CLT UCL (Chen-1995)	20.83
		95% Modified-t UCL (Johnson-1978)	20.75

Gamma GOF Test

A-D Test Statistic	0.141	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.741	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0817	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.216	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	5.742	k star (bias corrected MLE)	4.707
Theta hat (MLE)	3.032	Theta star (bias corrected MLE)	3.699
nu hat (MLE)	183.7	nu star (bias corrected)	150.6
MLE Mean (bias corrected)	17.41	MLE Sd (bias corrected)	8.025
		Approximate Chi Square Value (0.05)	123.2
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	120.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	21.28	95% Adjusted Gamma UCL (use when n<50)	21.77

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.111	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.022	Mean of logged Data	2.767
Maximum of Logged Data	3.541	SD of logged Data	0.446

Assuming Lognormal Distribution

95% H-UCL	22.12	90% Chebyshev (MVUE) UCL	23.45
95% Chebyshev (MVUE) UCL	26.16	97.5% Chebyshev (MVUE) UCL	29.93
99% Chebyshev (MVUE) UCL	37.32		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	20.49	95% Jackknife UCL	20.69
95% Standard Bootstrap UCL	20.36	95% Bootstrap-t UCL	21.16
95% Hall's Bootstrap UCL	21.17	95% Percentile Bootstrap UCL	20.4
95% BCA Bootstrap UCL	20.84		
90% Chebyshev(Mean, Sd) UCL	23.03	95% Chebyshev(Mean, Sd) UCL	25.57
97.5% Chebyshev(Mean, Sd) UCL	29.11	99% Chebyshev(Mean, Sd) UCL	36.05

Suggested UCL to Use

95% Student's-t UCL 20.69

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SE_Metals|ZINC

General Statistics

Total Number of Observations	16	Number of Distinct Observations	16
		Number of Missing Observations	0
Minimum	25.7	Mean	80.04
Maximum	198	Median	65.85
SD	52.63	Std. Error of Mean	13.16
Coefficient of Variation	0.657	Skewness	1.138

Normal GOF Test

Shapiro Wilk Test Statistic	0.86	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.235	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.213	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	103.1	95% Adjusted-CLT UCL (Chen-1995)	105.7
		95% Modified-t UCL (Johnson-1978)	103.7

Gamma GOF Test

A-D Test Statistic	0.4	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.745	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.155	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.217	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.807	k star (bias corrected MLE)	2.322
Theta hat (MLE)	28.52	Theta star (bias corrected MLE)	34.47
nu hat (MLE)	89.82	nu star (bias corrected)	74.31
MLE Mean (bias corrected)	80.04	MLE Sd (bias corrected)	52.52
		Approximate Chi Square Value (0.05)	55.46
Adjusted Level of Significance	0.0335	Adjusted Chi Square Value	53.61

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	107.3	95% Adjusted Gamma UCL (use when n<50)	111

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.957	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.887	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.118	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.213	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.246	Mean of logged Data	4.194
Maximum of Logged Data	5.288	SD of logged Data	0.63

Assuming Lognormal Distribution

95% H-UCL	115.5	90% Chebyshev (MVUE) UCL	119.1
95% Chebyshev (MVUE) UCL	137	97.5% Chebyshev (MVUE) UCL	161.8
99% Chebyshev (MVUE) UCL	210.6		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	101.7	95% Jackknife UCL	103.1
95% Standard Bootstrap UCL	101.1	95% Bootstrap-t UCL	110.4
95% Hall's Bootstrap UCL	105.5	95% Percentile Bootstrap UCL	101.4
95% BCA Bootstrap UCL	105.2		
90% Chebyshev(Mean, Sd) UCL	119.5	95% Chebyshev(Mean, Sd) UCL	137.4
97.5% Chebyshev(Mean, Sd) UCL	162.2	99% Chebyshev(Mean, Sd) UCL	210.9

Suggested UCL to Use

95% Adjusted Gamma UCL 111

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.15/23/2016 12:52:41 PM

User Selected Options

From File ProUCL Inputs_a.xls

Full Precision OFF

From File: ProUCL Inputs_a.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
TA_RA_SE_Metals|SELENIUM	16	0	8	8	50.00%	0.21	1.5	0.947	1.873	1.368	1.445
FFTA_RA_SE_Metals|SILVER	16	0	14	2	12.50%	0.033	0.0608	0.508	0.422	0.649	1.279
TA_RA_SE_Metals|THALLIUM	16	0	15	1	6.25%	0.074	0.074	0.102	0.00417	0.0646	0.635
PestPCBs|TOTAL AROCLORS	16	0	15	1	6.25%	0.026	0.026	0.611	0.353	0.594	0.973
A_RA_SE_PestPCBs|4,4-DDD	16	0	6	10	62.50%	4.0000E-4	0.0063	0.00649	1.3649E-4	0.0117	1.801
A_RA_SE_PestPCBs|4,4-DDE	16	0	7	9	56.25%	4.0000E-4	0.0046	0.00154	2.0800E-6	0.00144	0.936
A_RA_SE_PestPCBs|4,4-DDT	16	0	7	9	56.25%	5.6000E-4	0.0063	0.00709	1.4132E-4	0.0119	1.677
_PestPCBs|ENDRIN KETONE	16	0	10	6	37.50%	5.0000E-4	0.0063	0.0681	0.00749	0.0865	1.27
FTA_RA_SE_VOCs|ACETONE	16	0	14	2	12.50%	0.043	0.06	0.801	0.932	0.965	1.205
FTA_RA_SE_VOCs|TOLUENE	16	0	14	2	12.50%	0.0028	0.01	0.0464	0.00638	0.0799	1.722

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
TA_RA_SE_Metals|SELENIUM	8	0	0.33	5.5	1.554	0.695	3.395	1.843	0.4	1.837	1.186
FFTA_RA_SE_Metals|SILVER	14	0	0.06	2.34	0.575	0.225	0.481	0.693	0.15	1.719	1.206
TA_RA_SE_Metals|THALLIUM	15	0	0.06	0.3	0.104	0.075	0.00465	0.0682	0.0222	2.036	0.654
PestPCBs|TOTAL AROCLORS	15	0	0.028	2.1	0.65	0.44	0.377	0.614	0.535	1.059	0.946
A_RA_SE_PestPCBs|4,4-DDD	6	0	0.0016	0.043	0.0163	0.0123	2.5313E-4	0.0159	0.0153	1.036	0.979
A_RA_SE_PestPCBs|4,4-DDE	7	0	8.6000E-4	0.0061	0.00243	0.0018	3.3046E-6	0.00182	0.00126	1.644	0.748
A_RA_SE_PestPCBs|4,4-DDT	7	0	0.0031	0.043	0.0152	0.0065	2.3920E-4	0.0155	0.00504	1.344	1.018
_PestPCBs|ENDRIN KETONE	10	0	0.014	0.29	0.109	0.0745	0.00843	0.0918	0.0801	0.938	0.845
_RA_SE_SVOCs|PAH, TOTAL	16	0	0.04	43	3.805	0.64	111	10.53	0.856	3.896	2.768
FTA_RA_SE_VOCs|ACETONE	14	0	0.026	3	0.912	0.4	1.041	1.02	0.297	1.37	1.119
FTA_RA_SE_VOCs|TOLUENE	14	0	0.0029	0.31	0.0526	0.012	0.00752	0.0867	0.013	2.398	1.648

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
TA_RA_SE_Metals|SELENIUM	16	0	0.285	0.414	0.449	0.643	1.168	1.31	2.35	3.775	5.155
FFTA_RA_SE_Metals|SILVER	16	0	0.0604	0.118	0.15	0.2	0.467	0.81	1.455	1.785	2.229
TA_RA_SE_Metals|THALLIUM	16	0	0.06	0.06	0.063	0.0745	0.103	0.15	0.175	0.218	0.284
PestPCBs|TOTAL AROCLORS	16	0	0.047	0.079	0.14	0.365	0.953	1.2	1.35	1.575	1.995
A_RA_SE_PestPCBs|4,4-DDD	16	0	8.8000E-4	0.0015	0.00158	0.00245	0.00713	0.0096	0.0205	0.0303	0.0405
A_RA_SE_PestPCBs|4,4-DDE	16	0	7.1000E-4	9.5000E-4	0.00114	0.00195	0.00308	0.0033	0.0041	0.00498	0.00588
A_RA_SE_PestPCBs|4,4-DDT	16	0	0.00185	0.0022	0.0025	0.0041	0.00635	0.0065	0.021	0.034	0.0412
_PestPCBs|ENDRIN KETONE	16	0	6.5500E-4	0.0036	0.00405	0.0295	0.0985	0.13	0.195	0.23	0.278
_RA_SE_SVOCs|PAH, TOTAL	16	0	0.0625	0.077	0.214	0.64	2.525	2.6	3.8	13.83	37.17
FTA_RA_SE_VOCs|ACETONE	16	0	0.0515	0.2	0.2	0.36	0.985	1.3	2.5	2.925	2.985
FTA_RA_SE_VOCs|TOLUENE	16	0	0.00305	0.0032	0.0083	0.012	0.0298	0.047	0.135	0.183	0.285

ATTACHMENT G
PROUCL EXPORTS FOR SURFACE SOIL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.13/2/2017 10:28:29 AM
From File	SurfaceSoil_Rev_3-27.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

FFTA_RA_SO_Metals|ARSENIC

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	64
Minimum	3.6	Mean	7.603
Maximum	12	Median	7.4
SD	1.985	Std. Error of Mean	0.326
Coefficient of Variation	0.261	Skewness	0.386

Normal GOF Test

Shapiro Wilk Test Statistic	0.973	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.0992	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	8.154	95% Adjusted-CLT UCL (Chen-1995)	8.162
		95% Modified-t UCL (Johnson-1978)	8.158

Gamma GOF Test

A-D Test Statistic	0.168	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0654	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.87	k star (bias corrected MLE)	13.68
Theta hat (MLE)	0.511	Theta star (bias corrected MLE)	0.556
nu hat (MLE)	1100	nu star (bias corrected)	1013
MLE Mean (bias corrected)	7.603	MLE Sd (bias corrected)	2.055
		Approximate Chi Square Value (0.05)	939.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	936.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	8.193	95% Adjusted Gamma UCL (use when n<50)	8.219

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.982	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.0614	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.281	Mean of logged Data	1.995
Maximum of Logged Data	2.485	SD of logged Data	0.268

Assuming Lognormal Distribution

95% H-UCL	8.244	90% Chebyshev (MVUE) UCL	8.63
95% Chebyshev (MVUE) UCL	9.092	97.5% Chebyshev (MVUE) UCL	9.734
99% Chebyshev (MVUE) UCL	10.99		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	8.14	95% Jackknife UCL	8.154
95% Standard Bootstrap UCL	8.139	95% Bootstrap-t UCL	8.202
95% Hall's Bootstrap UCL	8.171	95% Percentile Bootstrap UCL	8.148
95% BCA Bootstrap UCL	8.131		
90% Chebyshev(Mean, Sd) UCL	8.582	95% Chebyshev(Mean, Sd) UCL	9.025
97.5% Chebyshev(Mean, Sd) UCL	9.641	99% Chebyshev(Mean, Sd) UCL	10.85

Suggested UCL to Use

95% Student's-t UCL 8.154

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|CADMIUM

General Statistics

Total Number of Observations	37	Number of Distinct Observations	26
		Number of Missing Observations	64
Minimum	0.04	Mean	0.148
Maximum	1.3	Median	0.0826
SD	0.226	Std. Error of Mean	0.0372
Coefficient of Variation	1.528	Skewness	4.343

Normal GOF Test

Shapiro Wilk Test Statistic	0.399	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.397	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.211	95% Adjusted-CLT UCL (Chen-1995)	0.238
		95% Modified-t UCL (Johnson-1978)	0.215

Gamma GOF Test

A-D Test Statistic	5.64	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.766	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.317	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.148	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.506	k star (bias corrected MLE)	1.402
Theta hat (MLE)	0.0983	Theta star (bias corrected MLE)	0.106
nu hat (MLE)	111.5	nu star (bias corrected)	103.8
MLE Mean (bias corrected)	0.148	MLE Sd (bias corrected)	0.125
		Approximate Chi Square Value (0.05)	81.25
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	80.39

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.189	95% Adjusted Gamma UCL (use when n<50)	0.191

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.738	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.245	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.219	Mean of logged Data	-2.277
Maximum of Logged Data	0.262	SD of logged Data	0.669

Assuming Lognormal Distribution

95% H-UCL	0.161	90% Chebyshev (MVUE) UCL	0.173
95% Chebyshev (MVUE) UCL	0.193	97.5% Chebyshev (MVUE) UCL	0.222
99% Chebyshev (MVUE) UCL	0.278		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.209	95% Jackknife UCL	0.211
95% Standard Bootstrap UCL	0.209	95% Bootstrap-t UCL	0.393
95% Hall's Bootstrap UCL	0.426	95% Percentile Bootstrap UCL	0.216
95% BCA Bootstrap UCL	0.243		
90% Chebyshev(Mean, Sd) UCL	0.26	95% Chebyshev(Mean, Sd) UCL	0.31
97.5% Chebyshev(Mean, Sd) UCL	0.381	99% Chebyshev(Mean, Sd) UCL	0.518

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 0.31

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|CHROMIUM, TOTAL

General Statistics

Total Number of Observations	48	Number of Distinct Observations	41
		Number of Missing Observations	54
Number of Detects	47	Number of Non-Detects	1
Number of Distinct Detects	40	Number of Distinct Non-Detects	1
Minimum Detect	13.9	Minimum Non-Detect	10.6
Maximum Detect	42.3	Maximum Non-Detect	10.6
Variance Detects	36.42	Percent Non-Detects	2.083%
Mean Detects	27.16	SD Detects	6.035
Median Detects	26.7	CV Detects	0.222
Skewness Detects	0.502	Kurtosis Detects	0.21
Mean of Logged Detects	3.277	SD of Logged Detects	0.224

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.966	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.946	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.127	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.128	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	26.81	KM Standard Error of Mean	0.928
KM SD	6.364	95% KM (BCA) UCL	28.33
95% KM (t) UCL	28.37	95% KM (Percentile Bootstrap) UCL	28.34
95% KM (z) UCL	28.34	95% KM Bootstrap t UCL	28.36
90% KM Chebyshev UCL	29.6	95% KM Chebyshev UCL	30.86
97.5% KM Chebyshev UCL	32.61	99% KM Chebyshev UCL	36.05

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.338	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.748	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0987	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.129	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	20.85	k star (bias corrected MLE)	19.53
Theta hat (MLE)	1.303	Theta star (bias corrected MLE)	1.39
nu hat (MLE)	1960	nu star (bias corrected)	1836
Mean (detects)	27.16		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	13.9	Mean	26.88
Maximum	42.3	Median	26.65
SD	6.269	CV	0.233
k hat (MLE)	18.41	k star (bias corrected MLE)	17.28
Theta hat (MLE)	1.46	Theta star (bias corrected MLE)	1.556
nu hat (MLE)	1768	nu star (bias corrected)	1659
Adjusted Level of Significance (β)	0.045		
Approximate Chi Square Value (N/A, α)	1565	Adjusted Chi Square Value (N/A, β)	1562
95% Gamma Approximate UCL (use when n>=50)	28.49	95% Gamma Adjusted UCL (use when n<50)	28.54

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	26.81	SD (KM)	6.364
Variance (KM)	40.5	SE of Mean (KM)	0.928
k hat (KM)	17.75	k star (KM)	16.66
nu hat (KM)	1704	nu star (KM)	1599
theta hat (KM)	1.51	theta star (KM)	1.61
80% gamma percentile (KM)	32.13	90% gamma percentile (KM)	35.5
95% gamma percentile (KM)	38.45	99% gamma percentile (KM)	44.41

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	1507	Adjusted Chi Square Value (N/A, β)	1504
95% Gamma Approximate KM-UCL (use when n>=50)	28.45	95% Gamma Adjusted KM-UCL (use when n<50)	28.5

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.981	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.946	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0872	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.128	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	26.9	Mean in Log Scale	3.265
SD in Original Scale	6.227	SD in Log Scale	0.236
95% t UCL (assumes normality of ROS data)	28.41	95% Percentile Bootstrap UCL	28.34
95% BCA Bootstrap UCL	28.39	95% Bootstrap t UCL	28.51
95% H-UCL (Log ROS)	28.66		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	3.258	KM Geo Mean	26.01
KM SD (logged)	0.255	95% Critical H Value (KM-Log)	1.803
KM Standard Error of Mean (logged)	0.0372	95% H-UCL (KM -Log)	28.73
KM SD (logged)	0.255	95% Critical H Value (KM-Log)	1.803
KM Standard Error of Mean (logged)	0.0372		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	26.7	Mean in Log Scale	3.244
SD in Original Scale	6.753	SD in Log Scale	0.321
95% t UCL (Assumes normality)	28.34	95% H-Stat UCL	29.35

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 28.37

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|COBALT

General Statistics

Total Number of Observations	20	Number of Distinct Observations	19
		Number of Missing Observations	81
Minimum	6.8	Mean	11.57
Maximum	24.2	Median	11.5
SD	3.785	Std. Error of Mean	0.846
Coefficient of Variation	0.327	Skewness	1.964

Normal GOF Test

Shapiro Wilk Test Statistic	0.826	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.224	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.192	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	13.03	95% Adjusted-CLT UCL (Chen-1995)	13.36
		95% Modified-t UCL (Johnson-1978)	13.1

Gamma GOF Test

A-D Test Statistic	0.529	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.178	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.194	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	12.02	k star (bias corrected MLE)	10.25
Theta hat (MLE)	0.963	Theta star (bias corrected MLE)	1.129
nu hat (MLE)	480.8	nu star (bias corrected)	410
MLE Mean (bias corrected)	11.57	MLE Sd (bias corrected)	3.614
		Approximate Chi Square Value (0.05)	364.1
Adjusted Level of Significance	0.038	Adjusted Chi Square Value	360.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	13.03	95% Adjusted Gamma UCL (use when n<50)	13.15

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.905	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.16	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.192	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.917	Mean of logged Data	2.406
Maximum of Logged Data	3.186	SD of logged Data	0.288

Assuming Lognormal Distribution

95% H-UCL	13.06	90% Chebyshev (MVUE) UCL	13.8
95% Chebyshev (MVUE) UCL	14.82	97.5% Chebyshev (MVUE) UCL	16.24
99% Chebyshev (MVUE) UCL	19.04		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	12.96	95% Jackknife UCL	13.03
95% Standard Bootstrap UCL	12.98	95% Bootstrap-t UCL	13.73
95% Hall's Bootstrap UCL	19.35	95% Percentile Bootstrap UCL	13.04
95% BCA Bootstrap UCL	13.33		
90% Chebyshev(Mean, Sd) UCL	14.11	95% Chebyshev(Mean, Sd) UCL	15.26
97.5% Chebyshev(Mean, Sd) UCL	16.86	99% Chebyshev(Mean, Sd) UCL	19.99

Suggested UCL to Use

95% Adjusted Gamma UCL 13.15

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|COPPER

General Statistics

Total Number of Observations	24	Number of Distinct Observations	23
		Number of Missing Observations	77
Minimum	6.3	Mean	21.5
Maximum	32.1	Median	23.35
SD	7.324	Std. Error of Mean	1.495
Coefficient of Variation	0.341	Skewness	-0.874

Normal GOF Test

Shapiro Wilk Test Statistic	0.883	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.916	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.234	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.177	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	24.06	95% Adjusted-CLT UCL (Chen-1995)	23.67
		95% Modified-t UCL (Johnson-1978)	24.02

Gamma GOF Test

A-D Test Statistic	1.96	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.29	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.178	Data Not Gamma Distributed at 5% Significance Level

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	6.217	k star (bias corrected MLE)	5.468
Theta hat (MLE)	3.458	Theta star (bias corrected MLE)	3.932
nu hat (MLE)	298.4	nu star (bias corrected)	262.5
MLE Mean (bias corrected)	21.5	MLE Sd (bias corrected)	9.194
		Approximate Chi Square Value (0.05)	225.9
Adjusted Level of Significance	0.0392	Adjusted Chi Square Value	223.6

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	24.97	95% Adjusted Gamma UCL (use when n<50)	25.24

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.777	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.916	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.309	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.177	Data Not Lognormal at 5% Significance Level

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.841	Mean of logged Data	2.985
Maximum of Logged Data	3.469	SD of logged Data	0.462

Assuming Lognormal Distribution

95% H-UCL	26.58	90% Chebyshev (MVUE) UCL	28.34
95% Chebyshev (MVUE) UCL	31.25	97.5% Chebyshev (MVUE) UCL	35.29
99% Chebyshev (MVUE) UCL	43.21		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

ATTACHMENT G
PROUCL EXPORTS FOR SURFACE SOIL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Nonparametric Distribution Free UCLs

95% CLT UCL	23.96	95% Jackknife UCL	24.06
95% Standard Bootstrap UCL	23.93	95% Bootstrap-t UCL	23.8
95% Hall's Bootstrap UCL	23.7	95% Percentile Bootstrap UCL	23.85
95% BCA Bootstrap UCL	23.7		
90% Chebyshev(Mean, Sd) UCL	25.98	95% Chebyshev(Mean, Sd) UCL	28.02
97.5% Chebyshev(Mean, Sd) UCL	30.84	99% Chebyshev(Mean, Sd) UCL	36.37

Suggested UCL to Use

95% Student's-t UCL	24.06	or 95% Modified-t UCL	24.02

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

FFTA_RA_SO_Metals|LEAD

General Statistics

Total Number of Observations	37	Number of Distinct Observations	29
		Number of Missing Observations	64
Minimum	5.2	Mean	12.57
Maximum	47.5	Median	11.2
SD	6.416	Std. Error of Mean	1.055
Coefficient of Variation	0.51	Skewness	4.66

Normal GOF Test

Shapiro Wilk Test Statistic	0.532	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.262	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	14.35	95% Adjusted-CLT UCL (Chen-1995)	15.17
		95% Modified-t UCL (Johnson-1978)	14.49

Gamma GOF Test

A-D Test Statistic	2.277	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.749	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.189	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	7.587	k star (bias corrected MLE)	6.99
Theta hat (MLE)	1.657	Theta star (bias corrected MLE)	1.798
nu hat (MLE)	561.4	nu star (bias corrected)	517.2
MLE Mean (bias corrected)	12.57	MLE Sd (bias corrected)	4.754
		Approximate Chi Square Value (0.05)	465.5
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	463.4

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	13.97	95% Adjusted Gamma UCL (use when n<50)	14.03

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.848	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.157	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	1.649	Mean of logged Data	2.464
Maximum of Logged Data	3.861	SD of logged Data	0.333

Assuming Lognormal Distribution

95% H-UCL	13.73	90% Chebyshev (MVUE) UCL	14.48
95% Chebyshev (MVUE) UCL	15.42	97.5% Chebyshev (MVUE) UCL	16.73
99% Chebyshev (MVUE) UCL	19.3		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	14.3	95% Jackknife UCL	14.35
95% Standard Bootstrap UCL	14.22	95% Bootstrap-t UCL	16.34
95% Hall's Bootstrap UCL	21.74	95% Percentile Bootstrap UCL	14.62
95% BCA Bootstrap UCL	15.55		
90% Chebyshev(Mean, Sd) UCL	15.73	95% Chebyshev(Mean, Sd) UCL	17.17
97.5% Chebyshev(Mean, Sd) UCL	19.16	99% Chebyshev(Mean, Sd) UCL	23.06

Suggested UCL to Use

95% Student's-t UCL	14.35	or 95% Modified-t UCL	14.49

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|MANGANESE

General Statistics

Total Number of Observations	37	Number of Distinct Observations	33
		Number of Missing Observations	64
Minimum	315	Mean	823.9
Maximum	8600	Median	503
SD	1392	Std. Error of Mean	228.8
Coefficient of Variation	1.689	Skewness	5.206

Normal GOF Test

Shapiro Wilk Test Statistic	0.32	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.458	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	1210	95% Adjusted-CLT UCL (Chen-1995)	1409
		95% Modified-t UCL (Johnson-1978)	1243

Gamma GOF Test

A-D Test Statistic	7.427	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.765	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.398	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.148	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.559	k star (bias corrected MLE)	1.451
Theta hat (MLE)	528.4	Theta star (bias corrected MLE)	567.9
nu hat (MLE)	115.4	nu star (bias corrected)	107.4
MLE Mean (bias corrected)	823.9	MLE Sd (bias corrected)	684
		Approximate Chi Square Value (0.05)	84.44
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	83.56

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	1047	95% Adjusted Gamma UCL (use when n<50)	1059

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.612	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.309	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	5.753	Mean of logged Data	6.36
Maximum of Logged Data	9.06	SD of logged Data	0.614

Assuming Lognormal Distribution

95% H-UCL	857.4	90% Chebyshev (MVUE) UCL	919.1
95% Chebyshev (MVUE) UCL	1021	97.5% Chebyshev (MVUE) UCL	1162
99% Chebyshev (MVUE) UCL	1440		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	1200	95% Jackknife UCL	1210
95% Standard Bootstrap UCL	1184	95% Bootstrap-t UCL	5134
95% Hall's Bootstrap UCL	3312	95% Percentile Bootstrap UCL	1263
95% BCA Bootstrap UCL	1483		
90% Chebyshev(Mean, Sd) UCL	1510	95% Chebyshev(Mean, Sd) UCL	1821
97.5% Chebyshev(Mean, Sd) UCL	2253	99% Chebyshev(Mean, Sd) UCL	3100

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL 1821

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|MERCURY

General Statistics

Total Number of Observations	37	Number of Distinct Observations	20
		Number of Missing Observations	64
Number of Detects	29	Number of Non-Detects	8
Number of Distinct Detects	16	Number of Distinct Non-Detects	4
Minimum Detect	0.0043	Minimum Non-Detect	0.014
Maximum Detect	0.21	Maximum Non-Detect	0.018
Variance Detects	0.00185	Percent Non-Detects	21.62%
Mean Detects	0.0271	SD Detects	0.043
Median Detects	0.01	CV Detects	1.591
Skewness Detects	3.42	Kurtosis Detects	12.6
Mean of Logged Detects	-4.219	SD of Logged Detects	0.993

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.532	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.298	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0229	KM Standard Error of Mean	0.00641
KM SD	0.0383	95% KM (BCA) UCL	0.035
95% KM (t) UCL	0.0338	95% KM (Percentile Bootstrap) UCL	0.0348
95% KM (z) UCL	0.0335	95% KM Bootstrap t UCL	0.0518
90% KM Chebyshev UCL	0.0422	95% KM Chebyshev UCL	0.0509
97.5% KM Chebyshev UCL	0.0629	99% KM Chebyshev UCL	0.0867

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.017	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.776	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.253	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.168	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.954	k star (bias corrected MLE)	0.878
Theta hat (MLE)	0.0284	Theta star (bias corrected MLE)	0.0308
nu hat (MLE)	55.32	nu star (bias corrected)	50.93
Mean (detects)	0.0271		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0043	Mean	0.0236
Maximum	0.21	Median	0.01
SD	0.0386	CV	1.637
k hat (MLE)	1.066	k star (bias corrected MLE)	0.997
Theta hat (MLE)	0.0221	Theta star (bias corrected MLE)	0.0236
nu hat (MLE)	78.87	nu star (bias corrected)	73.81
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (73.81, α)	55.03	Adjusted Chi Square Value (73.81, β)	54.32
95% Gamma Approximate UCL (use when n>=50)	0.0316	95% Gamma Adjusted UCL (use when n<50)	0.032

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0229	SD (KM)	0.0383
Variance (KM)	0.00146	SE of Mean (KM)	0.00641
k hat (KM)	0.359	k star (KM)	0.348
nu hat (KM)	26.6	nu star (KM)	25.78
theta hat (KM)	0.0638	theta star (KM)	0.0659
80% gamma percentile (KM)	0.0363	90% gamma percentile (KM)	0.0663
95% gamma percentile (KM)	0.0999	99% gamma percentile (KM)	0.186

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (25.78, α)	15.21	Adjusted Chi Square Value (25.78, β)	14.85
95% Gamma Approximate KM-UCL (use when n>=50)	0.0389	95% Gamma Adjusted KM-UCL (use when n<50)	0.0398

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.897	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.926	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.202	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.161	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0232	Mean in Log Scale	-4.333
SD in Original Scale	0.0387	SD in Log Scale	0.918
95% t UCL (assumes normality of ROS data)	0.0339	95% Percentile Bootstrap UCL	0.0346
95% BCA Bootstrap UCL	0.0388	95% Bootstrap t UCL	0.0524
95% H-UCL (Log ROS)	0.0284		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-4.36	KM Geo Mean	0.0128
KM SD (logged)	0.918	95% Critical H Value (KM-Log)	2.297
KM Standard Error of Mean (logged)	0.156	95% H-UCL (KM -Log)	0.0277
KM SD (logged)	0.918	95% Critical H Value (KM-Log)	2.297
KM Standard Error of Mean (logged)	0.156		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.023	Mean in Log Scale	-4.348
SD in Original Scale	0.0388	SD in Log Scale	0.912
95% t UCL (Assumes normality)	0.0337	95% H-Stat UCL	0.0278

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 0.0509

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|NICKEL

General Statistics

Total Number of Observations	37	Number of Distinct Observations	31
		Number of Missing Observations	64
Number of Detects	36	Number of Non-Detects	1
Number of Distinct Detects	30	Number of Distinct Non-Detects	1
Minimum Detect	7.1	Minimum Non-Detect	8.9
Maximum Detect	32.2	Maximum Non-Detect	8.9
Variance Detects	30.07	Percent Non-Detects	2.703%
Mean Detects	23.54	SD Detects	5.483
Median Detects	23.7	CV Detects	0.233
Skewness Detects	-0.857	Kurtosis Detects	0.997
Mean of Logged Detects	3.124	SD of Logged Detects	0.291

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.95	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.142	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	23.1	KM Standard Error of Mean	0.994
KM SD	5.963	95% KM (BCA) UCL	24.54
95% KM (t) UCL	24.78	95% KM (Percentile Bootstrap) UCL	24.67
95% KM (z) UCL	24.74	95% KM Bootstrap t UCL	24.57
90% KM Chebyshev UCL	26.08	95% KM Chebyshev UCL	27.43
97.5% KM Chebyshev UCL	29.31	99% KM Chebyshev UCL	32.99

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.071	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.748	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.179	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.147	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	14.57	k star (bias corrected MLE)	13.37
Theta hat (MLE)	1.616	Theta star (bias corrected MLE)	1.76
nu hat (MLE)	1049	nu star (bias corrected)	962.9
Mean (detects)	23.54		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	7.1	Mean	23.28
Maximum	32.2	Median	23.6
SD	5.644	CV	0.242
k hat (MLE)	13.66	k star (bias corrected MLE)	12.57
Theta hat (MLE)	1.704	Theta star (bias corrected MLE)	1.852
nu hat (MLE)	1011	nu star (bias corrected)	930.2
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (930.18, α)	860.4	Adjusted Chi Square Value (930.18, β)	857.5
95% Gamma Approximate UCL (use when n>=50)	25.17	95% Gamma Adjusted UCL (use when n<50)	25.25

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	23.1	SD (KM)	5.963
Variance (KM)	35.55	SE of Mean (KM)	0.994
k hat (KM)	15.01	k star (KM)	13.81
nu hat (KM)	1111	nu star (KM)	1022
theta hat (KM)	1.539	theta star (KM)	1.673
80% gamma percentile (KM)	28.1	90% gamma percentile (KM)	31.34
95% gamma percentile (KM)	34.18	99% gamma percentile (KM)	39.96

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (N/A, α)	948.7	Adjusted Chi Square Value (N/A, β)	945.7
95% Gamma Approximate KM-UCL (use when n>=50)	24.88	95% Gamma Adjusted KM-UCL (use when n<50)	24.96

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.833	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.935	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.194	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.145	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	23.25	Mean in Log Scale	3.109
SD in Original Scale	5.689	SD in Log Scale	0.302
95% t UCL (assumes normality of ROS data)	24.83	95% Percentile Bootstrap UCL	24.72
95% BCA Bootstrap UCL	24.56	95% Bootstrap t UCL	24.66
95% H-UCL (Log ROS)	25.64		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	3.093	KM Geo Mean	22.04
KM SD (logged)	0.34	95% Critical H Value (KM-Log)	1.807
KM Standard Error of Mean (logged)	0.0567	95% H-UCL (KM -Log)	25.87
KM SD (logged)	0.34	95% Critical H Value (KM-Log)	1.807
KM Standard Error of Mean (logged)	0.0567		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	23.03	Mean in Log Scale	3.08
SD in Original Scale	6.252	SD in Log Scale	0.393
95% t UCL (Assumes normality)	24.76	95% H-Stat UCL	26.51

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 24.78

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|SELENIUM

General Statistics

Total Number of Observations	37	Number of Distinct Observations	26
		Number of Missing Observations	64
Number of Detects	25	Number of Non-Detects	12
Number of Distinct Detects	22	Number of Distinct Non-Detects	9
Minimum Detect	0.056	Minimum Non-Detect	0.21
Maximum Detect	6.4	Maximum Non-Detect	4
Variance Detects	1.671	Percent Non-Detects	32.43%
Mean Detects	0.587	SD Detects	1.293
Median Detects	0.23	CV Detects	2.202
Skewness Detects	4.22	Kurtosis Detects	18.7
Mean of Logged Detects	-1.282	SD of Logged Detects	0.979

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.375	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.438	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.459	KM Standard Error of Mean	0.178
KM SD	1.06	95% KM (BCA) UCL	0.803
95% KM (t) UCL	0.76	95% KM (Percentile Bootstrap) UCL	0.769
95% KM (z) UCL	0.752	95% KM Bootstrap t UCL	2.42
90% KM Chebyshev UCL	0.994	95% KM Chebyshev UCL	1.236
97.5% KM Chebyshev UCL	1.573	99% KM Chebyshev UCL	2.234

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	3.514	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.782	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.362	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.181	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.794	k star (bias corrected MLE)	0.725
Theta hat (MLE)	0.74	Theta star (bias corrected MLE)	0.81
nu hat (MLE)	39.68	nu star (bias corrected)	36.25
Mean (detects)	0.587		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.408
Maximum	6.4	Median	0.2
SD	1.088	CV	2.664
k hat (MLE)	0.485	k star (bias corrected MLE)	0.464
Theta hat (MLE)	0.841	Theta star (bias corrected MLE)	0.88
nu hat (MLE)	35.92	nu star (bias corrected)	34.34
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (34.34, α)	21.94	Adjusted Chi Square Value (34.34, β)	21.51
95% Gamma Approximate UCL (use when n>=50)	0.639	95% Gamma Adjusted UCL (use when n<50)	0.652

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.459	SD (KM)	1.06
Variance (KM)	1.124	SE of Mean (KM)	0.178
k hat (KM)	0.187	k star (KM)	0.19
nu hat (KM)	13.86	nu star (KM)	14.07
theta hat (KM)	2.449	theta star (KM)	2.413
80% gamma percentile (KM)	0.588	90% gamma percentile (KM)	1.387
95% gamma percentile (KM)	2.395	99% gamma percentile (KM)	5.194

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (14.07, α)	6.622	Adjusted Chi Square Value (14.07, β)	6.4
95% Gamma Approximate KM-UCL (use when n>=50)	0.975	95% Gamma Adjusted KM-UCL (use when n<50)	1.009

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.831	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.258	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.173	Detected Data Not Lognormal at 5% Significance Level	

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.454	Mean in Log Scale	-1.444
SD in Original Scale	1.074	SD in Log Scale	0.851
95% t UCL (assumes normality of ROS data)	0.752	95% Percentile Bootstrap UCL	0.766
95% BCA Bootstrap UCL	1.066	95% Bootstrap t UCL	3.101
95% H-UCL (Log ROS)	0.465		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-1.444	KM Geo Mean	0.236
KM SD (logged)	0.874	95% Critical H Value (KM-Log)	2.252
KM Standard Error of Mean (logged)	0.159	95% H-UCL (KM -Log)	0.48
KM SD (logged)	0.874	95% Critical H Value (KM-Log)	2.252
KM Standard Error of Mean (logged)	0.159		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.496	Mean in Log Scale	-1.412
SD in Original Scale	1.104	SD in Log Scale	0.928
95% t UCL (Assumes normality)	0.803	95% H-Stat UCL	0.536

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 1.236

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|SILVER

General Statistics

Total Number of Observations	37	Number of Distinct Observations	19
		Number of Missing Observations	64
Minimum	0.02	Mean	0.0489
Maximum	0.22	Median	0.04
SD	0.0354	Std. Error of Mean	0.00582
Coefficient of Variation	0.724	Skewness	3.578

Normal GOF Test

Shapiro Wilk Test Statistic	0.615	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.298	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	0.0587	95% Adjusted-CLT UCL (Chen-1995)	0.0621
		95% Modified-t UCL (Johnson-1978)	0.0593

Gamma GOF Test

A-D Test Statistic	1.904	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.753	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.225	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.146	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	3.741	k star (bias corrected MLE)	3.456
Theta hat (MLE)	0.0131	Theta star (bias corrected MLE)	0.0141
nu hat (MLE)	276.9	nu star (bias corrected)	255.8
MLE Mean (bias corrected)	0.0489	MLE Sd (bias corrected)	0.0263
		Approximate Chi Square Value (0.05)	219.7
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	218.3

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	0.0569	95% Adjusted Gamma UCL (use when n<50)	0.0573

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.903	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.178	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data Not Lognormal at 5% Significance Level	

Data Not Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-3.912	Mean of logged Data	-3.158
Maximum of Logged Data	-1.514	SD of logged Data	0.479

Assuming Lognormal Distribution

95% H-UCL	0.0555	90% Chebyshev (MVUE) UCL	0.0592
95% Chebyshev (MVUE) UCL	0.0645	97.5% Chebyshev (MVUE) UCL	0.0719
99% Chebyshev (MVUE) UCL	0.0863		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	0.0584	95% Jackknife UCL	0.0587
95% Standard Bootstrap UCL	0.058	95% Bootstrap-t UCL	0.0662
95% Hall's Bootstrap UCL	0.0993	95% Percentile Bootstrap UCL	0.0586
95% BCA Bootstrap UCL	0.0615		
90% Chebyshev(Mean, Sd) UCL	0.0663	95% Chebyshev(Mean, Sd) UCL	0.0742
97.5% Chebyshev(Mean, Sd) UCL	0.0852	99% Chebyshev(Mean, Sd) UCL	0.107

Suggested UCL to Use

95% Student's-t UCL	0.0587	or 95% Modified-t UCL	0.0593

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Metals|VANADIUM

General Statistics

Total Number of Observations	37	Number of Distinct Observations	35
		Number of Missing Observations	64
Minimum	17.8	Mean	33.46
Maximum	47	Median	33.7
SD	6.71	Std. Error of Mean	1.103
Coefficient of Variation	0.201	Skewness	-0.236

Normal GOF Test

Shapiro Wilk Test Statistic	0.981	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.0805	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	35.32	95% Adjusted-CLT UCL (Chen-1995)	35.23
		95% Modified-t UCL (Johnson-1978)	35.31

Gamma GOF Test

A-D Test Statistic	0.396	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.747	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.0957	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	23.37	k star (bias corrected MLE)	21.5
Theta hat (MLE)	1.431	Theta star (bias corrected MLE)	1.556
nu hat (MLE)	1730	nu star (bias corrected)	1591
MLE Mean (bias corrected)	33.46	MLE Sd (bias corrected)	7.216
		Approximate Chi Square Value (0.05)	1499
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	1495

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	35.5	95% Adjusted Gamma UCL (use when n<50)	35.59

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.109	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.879	Mean of logged Data	3.489
Maximum of Logged Data	3.85	SD of logged Data	0.217

Assuming Lognormal Distribution

95% H-UCL	35.7	90% Chebyshev (MVUE) UCL	37.12
95% Chebyshev (MVUE) UCL	38.76	97.5% Chebyshev (MVUE) UCL	41.03
99% Chebyshev (MVUE) UCL	45.49		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	35.27	95% Jackknife UCL	35.32
95% Standard Bootstrap UCL	35.26	95% Bootstrap-t UCL	35.31
95% Hall's Bootstrap UCL	35.22	95% Percentile Bootstrap UCL	35.33
95% BCA Bootstrap UCL	35.17		
90% Chebyshev(Mean, Sd) UCL	36.77	95% Chebyshev(Mean, Sd) UCL	38.26
97.5% Chebyshev(Mean, Sd) UCL	40.35	99% Chebyshev(Mean, Sd) UCL	44.43

Suggested UCL to Use

95% Student's-t UCL 35.32

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.

FFTA_RA_SO_Metals|ZINC

General Statistics

Total Number of Observations	37	Number of Distinct Observations	37
		Number of Missing Observations	64
Minimum	34.5	Mean	49.63
Maximum	72	Median	49
SD	8.94	Std. Error of Mean	1.47
Coefficient of Variation	0.18	Skewness	0.512

Normal GOF Test

Shapiro Wilk Test Statistic	0.967	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.11	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	52.11	95% Adjusted-CLT UCL (Chen-1995)	52.18
		95% Modified-t UCL (Johnson-1978)	52.13

Gamma GOF Test

A-D Test Statistic	0.218	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.746	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.0881	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.145	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	32.35	k star (bias corrected MLE)	29.75
Theta hat (MLE)	1.534	Theta star (bias corrected MLE)	1.668
nu hat (MLE)	2394	nu star (bias corrected)	2201
MLE Mean (bias corrected)	49.63	MLE Sd (bias corrected)	9.1
		Approximate Chi Square Value (0.05)	2093
Adjusted Level of Significance	0.0431	Adjusted Chi Square Value	2089

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	52.19	95% Adjusted Gamma UCL (use when n<50)	52.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.98	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.936	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0813	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.144	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.541	Mean of logged Data	3.889
Maximum of Logged Data	4.277	SD of logged Data	0.179

Assuming Lognormal Distribution

95% H-UCL	52.27	90% Chebyshev (MVUE) UCL	54.02
95% Chebyshev (MVUE) UCL	56.02	97.5% Chebyshev (MVUE) UCL	58.78
99% Chebyshev (MVUE) UCL	64.21		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	52.05	95% Jackknife UCL	52.11
95% Standard Bootstrap UCL	52.05	95% Bootstrap-t UCL	52.34
95% Hall's Bootstrap UCL	52.26	95% Percentile Bootstrap UCL	51.91
95% BCA Bootstrap UCL	52.02		
90% Chebyshev(Mean, Sd) UCL	54.04	95% Chebyshev(Mean, Sd) UCL	56.04
97.5% Chebyshev(Mean, Sd) UCL	58.81	99% Chebyshev(Mean, Sd) UCL	64.25

Suggested UCL to Use

95% Student's-t UCL 52.11

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Pest_PCBs|TOTAL AROCLORS

General Statistics

Total Number of Observations	107	Number of Distinct Observations	100
		Number of Missing Observations	18
Number of Detects	103	Number of Non-Detects	4
Number of Distinct Detects	97	Number of Distinct Non-Detects	3
Minimum Detect	0.015	Minimum Non-Detect	0.0097
Maximum Detect	610	Maximum Non-Detect	0.012
Variance Detects	4395	Percent Non-Detects	3.738%
Mean Detects	18.5	SD Detects	66.29
Median Detects	1.9	CV Detects	3.583
Skewness Detects	7.546	Kurtosis Detects	64.24
Mean of Logged Detects	0.808	SD of Logged Detects	2.167

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.298	**Normal GOF Test on Detected Observations Only**	
5% Shapiro Wilk P Value	0	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.39	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.0876	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	17.81	KM Standard Error of Mean	6.297
KM SD	64.82	95% KM (BCA) UCL	29.57
95% KM (t) UCL	28.26	95% KM (Percentile Bootstrap) UCL	28.83
95% KM (z) UCL	28.17	95% KM Bootstrap t UCL	48.1
90% KM Chebyshev UCL	36.7	95% KM Chebyshev UCL	45.26
97.5% KM Chebyshev UCL	57.14	99% KM Chebyshev UCL	80.47

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.28	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.862	Detected Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.151	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.096	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.323	k star (bias corrected MLE)	0.32
Theta hat (MLE)	57.31	Theta star (bias corrected MLE)	57.84
nu hat (MLE)	66.51	nu star (bias corrected)	65.9
Mean (detects)	18.5		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	17.81
Maximum	610	Median	1.8
SD	65.13	CV	3.656
k hat (MLE)	0.303	k star (bias corrected MLE)	0.3
Theta hat (MLE)	58.84	Theta star (bias corrected MLE)	59.29
nu hat (MLE)	64.78	nu star (bias corrected)	64.3
Adjusted Level of Significance (β)	0.0478		
Approximate Chi Square Value (64.30, α)	46.85	Adjusted Chi Square Value (64.30, β)	46.64
95% Gamma Approximate UCL (use when n>=50)	24.45	95% Gamma Adjusted UCL (use when n<50)	24.55

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	17.81	SD (KM)	64.82
Variance (KM)	4202	SE of Mean (KM)	6.297
k hat (KM)	0.0755	k star (KM)	0.0796
nu hat (KM)	16.16	nu star (KM)	17.04
theta hat (KM)	235.9	theta star (KM)	223.7
80% gamma percentile (KM)	8.4	90% gamma percentile (KM)	42.11
95% gamma percentile (KM)	103.6	99% gamma percentile (KM)	316.2

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (17.04, α)	8.7	Adjusted Chi Square Value (17.04, β)	8.619
95% Gamma Approximate KM-UCL (use when n>=50)	34.89	95% Gamma Adjusted KM-UCL (use when n<50)	35.21

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Approximate Test Statistic	0.983	**Shapiro Wilk GOF Test**
5% Shapiro Wilk P Value	0.658	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0507	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.0876	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	17.81	Mean in Log Scale	0.612
SD in Original Scale	65.13	SD in Log Scale	2.349
95% t UCL (assumes normality of ROS data)	28.26	95% Percentile Bootstrap UCL	29.13
95% BCA Bootstrap UCL	35.47	95% Bootstrap t UCL	46.07
95% H-UCL (Log ROS)	68.32		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.604	KM Geo Mean	1.83
KM SD (logged)	2.354	95% Critical H Value (KM-Log)	3.75
KM Standard Error of Mean (logged)	0.229	95% H-UCL (KM -Log)	68.86
KM SD (logged)	2.354	95% Critical H Value (KM-Log)	3.75
KM Standard Error of Mean (logged)	0.229		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	17.81	Mean in Log Scale	0.583
SD in Original Scale	65.13	SD in Log Scale	2.413
95% t UCL (Assumes normality)	28.26	95% H-Stat UCL	80.84

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL 68.86

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Pest_PCBs|4,4-DDT

General Statistics

Total Number of Observations	30	Number of Distinct Observations	18
		Number of Missing Observations	67
Number of Detects	10	Number of Non-Detects	20
Number of Distinct Detects	10	Number of Distinct Non-Detects	8
Minimum Detect	0.0032	Minimum Non-Detect	3.3000E-4
Maximum Detect	0.76	Maximum Non-Detect	0.935
Variance Detects	0.0614	Percent Non-Detects	66.67%
Mean Detects	0.15	SD Detects	0.248
Median Detects	0.031	CV Detects	1.656
Skewness Detects	2.104	Kurtosis Detects	4.084
Mean of Logged Detects	-3.2	SD of Logged Detects	1.79

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.661	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.321	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0518	KM Standard Error of Mean	0.0304
KM SD	0.155	95% KM (BCA) UCL	0.111
95% KM (t) UCL	0.103	95% KM (Percentile Bootstrap) UCL	0.105
95% KM (z) UCL	0.102	95% KM Bootstrap t UCL	0.276
90% KM Chebyshev UCL	0.143	95% KM Chebyshev UCL	0.184
97.5% KM Chebyshev UCL	0.241	99% KM Chebyshev UCL	0.354

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.474	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.779	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.205	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.281	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.49	k star (bias corrected MLE)	0.41
Theta hat (MLE)	0.305	Theta star (bias corrected MLE)	0.365
nu hat (MLE)	9.802	nu star (bias corrected)	8.195
Mean (detects)	0.15		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0032	Mean	0.0565
Maximum	0.76	Median	0.01
SD	0.153	CV	2.714
k hat (MLE)	0.502	k star (bias corrected MLE)	0.474
Theta hat (MLE)	0.113	Theta star (bias corrected MLE)	0.119
nu hat (MLE)	30.14	nu star (bias corrected)	28.46
Adjusted Level of Significance (β)	0.041		
Approximate Chi Square Value (28.46, α)	17.28	Adjusted Chi Square Value (28.46, β)	16.78
95% Gamma Approximate UCL (use when n>=50)	0.0931	95% Gamma Adjusted UCL (use when n<50)	0.0959

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0518	SD (KM)	0.155
Variance (KM)	0.0241	SE of Mean (KM)	0.0304
k hat (KM)	0.111	k star (KM)	0.122
nu hat (KM)	6.684	nu star (KM)	7.349
theta hat (KM)	0.465	theta star (KM)	0.423
80% gamma percentile (KM)	0.0465	90% gamma percentile (KM)	0.148
95% gamma percentile (KM)	0.295	99% gamma percentile (KM)	0.742

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (7.35, α)	2.364	Adjusted Chi Square Value (7.35, β)	2.204
95% Gamma Approximate KM-UCL (use when n>=50)	0.161	95% Gamma Adjusted KM-UCL (use when n<50)	0.173

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.969	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.842	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.125	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.262	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0501	Mean in Log Scale	-7.183
SD in Original Scale	0.155	SD in Log Scale	3.342
95% t UCL (assumes normality of ROS data)	0.0983	95% Percentile Bootstrap UCL	0.102
95% BCA Bootstrap UCL	0.123	95% Bootstrap t UCL	0.281
95% H-UCL (Log ROS)	9.237		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.356	KM Geo Mean	0.00174
KM SD (logged)	2.497	95% Critical H Value (KM-Log)	4.741
KM Standard Error of Mean (logged)	0.489	95% H-UCL (KM -Log)	0.354
KM SD (logged)	2.497	95% Critical H Value (KM-Log)	4.741
KM Standard Error of Mean (logged)	0.489		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0659	Mean in Log Scale	-5.711
SD in Original Scale	0.173	SD in Log Scale	2.428
95% t UCL (Assumes normality)	0.119	95% H-Stat UCL	0.509

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ı Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 0.173

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Pest_PCBs|DIELDRIN

General Statistics

Total Number of Observations	30	Number of Distinct Observations	16
		Number of Missing Observations	67
Number of Detects	11	Number of Non-Detects	19
Number of Distinct Detects	9	Number of Distinct Non-Detects	8
Minimum Detect	0.0018	Minimum Non-Detect	3.2000E-4
Maximum Detect	0.48	Maximum Non-Detect	0.935
Variance Detects	0.0201	Percent Non-Detects	63.33%
Mean Detects	0.0676	SD Detects	0.142
Median Detects	0.017	CV Detects	2.097
Skewness Detects	2.946	Kurtosis Detects	8.997
Mean of Logged Detects	-4.281	SD of Logged Detects	1.9

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.528	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.382	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0259	KM Standard Error of Mean	0.0174
KM SD	0.0894	95% KM (BCA) UCL	0.0602
95% KM (t) UCL	0.0555	95% KM (Percentile Bootstrap) UCL	0.0571
95% KM (z) UCL	0.0545	95% KM Bootstrap t UCL	0.214
90% KM Chebyshev UCL	0.0781	95% KM Chebyshev UCL	0.102
97.5% KM Chebyshev UCL	0.135	99% KM Chebyshev UCL	0.199

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.708	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.798	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.206	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.272	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.413	k star (bias corrected MLE)	0.361
Theta hat (MLE)	0.164	Theta star (bias corrected MLE)	0.188
nu hat (MLE)	9.076	nu star (bias corrected)	7.934
Mean (detects)	0.0676		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0018	Mean	0.0311
Maximum	0.48	Median	0.01
SD	0.0879	CV	2.824
k hat (MLE)	0.607	k star (bias corrected MLE)	0.568
Theta hat (MLE)	0.0513	Theta star (bias corrected MLE)	0.0548
nu hat (MLE)	36.4	nu star (bias corrected)	34.09
Adjusted Level of Significance (β)	0.041		
Approximate Chi Square Value (34.09, α)	21.74	Adjusted Chi Square Value (34.09, β)	21.17
95% Gamma Approximate UCL (use when n>=50)	0.0488	95% Gamma Adjusted UCL (use when n<50)	0.0501

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0259	SD (KM)	0.0894
Variance (KM)	0.008	SE of Mean (KM)	0.0174
k hat (KM)	0.0837	k star (KM)	0.0976
nu hat (KM)	5.023	nu star (KM)	5.854
theta hat (KM)	0.309	theta star (KM)	0.265
80% gamma percentile (KM)	0.0173	90% gamma percentile (KM)	0.0682
95% gamma percentile (KM)	0.15	99% gamma percentile (KM)	0.416

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.85, α)	1.566	Adjusted Chi Square Value (5.85, β)	1.443
95% Gamma Approximate KM-UCL (use when n>=50)	0.0968	95% Gamma Adjusted KM-UCL (use when n<50)	0.105

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.912	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.174	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0249	Mean in Log Scale	-7.889
SD in Original Scale	0.0896	SD in Log Scale	3.278
95% t UCL (assumes normality of ROS data)	0.0527	95% Percentile Bootstrap UCL	0.0557
95% BCA Bootstrap UCL	0.0733	95% Bootstrap t UCL	0.208
95% H-UCL (Log ROS)	3.214		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-6.589	KM Geo Mean	0.00138
KM SD (logged)	2.133	95% Critical H Value (KM-Log)	4.148
KM Standard Error of Mean (logged)	0.418	95% H-UCL (KM -Log)	0.0692
KM SD (logged)	2.133	95% Critical H Value (KM-Log)	4.148
KM Standard Error of Mean (logged)	0.418		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0409	Mean in Log Scale	-5.924
SD in Original Scale	0.12	SD in Log Scale	2.097
95% t UCL (Assumes normality)	0.0782	95% H-Stat UCL	0.119

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ı Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 0.105

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Pest_PCBs|ENDOSULFAN SULFATE

General Statistics

Total Number of Observations	30	Number of Distinct Observations	17
		Number of Missing Observations	67
Number of Detects	7	Number of Non-Detects	23
Number of Distinct Detects	7	Number of Distinct Non-Detects	10
Minimum Detect	0.0025	Minimum Non-Detect	2.7000E-4
Maximum Detect	0.22	Maximum Non-Detect	0.935
Variance Detects	0.00781	Percent Non-Detects	76.67%
Mean Detects	0.0592	SD Detects	0.0883
Median Detects	0.011	CV Detects	1.492
Skewness Detects	1.439	Kurtosis Detects	0.493
Mean of Logged Detects	-3.974	SD of Logged Detects	1.655

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.691	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.406	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0145	KM Standard Error of Mean	0.00952
KM SD	0.0474	95% KM (BCA) UCL	0.0312
95% KM (t) UCL	0.0307	95% KM (Percentile Bootstrap) UCL	0.0297
95% KM (z) UCL	0.0302	95% KM Bootstrap t UCL	0.166
90% KM Chebyshev UCL	0.0431	95% KM Chebyshev UCL	0.056
97.5% KM Chebyshev UCL	0.0739	99% KM Chebyshev UCL	0.109

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.742	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.749	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.35	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.326	Detected Data Not Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.546	k star (bias corrected MLE)	0.407
Theta hat (MLE)	0.108	Theta star (bias corrected MLE)	0.145
nu hat (MLE)	7.645	nu star (bias corrected)	5.702
Mean (detects)	0.0592		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0025	Mean	0.0215
Maximum	0.22	Median	0.01
SD	0.0454	CV	2.114
k hat (MLE)	0.941	k star (bias corrected MLE)	0.87
Theta hat (MLE)	0.0228	Theta star (bias corrected MLE)	0.0247
nu hat (MLE)	56.49	nu star (bias corrected)	52.17
Adjusted Level of Significance (β)	0.041		
Approximate Chi Square Value (52.17, α)	36.58	Adjusted Chi Square Value (52.17, β)	35.83
95% Gamma Approximate UCL (use when n>=50)	0.0306	95% Gamma Adjusted UCL (use when n<50)	0.0313

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0145	SD (KM)	0.0474
Variance (KM)	0.00225	SE of Mean (KM)	0.00952
k hat (KM)	0.0935	k star (KM)	0.106
nu hat (KM)	5.607	nu star (KM)	6.38
theta hat (KM)	0.155	theta star (KM)	0.136
80% gamma percentile (KM)	0.011	90% gamma percentile (KM)	0.0395
95% gamma percentile (KM)	0.0838	99% gamma percentile (KM)	0.223

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (6.38, α)	1.837	Adjusted Chi Square Value (6.38, β)	1.7
95% Gamma Approximate KM-UCL (use when n>=50)	0.0504	95% Gamma Adjusted KM-UCL (use when n<50)	0.0544

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.887	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.269	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0139	Mean in Log Scale	-8.899
SD in Original Scale	0.0476	SD in Log Scale	3.272
95% t UCL (assumes normality of ROS data)	0.0286	95% Percentile Bootstrap UCL	0.0304
95% BCA Bootstrap UCL	0.037	95% Bootstrap t UCL	0.176
95% H-UCL (Log ROS)	1.136		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-7.189	KM Geo Mean	7.5457E-4
KM SD (logged)	1.966	95% Critical H Value (KM-Log)	3.881
KM Standard Error of Mean (logged)	0.395	95% H-UCL (KM -Log)	0.0215
KM SD (logged)	1.966	95% Critical H Value (KM-Log)	3.881
KM Standard Error of Mean (logged)	0.395		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.03	Mean in Log Scale	-6.362
SD in Original Scale	0.0952	SD in Log Scale	2.054
95% t UCL (Assumes normality)	0.0595	95% H-Stat UCL	0.0659

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ı Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 0.0544

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Pest_PCBs|ENDRIN KETONE

General Statistics

Total Number of Observations	30	Number of Distinct Observations	25
		Number of Missing Observations	67
Number of Detects	25	Number of Non-Detects	5
Number of Distinct Detects	22	Number of Distinct Non-Detects	3
Minimum Detect	0.0011	Minimum Non-Detect	0.0017
Maximum Detect	3	Maximum Non-Detect	0.935
Variance Detects	0.507	Percent Non-Detects	16.67%
Mean Detects	0.33	SD Detects	0.712
Median Detects	0.044	CV Detects	2.158
Skewness Detects	2.959	Kurtosis Detects	8.862
Mean of Logged Detects	-3.001	SD of Logged Detects	2.109

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.522	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.346	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.278	KM Standard Error of Mean	0.121
KM SD	0.648	95% KM (BCA) UCL	0.495
95% KM (t) UCL	0.484	95% KM (Percentile Bootstrap) UCL	0.492
95% KM (z) UCL	0.477	95% KM Bootstrap t UCL	0.838
90% KM Chebyshev UCL	0.641	95% KM Chebyshev UCL	0.805
97.5% KM Chebyshev UCL	1.033	99% KM Chebyshev UCL	1.481

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.25	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.839	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.195	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.188	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.355	k star (bias corrected MLE)	0.339
Theta hat (MLE)	0.93	Theta star (bias corrected MLE)	0.974
nu hat (MLE)	17.73	nu star (bias corrected)	16.94
Mean (detects)	0.33		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0011	Mean	0.277
Maximum	3	Median	0.0205
SD	0.659	CV	2.382
k hat (MLE)	0.341	k star (bias corrected MLE)	0.329
Theta hat (MLE)	0.812	Theta star (bias corrected MLE)	0.841
nu hat (MLE)	20.44	nu star (bias corrected)	19.73
Adjusted Level of Significance (β)	0.041		
Approximate Chi Square Value (19.73, α)	10.65	Adjusted Chi Square Value (19.73, β)	10.27
95% Gamma Approximate UCL (use when n>=50)	0.512	95% Gamma Adjusted UCL (use when n<50)	0.532

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.278	SD (KM)	0.648
Variance (KM)	0.42	SE of Mean (KM)	0.121
k hat (KM)	0.184	k star (KM)	0.188
nu hat (KM)	11.04	nu star (KM)	11.27
theta hat (KM)	1.512	theta star (KM)	1.481
80% gamma percentile (KM)	0.354	90% gamma percentile (KM)	0.84
95% gamma percentile (KM)	1.456	99% gamma percentile (KM)	3.169

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (11.27, α)	4.748	Adjusted Chi Square Value (11.27, β)	4.505
95% Gamma Approximate KM-UCL (use when n>=50)	0.66	95% Gamma Adjusted KM-UCL (use when n<50)	0.695

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.974	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0947	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.276	Mean in Log Scale	-3.535
SD in Original Scale	0.659	SD in Log Scale	2.329
95% t UCL (assumes normality of ROS data)	0.48	95% Percentile Bootstrap UCL	0.487
95% BCA Bootstrap UCL	0.555	95% Bootstrap t UCL	0.849
95% H-UCL (Log ROS)	3.03		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.521	KM Geo Mean	0.0296
KM SD (logged)	2.287	95% Critical H Value (KM-Log)	4.396
KM Standard Error of Mean (logged)	0.432	95% H-UCL (KM -Log)	2.612
KM SD (logged)	2.287	95% Critical H Value (KM-Log)	4.396
KM Standard Error of Mean (logged)	0.432		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.291	Mean in Log Scale	-3.465
SD in Original Scale	0.659	SD in Log Scale	2.426
95% t UCL (Assumes normality)	0.495	95% H-Stat UCL	4.757

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL 1.033

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_Pest_PCBs|METHOXYCHLOR

General Statistics

Total Number of Observations	30	Number of Distinct Observations	23
		Number of Missing Observations	67
Number of Detects	6	Number of Non-Detects	24
Number of Distinct Detects	6	Number of Distinct Non-Detects	17
Minimum Detect	0.012	Minimum Non-Detect	0.0014
Maximum Detect	1.6	Maximum Non-Detect	4.95
Variance Detects	0.384	Percent Non-Detects	80%
Mean Detects	0.421	SD Detects	0.619
Median Detects	0.137	CV Detects	1.471
Skewness Detects	1.847	Kurtosis Detects	3.28
Mean of Logged Detects	-2.044	SD of Logged Detects	1.857

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.747	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.3	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0882	KM Standard Error of Mean	0.0627
KM SD	0.308	95% KM (BCA) UCL	0.192
95% KM (t) UCL	0.195	95% KM (Percentile Bootstrap) UCL	0.193
95% KM (z) UCL	0.191	95% KM Bootstrap t UCL	0.602
90% KM Chebyshev UCL	0.276	95% KM Chebyshev UCL	0.362
97.5% KM Chebyshev UCL	0.48	99% KM Chebyshev UCL	0.712

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.27	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.734	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.213	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.348	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.534	k star (bias corrected MLE)	0.378
Theta hat (MLE)	0.789	Theta star (bias corrected MLE)	1.114
nu hat (MLE)	6.402	nu star (bias corrected)	4.534
Mean (detects)	0.421		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.0922
Maximum	1.6	Median	0.01
SD	0.307	CV	3.327
k hat (MLE)	0.387	k star (bias corrected MLE)	0.371
Theta hat (MLE)	0.238	Theta star (bias corrected MLE)	0.249
nu hat (MLE)	23.22	nu star (bias corrected)	22.23
Adjusted Level of Significance (β)	0.041		
Approximate Chi Square Value (22.23, α)	12.51	Adjusted Chi Square Value (22.23, β)	12.09
95% Gamma Approximate UCL (use when n>=50)	0.164	95% Gamma Adjusted UCL (use when n<50)	0.17

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0882	SD (KM)	0.308
Variance (KM)	0.095	SE of Mean (KM)	0.0627
k hat (KM)	0.0819	k star (KM)	0.0959
nu hat (KM)	4.913	nu star (KM)	5.755
theta hat (KM)	1.077	theta star (KM)	0.92
80% gamma percentile (KM)	0.0575	90% gamma percentile (KM)	0.231
95% gamma percentile (KM)	0.513	99% gamma percentile (KM)	1.431

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.76, α)	1.516	Adjusted Chi Square Value (5.76, β)	1.395
95% Gamma Approximate KM-UCL (use when n>=50)	0.335	95% Gamma Adjusted KM-UCL (use when n<50)	0.364

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.972	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.148	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0843	Mean in Log Scale	-8.6
SD in Original Scale	0.309	SD in Log Scale	3.7
95% t UCL (assumes normality of ROS data)	0.18	95% Percentile Bootstrap UCL	0.185
95% BCA Bootstrap UCL	0.244	95% Bootstrap t UCL	0.695
95% H-UCL (Log ROS)	18.13		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.635	KM Geo Mean	0.00357
KM SD (logged)	1.99	95% Critical H Value (KM-Log)	3.919
KM Standard Error of Mean (logged)	0.405	95% H-UCL (KM -Log)	0.11
KM SD (logged)	1.99	95% Critical H Value (KM-Log)	3.919
KM Standard Error of Mean (logged)	0.405		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.169	Mean in Log Scale	-4.911
SD in Original Scale	0.533	SD in Log Scale	2.178
95% t UCL (Assumes normality)	0.335	95% H-Stat UCL	0.435

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.195

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_SVOCs|1,1-BIPHENYL

General Statistics

Total Number of Observations	41	Number of Distinct Observations	21
		Number of Missing Observations	60
Number of Detects	9	Number of Non-Detects	32
Number of Distinct Detects	9	Number of Distinct Non-Detects	12
Minimum Detect	0.0014	Minimum Non-Detect	0.0088
Maximum Detect	0.64	Maximum Non-Detect	0.38
Variance Detects	0.0435	Percent Non-Detects	78.05%
Mean Detects	0.0881	SD Detects	0.209
Median Detects	0.0054	CV Detects	2.366
Skewness Detects	2.917	Kurtosis Detects	8.615
Mean of Logged Detects	-4.546	SD of Logged Detects	2.165

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.483	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.425	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.0216	KM Standard Error of Mean	0.0164
KM SD	0.0987	95% KM (BCA) UCL	0.0531
95% KM (t) UCL	0.0492	95% KM (Percentile Bootstrap) UCL	0.0518
95% KM (z) UCL	0.0486	95% KM Bootstrap t UCL	0.202
90% KM Chebyshev UCL	0.0708	95% KM Chebyshev UCL	0.0931
97.5% KM Chebyshev UCL	0.124	99% KM Chebyshev UCL	0.185

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.902	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.803	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.241	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.301	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.322	k star (bias corrected MLE)	0.289
Theta hat (MLE)	0.274	Theta star (bias corrected MLE)	0.305
nu hat (MLE)	5.797	nu star (bias corrected)	5.198
Mean (detects)	0.0881		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0014	Mean	0.0287
Maximum	0.64	Median	0.01
SD	0.0988	CV	3.445
k hat (MLE)	0.631	k star (bias corrected MLE)	0.601
Theta hat (MLE)	0.0454	Theta star (bias corrected MLE)	0.0477
nu hat (MLE)	51.76	nu star (bias corrected)	49.31
Adjusted Level of Significance (β)	0.0441		
Approximate Chi Square Value (49.31, α)	34.19	Adjusted Chi Square Value (49.31, β)	33.73
95% Gamma Approximate UCL (use when n>=50)	0.0414	95% Gamma Adjusted UCL (use when n<50)	0.0419

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.0216	SD (KM)	0.0987
Variance (KM)	0.00975	SE of Mean (KM)	0.0164
k hat (KM)	0.0481	k star (KM)	0.0608
nu hat (KM)	3.941	nu star (KM)	4.986
theta hat (KM)	0.45	theta star (KM)	0.356
80% gamma percentile (KM)	0.00543	90% gamma percentile (KM)	0.0413
95% gamma percentile (KM)	0.122	99% gamma percentile (KM)	0.434

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (4.99, α)	1.146	Adjusted Chi Square Value (4.99, β)	1.081
95% Gamma Approximate KM-UCL (use when n>=50)	0.0942	95% Gamma Adjusted KM-UCL (use when n<50)	0.0998

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.87	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.231	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.0223	Mean in Log Scale	-5.696
SD in Original Scale	0.0998	SD in Log Scale	1.464
95% t UCL (assumes normality of ROS data)	0.0486	95% Percentile Bootstrap UCL	0.053
95% BCA Bootstrap UCL	0.0717	95% Bootstrap t UCL	0.233
95% H-UCL (Log ROS)	0.0192		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-5.78	KM Geo Mean	0.00309
KM SD (logged)	1.268	95% Critical H Value (KM-Log)	2.662
KM Standard Error of Mean (logged)	0.287	95% H-UCL (KM -Log)	0.0118
KM SD (logged)	1.268	95% Critical H Value (KM-Log)	2.662
KM Standard Error of Mean (logged)	0.287		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.0412	Mean in Log Scale	-4.71
SD in Original Scale	0.11	SD in Log Scale	1.442
95% t UCL (Assumes normality)	0.07	95% H-Stat UCL	0.0491

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ı Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 0.0998

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_SVOCs|HPAH, TOTAL (8270 Methods)

General Statistics

Total Number of Observations	37	Number of Distinct Observations	28
		Number of Missing Observations	64
Number of Detects	26	Number of Non-Detects	11
Number of Distinct Detects	23	Number of Distinct Non-Detects	6
Minimum Detect	0.002	Minimum Non-Detect	0.22
Maximum Detect	57	Maximum Non-Detect	0.29
Variance Detects	124.2	Percent Non-Detects	29.73%
Mean Detects	2.399	SD Detects	11.14
Median Detects	0.063	CV Detects	4.645
Skewness Detects	5.09	Kurtosis Detects	25.93
Mean of Logged Detects	-2.686	SD of Logged Detects	2.236

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.222	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.494	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.702	KM Standard Error of Mean	1.546
KM SD	9.222	95% KM (BCA) UCL	4.795
95% KM (t) UCL	4.312	95% KM (Percentile Bootstrap) UCL	4.736
95% KM (z) UCL	4.245	95% KM Bootstrap t UCL	68.1
90% KM Chebyshev UCL	6.34	95% KM Chebyshev UCL	8.441
97.5% KM Chebyshev UCL	11.36	99% KM Chebyshev UCL	17.09

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	4.043	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.898	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.311	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.19	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.206	k star (bias corrected MLE)	0.208
Theta hat (MLE)	11.66	Theta star (bias corrected MLE)	11.55
nu hat (MLE)	10.7	nu star (bias corrected)	10.8
Mean (detects)	2.399		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.002	Mean	1.689
Maximum	57	Median	0.015
SD	9.351	CV	5.538
k hat (MLE)	0.195	k star (bias corrected MLE)	0.198
Theta hat (MLE)	8.643	Theta star (bias corrected MLE)	8.547
nu hat (MLE)	14.46	nu star (bias corrected)	14.62
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (14.62, α)	6.997	Adjusted Chi Square Value (14.62, β)	6.768
95% Gamma Approximate UCL (use when n>=50)	3.528	95% Gamma Adjusted UCL (use when n<50)	3.647

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.702	SD (KM)	9.222
Variance (KM)	85.04	SE of Mean (KM)	1.546
k hat (KM)	0.0341	k star (KM)	0.0493
nu hat (KM)	2.52	nu star (KM)	3.649
theta hat (KM)	49.98	theta star (KM)	34.51
80% gamma percentile (KM)	0.22	90% gamma percentile (KM)	2.55
95% gamma percentile (KM)	9.005	99% gamma percentile (KM)	37.22

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (3.65, α)	0.588	Adjusted Chi Square Value (3.65, β)	0.54
95% Gamma Approximate KM-UCL (use when n>=50)	10.56	95% Gamma Adjusted KM-UCL (use when n<50)	11.49

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.92	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.0992	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.17	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.699	Mean in Log Scale	-2.902
SD in Original Scale	9.35	SD in Log Scale	1.944
95% t UCL (assumes normality of ROS data)	4.294	95% Percentile Bootstrap UCL	4.763
95% BCA Bootstrap UCL	6.357	95% Bootstrap t UCL	69.07
95% H-UCL (Log ROS)	1.186		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.956	KM Geo Mean	0.052
KM SD (logged)	2.009	95% Critical H Value (KM-Log)	3.743
KM Standard Error of Mean (logged)	0.366	95% H-UCL (KM -Log)	1.37
KM SD (logged)	2.009	95% Critical H Value (KM-Log)	3.743
KM Standard Error of Mean (logged)	0.366		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.724	Mean in Log Scale	-2.496
SD in Original Scale	9.345	SD in Log Scale	1.888
95% t UCL (Assumes normality)	4.318	95% H-Stat UCL	1.502

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL 11.36

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_SVOCs|LPAH, TOTAL (8270 Methods)

General Statistics

Total Number of Observations	37	Number of Distinct Observations	19
		Number of Missing Observations	64
Number of Detects	9	Number of Non-Detects	28
Number of Distinct Detects	9	Number of Distinct Non-Detects	10
Minimum Detect	0.0027	Minimum Non-Detect	0.22
Maximum Detect	15	Maximum Non-Detect	1.6
Variance Detects	25.29	Percent Non-Detects	75.68%
Mean Detects	2.334	SD Detects	5.029
Median Detects	0.13	CV Detects	2.155
Skewness Detects	2.498	Kurtosis Detects	6.305
Mean of Logged Detects	-2.095	SD of Logged Detects	2.982

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.555	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.419	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.618	KM Standard Error of Mean	0.443
KM SD	2.534	95% KM (BCA) UCL	1.418
95% KM (t) UCL	1.365	95% KM (Percentile Bootstrap) UCL	1.418
95% KM (z) UCL	1.346	95% KM Bootstrap t UCL	9.234
90% KM Chebyshev UCL	1.946	95% KM Chebyshev UCL	2.547
97.5% KM Chebyshev UCL	3.382	99% KM Chebyshev UCL	5.022

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.592	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.83	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.243	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.305	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.243	k star (bias corrected MLE)	0.236
Theta hat (MLE)	9.619	Theta star (bias corrected MLE)	9.896
nu hat (MLE)	4.367	nu star (bias corrected)	4.245
Mean (detects)	2.334		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.0027	Mean	0.636
Maximum	15	Median	0.01
SD	2.575	CV	4.05
k hat (MLE)	0.234	k star (bias corrected MLE)	0.233
Theta hat (MLE)	2.715	Theta star (bias corrected MLE)	2.726
nu hat (MLE)	17.33	nu star (bias corrected)	17.26
Adjusted Level of Significance (β)	0.0431		
Approximate Chi Square Value (17.26, α)	8.856	Adjusted Chi Square Value (17.26, β)	8.594
95% Gamma Approximate UCL (use when n>=50)	1.239	95% Gamma Adjusted UCL (use when n<50)	1.277

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.618	SD (KM)	2.534
Variance (KM)	6.419	SE of Mean (KM)	0.443
k hat (KM)	0.0595	k star (KM)	0.0727
nu hat (KM)	4.401	nu star (KM)	5.377
theta hat (KM)	10.39	theta star (KM)	8.502
80% gamma percentile (KM)	0.241	90% gamma percentile (KM)	1.372
95% gamma percentile (KM)	3.568	99% gamma percentile (KM)	11.44

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.38, α)	1.33	Adjusted Chi Square Value (5.38, β)	1.246
95% Gamma Approximate KM-UCL (use when n>=50)	2.497	95% Gamma Adjusted KM-UCL (use when n<50)	2.666

95% Gamma Adjusted KM-UCL (use when k<=1 and 15 < n < 50)

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.116	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.608	Mean in Log Scale	-3.344
SD in Original Scale	2.57	SD in Log Scale	1.997
95% t UCL (assumes normality of ROS data)	1.322	95% Percentile Bootstrap UCL	1.422
95% BCA Bootstrap UCL	1.818	95% Bootstrap t UCL	15.21
95% H-UCL (Log ROS)	0.896		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-3.344	KM Geo Mean	0.0353
KM SD (logged)	2.1	95% Critical H Value (KM-Log)	3.878
KM Standard Error of Mean (logged)	0.688	95% H-UCL (KM -Log)	1.245
KM SD (logged)	2.1	95% Critical H Value (KM-Log)	3.878
KM Standard Error of Mean (logged)	0.688		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.701	Mean in Log Scale	-1.952
SD in Original Scale	2.554	SD in Log Scale	1.464
95% t UCL (Assumes normality)	1.409	95% H-Stat UCL	0.856

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

ı Adjusted KM-UCL (use when k<=1 and 15 < n < 50 but k<=1) 2.666

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

FFTA_RA_SO_VOCs|ACETONE

General Statistics

Total Number of Observations	41	Number of Distinct Observations	33
		Number of Missing Observations	60
Number of Detects	25	Number of Non-Detects	16
Number of Distinct Detects	20	Number of Distinct Non-Detects	15
Minimum Detect	0.037	Minimum Non-Detect	0.021
Maximum Detect	2	Maximum Non-Detect	0.17
Variance Detects	0.216	Percent Non-Detects	39.02%
Mean Detects	0.26	SD Detects	0.465
Median Detects	0.12	CV Detects	1.788
Skewness Detects	3.057	Kurtosis Detects	9.167
Mean of Logged Detects	-2.08	SD of Logged Detects	1.039

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.494	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.391	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.172	KM Standard Error of Mean	0.0594
KM SD	0.372	95% KM (BCA) UCL	0.287
95% KM (t) UCL	0.272	95% KM (Percentile Bootstrap) UCL	0.276
95% KM (z) UCL	0.27	95% KM Bootstrap t UCL	0.614
90% KM Chebyshev UCL	0.35	95% KM Chebyshev UCL	0.431
97.5% KM Chebyshev UCL	0.543	99% KM Chebyshev UCL	0.763

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	2.711	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.781	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.306	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.181	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.809	k star (bias corrected MLE)	0.739
Theta hat (MLE)	0.321	Theta star (bias corrected MLE)	0.352
nu hat (MLE)	40.47	nu star (bias corrected)	36.94
Mean (detects)	0.26		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.162
Maximum	2	Median	0.053
SD	0.38	CV	2.344
k hat (MLE)	0.508	k star (bias corrected MLE)	0.487
Theta hat (MLE)	0.319	Theta star (bias corrected MLE)	0.333
nu hat (MLE)	41.66	nu star (bias corrected)	39.94
Adjusted Level of Significance (β)	0.0441		
Approximate Chi Square Value (39.94, α)	26.46	Adjusted Chi Square Value (39.94, β)	26.06
95% Gamma Approximate UCL (use when n>=50)	0.245	95% Gamma Adjusted UCL (use when n<50)	0.249

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.172	SD (KM)	0.372
Variance (KM)	0.139	SE of Mean (KM)	0.0594
k hat (KM)	0.213	k star (KM)	0.214
nu hat (KM)	17.5	nu star (KM)	17.55
theta hat (KM)	0.806	theta star (KM)	0.803
80% gamma percentile (KM)	0.234	90% gamma percentile (KM)	0.52
95% gamma percentile (KM)	0.87	99% gamma percentile (KM)	1.824

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (17.55, α)	9.069	Adjusted Chi Square Value (17.55, β)	8.845
95% Gamma Approximate KM-UCL (use when n>=50)	0.333	95% Gamma Adjusted KM-UCL (use when n<50)	0.341

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.858	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.918	Detected Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.216	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.173	Detected Data Not Lognormal at 5% Significance Level

Detected Data Not Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.168	Mean in Log Scale	-2.774
SD in Original Scale	0.378	SD in Log Scale	1.234
95% t UCL (assumes normality of ROS data)	0.267	95% Percentile Bootstrap UCL	0.279
95% BCA Bootstrap UCL	0.308	95% Bootstrap t UCL	0.439
95% H-UCL (Log ROS)	0.223		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.64	KM Geo Mean	0.0714
KM SD (logged)	1.106	95% Critical H Value (KM-Log)	2.471
KM Standard Error of Mean (logged)	0.183	95% H-UCL (KM -Log)	0.203
KM SD (logged)	1.106	95% Critical H Value (KM-Log)	2.471
KM Standard Error of Mean (logged)	0.183		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.172	Mean in Log Scale	-2.652
SD in Original Scale	0.377	SD in Log Scale	1.158
95% t UCL (Assumes normality)	0.271	95% H-Stat UCL	0.219

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution at 5% Significance Level

Suggested UCL to Use

95% KM (Chebyshev) UCL 0.431

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.13/2/2017 11:51:39 AM

User Selected Options

From File SurfaceSoil_Rev_3-27.xls

Full Precision OFF

From File: SurfaceSoil_Rev_3-27.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
FFTA_RA_SO_Metals|CADMIUM	37	64	37	0	0.00%	N/A	N/A	0.148	0.0513	0.226	1.528
FFTA_RA_SO_Metals|CHROMIUM, TOTAL	48	54	47	1	2.08%	10.6	10.6	26.81	40.5	6.364	0.237
FFTA_RA_SO_Metals|MERCURY	37	64	29	8	21.62%	0.014	0.018	0.0229	0.00146	0.0383	1.668
FFTA_RA_SO_Metals|NICKEL	37	64	36	1	2.70%	8.9	8.9	23.1	35.55	5.963	0.258
FFTA_RA_SO_Metals|SELENIUM	37	64	25	12	32.43%	0.21	4	0.459	1.124	1.06	2.31
FFTA_RA_SO_Metals|SILVER	37	64	37	0	0.00%	N/A	N/A	0.0489	0.00125	0.0354	0.724
FFTA_RA_SO_Pest_PCBs|TOTAL AROCLORS	107	18	103	4	3.74%	0.0097	0.012	17.81	4202	64.82	3.639
FFTA_RA_SO_Pest_PCBs|4,4-DDT	30	67	10	20	66.67%	3.3000E-4	0.935	0.0518	0.0241	0.155	2.996
FFTA_RA_SO_Pest_PCBs|DIELDRIN	30	67	11	19	63.33%	3.2000E-4	0.935	0.0259	0.008	0.0894	3.456
FFTA_RA_SO_Pest_PCBs|ENDOSULFAN SULFATE	30	67	7	23	76.67%	2.7000E-4	0.935	0.0145	0.00225	0.0474	3.271
FFTA_RA_SO_Pest_PCBs|ENDRIN KETONE	30	67	25	5	16.67%	0.0017	0.935	0.278	0.42	0.648	2.332
FFTA_RA_SO_Pest_PCBs|METHOXYCHLOR	30	67	6	24	80.00%	0.0014	4.95	0.0882	0.095	0.308	3.494
FFTA_RA_SO_SVOCs|1,1-BIPHENYL	41	60	9	32	78.05%	0.0088	0.38	0.0216	0.00975	0.0987	4.561
FFTA_RA_SO_SVOCs|LPAH, TOTAL (8270 Methods)	37	64	9	28	75.68%	0.22	1.6	0.618	6.419	2.534	4.101
FFTA_RA_SO_SVOCs|HPAH, TOTAL (8270 Methods)	37	64	26	11	29.73%	0.22	0.29	1.702	85.04	9.222	5.419
FFTA_RA_SO_VOCs|ACETONE	41	60	25	16	39.02%	0.021	0.17	0.172	0.139	0.372	2.165

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
FFTA_RA_SO_Metals|CADMIUM	37	64	0.04	1.3	0.148	0.0826	0.0513	0.226	0.0187	4.343	1.528
FFTA_RA_SO_Metals|CHROMIUM, TOTAL	47	54	13.9	42.3	27.16	26.7	36.42	6.035	5.189	0.502	0.222
FFTA_RA_SO_Metals|MERCURY	29	64	0.0043	0.21	0.0271	0.01	0.00185	0.043	0.00741	3.42	1.591
FFTA_RA_SO_Metals|NICKEL	36	64	7.1	32.2	23.54	23.7	30.07	5.483	4.448	-0.857	0.233
FFTA_RA_SO_Metals|SELENIUM	25	64	0.056	6.4	0.587	0.23	1.671	1.293	0.119	4.22	2.202
FFTA_RA_SO_Metals|SILVER	37	64	0.02	0.22	0.0489	0.04	0.00125	0.0354	0.0148	3.578	0.724
FFTA_RA_SO_Pest_PCBs|TOTAL AROCLORS	103	18	0.015	610	18.5	1.9	4395	66.29	2.654	7.546	3.583
FFTA_RA_SO_Pest_PCBs|4,4-DDT	10	67	0.0032	0.76	0.15	0.031	0.0614	0.248	0.0394	2.104	1.656
FFTA_RA_SO_Pest_PCBs|DIELDRIN	11	67	0.0018	0.48	0.0676	0.017	0.0201	0.142	0.0225	2.946	2.097
FFTA_RA_SO_Pest_PCBs|ENDOSULFAN SULFATE	7	67	0.0025	0.22	0.0592	0.011	0.00781	0.0883	0.00726	1.439	1.492
FFTA_RA_SO_Pest_PCBs|ENDRIN KETONE	25	67	0.0011	3	0.33	0.044	0.507	0.712	0.0571	2.959	2.158
FFTA_RA_SO_Pest_PCBs|METHOXYCHLOR	6	67	0.012	1.6	0.421	0.137	0.384	0.619	0.172	1.847	1.471
FFTA_RA_SO_SVOCs|1,1-BIPHENYL	9	60	0.0014	0.64	0.0881	0.0054	0.0435	0.209	0.00593	2.917	2.366
FFTA_RA_SO_SVOCs|LPAH, TOTAL (8270 Methods)	9	64	0.0027	15	2.334	0.13	25.29	5.029	0.186	2.498	2.155
FFTA_RA_SO_SVOCs|HPAH, TOTAL (8270 Methods)	26	64	0.002	57	2.399	0.063	124.2	11.14	0.0821	5.09	4.645
FFTA_RA_SO_VOCs|ACETONE	25	60	0.037	2	0.26	0.12	0.216	0.465	0.0904	3.057	1.788

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
FFTA_RA_SO_Metals|CADMIUM	37	64	0.06	0.0785	0.0799	0.0826	0.11	0.125	0.176	0.44	1.091
FFTA_RA_SO_Metals|CHROMIUM, TOTAL	48	54	19.5	22	22.83	26.65	29.58	30.6	37.16	38.41	40.75
FFTA_RA_SO_Metals|MERCURY	37	64	0.0056	0.00712	0.0078	0.014	0.02	0.03	0.04	0.066	0.181
FFTA_RA_SO_Metals|NICKEL	37	64	15.48	17.98	21.1	23.6	27.1	28.36	29.38	30.88	31.98
FFTA_RA_SO_Metals|SELENIUM	37	64	0.16	0.202	0.21	0.27	0.34	0.35	0.59	2.72	5.536
FFTA_RA_SO_Metals|SILVER	37	64	0.0266	0.03	0.03	0.04	0.05	0.05	0.068	0.104	0.184
FFTA_RA_SO_Pest_PCBs|TOTAL AROCLORS	107	18	0.0798	0.312	0.43	1.8	10	15.16	33.98	67.47	234
FFTA_RA_SO_Pest_PCBs|4,4-DDT	30	67	0.00147	0.0017	0.0017	0.0018	0.0185	0.0262	0.176	0.602	0.884
FFTA_RA_SO_Pest_PCBs|DIELDRIN	30	67	0.00169	0.0017	0.0017	0.0018	0.00515	0.0184	0.0535	0.322	0.803
FFTA_RA_SO_Pest_PCBs|ENDOSULFAN SULFATE	30	67	3.5800E-4	0.00168	0.0017	0.0018	0.00333	0.00688	0.0285	0.189	0.728
FFTA_RA_SO_Pest_PCBs|ENDRIN KETONE	30	67	0.0017	0.00436	0.00663	0.034	0.213	0.296	0.941	1.546	2.71
FFTA_RA_SO_Pest_PCBs|METHOXYCHLOR	30	67	0.00178	0.0018	0.0083	0.00915	0.00993	0.0156	0.25	1.155	3.979
FFTA_RA_SO_SVOCs|1,1-BIPHENYL	41	60	0.0054	0.0099	0.01	0.011	0.012	0.017	0.35	0.36	0.536
FFTA_RA_SO_SVOCs|LPAH, TOTAL (8270 Methods)	37	64	0.0952	0.24	0.24	0.26	0.28	0.29	0.866	2.3	11.44
FFTA_RA_SO_SVOCs|HPAH, TOTAL (8270 Methods)	37	64	0.00776	0.0158	0.03	0.16	0.26	0.28	0.79	1.084	37.02
FFTA_RA_SO_VOCs|ACETONE	41	60	0.034	0.042	0.051	0.089	0.13	0.14	0.2	0.76	1.76

UCL Statistics for Data Sets with Non-Detects

User Selected Options	
Date/Time of Computation	ProUCL 5.15/24/2016 2:11:26 PM
From File	ProUCL Inputs_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Dis_FFTA_RA_SW_Metals|ARSENIC

General Statistics

Total Number of Observations	14	Number of Distinct Observations	8
Number of Detects	9	Number of Non-Detects	5
Number of Distinct Detects	7	Number of Distinct Non-Detects	1
Minimum Detect	3.1	Minimum Non-Detect	4
Maximum Detect	7	Maximum Non-Detect	4
Variance Detects	2.042	Percent Non-Detects	35.71%
Mean Detects	4.322	SD Detects	1.429
Median Detects	3.7	CV Detects	0.331
Skewness Detects	1.173	Kurtosis Detects	-0.114
Mean of Logged Detects	1.421	SD of Logged Detects	0.301

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.799	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.335	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.005	KM Standard Error of Mean	0.335
KM SD	1.169	95% KM (BCA) UCL	4.548
95% KM (t) UCL	4.598	95% KM (Percentile Bootstrap) UCL	4.578
95% KM (z) UCL	4.556	95% KM Bootstrap t UCL	5.112
90% KM Chebyshev UCL	5.01	95% KM Chebyshev UCL	5.466
97.5% KM Chebyshev UCL	6.098	99% KM Chebyshev UCL	7.339

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.826	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.722	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.331	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.279	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	11.84	k star (bias corrected MLE)	7.965
Theta hat (MLE)	0.365	Theta star (bias corrected MLE)	0.543
nu hat (MLE)	213	nu star (bias corrected)	143.4
Mean (detects)	4.322		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	2.576	Mean	4.046
Maximum	7	Median	3.633
SD	1.255	CV	0.31
k hat (MLE)	13.18	k star (bias corrected MLE)	10.4
Theta hat (MLE)	0.307	Theta star (bias corrected MLE)	0.389
nu hat (MLE)	369	nu star (bias corrected)	291.3
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (291.25, α)	252.7	Adjusted Chi Square Value (291.25, β)	248
95% Gamma Approximate UCL (use when n>=50)	4.663	95% Gamma Adjusted UCL (use when n<50)	4.752

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.005	SD (KM)	1.169
Variance (KM)	1.366	SE of Mean (KM)	0.335
k hat (KM)	11.74	k star (KM)	9.275
nu hat (KM)	328.8	nu star (KM)	259.7
theta hat (KM)	0.341	theta star (KM)	0.432
80% gamma percentile (KM)	5.049	90% gamma percentile (KM)	5.755
95% gamma percentile (KM)	6.384	99% gamma percentile (KM)	7.679

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (259.69, α)	223.4	Adjusted Chi Square Value (259.69, β)	218.9
95% Gamma Approximate KM-UCL (use when n>=50)	4.656	95% Gamma Adjusted KM-UCL (use when n<50)	4.751

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.832	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.313	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data Not Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.059	Mean in Log Scale	1.365
SD in Original Scale	1.228	SD in Log Scale	0.267
95% t UCL (assumes normality of ROS data)	4.64	95% Percentile Bootstrap UCL	4.618
95% BCA Bootstrap UCL	4.762	95% Bootstrap t UCL	5.036
95% H-UCL (Log ROS)	4.658		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.353	KM Geo Mean	3.87
KM SD (logged)	0.248	95% Critical H Value (KM-Log)	1.852
KM Standard Error of Mean (logged)	0.0718	95% H-UCL (KM -Log)	4.532
KM SD (logged)	0.248	95% Critical H Value (KM-Log)	1.852
KM Standard Error of Mean (logged)	0.0718		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.493	Mean in Log Scale	1.161
SD in Original Scale	1.609	SD in Log Scale	0.432
95% t UCL (Assumes normality)	4.255	95% H-Stat UCL	4.454

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM Student's t	4.898	KM H-UCL	4.532

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|ARSENIC

General Statistics

Total Number of Observations	14	Number of Distinct Observations	8
		Number of Missing Observations	14
Number of Detects	9	Number of Non-Detects	5
Number of Distinct Detects	7	Number of Distinct Non-Detects	2
Minimum Detect	3.3	Minimum Non-Detect	3
Maximum Detect	7.9	Maximum Non-Detect	4
Variance Detects	3.29	Percent Non-Detects	35.71%
Mean Detects	4.967	SD Detects	1.814
Median Detects	4	CV Detects	0.365
Skewness Detects	1.034	Kurtosis Detects	-0.474
Mean of Logged Detects	1.549	SD of Logged Detects	0.337

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.805	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.259	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.396	KM Standard Error of Mean	0.452
KM SD	1.582	95% KM (BCA) UCL	5.238
95% KM (t) UCL	5.196	95% KM (Percentile Bootstrap) UCL	5.186
95% KM (z) UCL	5.139	95% KM Bootstrap t UCL	5.773
90% KM Chebyshev UCL	5.751	95% KM Chebyshev UCL	6.366
97.5% KM Chebyshev UCL	7.218	99% KM Chebyshev UCL	8.892

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.69	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.722	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.259	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.279	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	9.54	k star (bias corrected MLE)	6.434
Theta hat (MLE)	0.521	Theta star (bias corrected MLE)	0.772
nu hat (MLE)	171.7	nu star (bias corrected)	115.8
Mean (detects)	4.967		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.457	Mean	4.177
Maximum	7.9	Median	3.7
SD	1.891	CV	0.453
k hat (MLE)	5.441	k star (bias corrected MLE)	4.323
Theta hat (MLE)	0.768	Theta star (bias corrected MLE)	0.966
nu hat (MLE)	152.4	nu star (bias corrected)	121
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (121.04, α)	96.63	Adjusted Chi Square Value (121.04, β)	93.74
95% Gamma Approximate UCL (use when n>=50)	5.231	95% Gamma Adjusted UCL (use when n<50)	5.393

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.396	SD (KM)	1.582
Variance (KM)	2.501	SE of Mean (KM)	0.452
k hat (KM)	7.725	k star (KM)	6.117
nu hat (KM)	216.3	nu star (KM)	171.3
theta hat (KM)	0.569	theta star (KM)	0.719
80% gamma percentile (KM)	5.78	90% gamma percentile (KM)	6.771
95% gamma percentile (KM)	7.667	99% gamma percentile (KM)	9.544

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (171.28, α)	142	Adjusted Chi Square Value (171.28, β)	138.5
95% Gamma Approximate KM-UCL (use when n>=50)	5.302	95% Gamma Adjusted KM-UCL (use when n<50)	5.437

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.853	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.284	Mean in Log Scale	1.386
SD in Original Scale	1.763	SD in Log Scale	0.377
95% t UCL (assumes normality of ROS data)	5.118	95% Percentile Bootstrap UCL	5.063
95% BCA Bootstrap UCL	5.183	95% Bootstrap t UCL	5.482
95% H-UCL (Log ROS)	5.269		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.428	KM Geo Mean	4.171
KM SD (logged)	0.307	95% Critical H Value (KM-Log)	1.9
KM Standard Error of Mean (logged)	0.0887	95% H-UCL (KM -Log)	5.142
KM SD (logged)	0.307	95% Critical H Value (KM-Log)	1.9
KM Standard Error of Mean (logged)	0.0887		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.871	Mean in Log Scale	1.223
SD in Original Scale	2.089	SD in Log Scale	0.531
95% t UCL (Assumes normality)	4.86	95% H-Stat UCL	5.288

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 5.196

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|ALUMINUM

General Statistics

Total Number of Observations	14	Number of Distinct Observations	13
		Number of Missing Observations	14
Number of Detects	11	Number of Non-Detects	3
Number of Distinct Detects	11	Number of Distinct Non-Detects	2
Minimum Detect	44.2	Minimum Non-Detect	100
Maximum Detect	1590	Maximum Non-Detect	110
Variance Detects	203738	Percent Non-Detects	21.43%
Mean Detects	306	SD Detects	451.4
Median Detects	120	CV Detects	1.475
Skewness Detects	2.729	Kurtosis Detects	7.926
Mean of Logged Detects	5.096	SD of Logged Detects	1.079

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.609	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.281	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	255	KM Standard Error of Mean	110.5
KM SD	393.9	95% KM (BCA) UCL	450.6
95% KM (t) UCL	450.6	95% KM (Percentile Bootstrap) UCL	444.1
95% KM (z) UCL	436.7	95% KM Bootstrap t UCL	895.7
90% KM Chebyshev UCL	586.4	95% KM Chebyshev UCL	736.5
97.5% KM Chebyshev UCL	944.9	99% KM Chebyshev UCL	1354

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.713	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.755	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.245	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.263	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.929	k star (bias corrected MLE)	0.736
Theta hat (MLE)	329.5	Theta star (bias corrected MLE)	415.8
nu hat (MLE)	20.43	nu star (bias corrected)	16.19
Mean (detects)	306		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	240.4
Maximum	1590	Median	100.5
SD	416.8	CV	1.733
k hat (MLE)	0.283	k star (bias corrected MLE)	0.27
Theta hat (MLE)	851.1	Theta star (bias corrected MLE)	891.8
nu hat (MLE)	7.91	nu star (bias corrected)	7.549
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (7.55, α)	2.476	Adjusted Chi Square Value (7.55, β)	2.108
95% Gamma Approximate UCL (use when n>=50)	732.9	95% Gamma Adjusted UCL (use when n<50)	860.8

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	255	SD (KM)	393.9
Variance (KM)	155174	SE of Mean (KM)	110.5
k hat (KM)	0.419	k star (KM)	0.377
nu hat (KM)	11.73	nu star (KM)	10.55
theta hat (KM)	608.6	theta star (KM)	676.7
80% gamma percentile (KM)	408.3	90% gamma percentile (KM)	727.6
95% gamma percentile (KM)	1081	99% gamma percentile (KM)	1977

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (10.55, α)	4.288	Adjusted Chi Square Value (10.55, β)	3.773
95% Gamma Approximate KM-UCL (use when n>=50)	627.3	95% Gamma Adjusted KM-UCL (use when n<50)	712.9

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.934	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.181	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	253.6	Mean in Log Scale	4.88
SD in Original Scale	409.4	SD in Log Scale	1.047
95% t UCL (assumes normality of ROS data)	447.4	95% Percentile Bootstrap UCL	445.4
95% BCA Bootstrap UCL	573.6	95% Bootstrap t UCL	891.3
95% H-UCL (Log ROS)	524		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	4.898	KM Geo Mean	134
KM SD (logged)	0.998	95% Critical H Value (KM-Log)	2.788
KM Standard Error of Mean (logged)	0.284	95% H-UCL (KM -Log)	476.9
KM SD (logged)	0.998	95% Critical H Value (KM-Log)	2.788
KM Standard Error of Mean (logged)	0.284		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	251.5	Mean in Log Scale	4.849
SD in Original Scale	410.4	SD in Log Scale	1.066
95% t UCL (Assumes normality)	445.8	95% H-Stat UCL	531.6

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Bootstrap t UCL	1007	95% Hall's Bootstrap	476.9

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dis_FFTA_RA_SW_Metals|BARIUM

General Statistics

Total Number of Observations	14	Number of Distinct Observations	12
Number of Detects	13	Number of Non-Detects	1
Number of Distinct Detects	11	Number of Distinct Non-Detects	1
Minimum Detect	0.68	Minimum Non-Detect	3
Maximum Detect	13.6	Maximum Non-Detect	3
Variance Detects	15.7	Percent Non-Detects	7.143%
Mean Detects	4.138	SD Detects	3.962
Median Detects	2.97	CV Detects	0.957
Skewness Detects	1.918	Kurtosis Detects	2.757
Mean of Logged Detects	1.088	SD of Logged Detects	0.835

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.695	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.36	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	3.985	KM Standard Error of Mean	1.036
KM SD	3.716	95% KM (BCA) UCL	5.59
95% KM (t) UCL	5.819	95% KM (Percentile Bootstrap) UCL	5.802
95% KM (z) UCL	5.688	95% KM Bootstrap t UCL	9.481
90% KM Chebyshev UCL	7.092	95% KM Chebyshev UCL	8.499
97.5% KM Chebyshev UCL	10.45	99% KM Chebyshev UCL	14.29

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.845	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.748	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.259	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.24	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.653	k star (bias corrected MLE)	1.323
Theta hat (MLE)	2.503	Theta star (bias corrected MLE)	3.128
nu hat (MLE)	42.99	nu star (bias corrected)	34.4
Mean (detects)	4.138		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.68	Mean	3.946
Maximum	13.6	Median	2.735
SD	3.874	CV	0.982
k hat (MLE)	1.636	k star (bias corrected MLE)	1.333
Theta hat (MLE)	2.413	Theta star (bias corrected MLE)	2.961
nu hat (MLE)	45.8	nu star (bias corrected)	37.32
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (37.32, α)	24.33	Adjusted Chi Square Value (37.32, β)	22.95
95% Gamma Approximate UCL (use when n>=50)	6.052	95% Gamma Adjusted UCL (use when n<50)	6.417

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	3.985	SD (KM)	3.716
Variance (KM)	13.81	SE of Mean (KM)	1.036
k hat (KM)	1.15	k star (KM)	0.951
nu hat (KM)	32.19	nu star (KM)	26.63
theta hat (KM)	3.466	theta star (KM)	4.19
80% gamma percentile (KM)	6.439	90% gamma percentile (KM)	9.289
95% gamma percentile (KM)	12.15	99% gamma percentile (KM)	18.82

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (26.63, α)	15.86	Adjusted Chi Square Value (26.63, β)	14.77
95% Gamma Approximate KM-UCL (use when n>=50)	6.689	95% Gamma Adjusted KM-UCL (use when n<50)	7.184

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.913	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.207	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	3.967	Mean in Log Scale	1.05
SD in Original Scale	3.861	SD in Log Scale	0.815
95% t UCL (assumes normality of ROS data)	5.794	95% Percentile Bootstrap UCL	5.646
95% BCA Bootstrap UCL	6.256	95% Bootstrap t UCL	9.786
95% H-UCL (Log ROS)	7.014		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.051	KM Geo Mean	2.861
KM SD (logged)	0.798	95% Critical H Value (KM-Log)	2.476
KM Standard Error of Mean (logged)	0.226	95% H-UCL (KM -Log)	6.804
KM SD (logged)	0.798	95% Critical H Value (KM-Log)	2.476
KM Standard Error of Mean (logged)	0.226		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	3.95	Mean in Log Scale	1.04
SD in Original Scale	3.872	SD in Log Scale	0.823
95% t UCL (Assumes normality)	5.782	95% H-Stat UCL	7.041

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	6.804

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dis_FFTA_RA_SW_Metals|COPPER

General Statistics

Total Number of Observations	14	Number of Distinct Observations	10
Number of Detects	11	Number of Non-Detects	3
Number of Distinct Detects	9	Number of Distinct Non-Detects	1
Minimum Detect	0.98	Minimum Non-Detect	2
Maximum Detect	6.6	Maximum Non-Detect	2
Variance Detects	2.857	Percent Non-Detects	21.43%
Mean Detects	2.345	SD Detects	1.69
Median Detects	1.99	CV Detects	0.721
Skewness Detects	1.834	Kurtosis Detects	3.632
Mean of Logged Detects	0.664	SD of Logged Detects	0.615

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.787	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.85	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.24	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.251	Detected Data appear Normal at 5% Significance Level

Detected Data appear Approximate Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	2.115	KM Standard Error of Mean	0.425
KM SD	1.503	95% KM (BCA) UCL	2.889
95% KM (t) UCL	2.867	95% KM (Percentile Bootstrap) UCL	2.822
95% KM (z) UCL	2.814	95% KM Bootstrap t UCL	3.432
90% KM Chebyshev UCL	3.389	95% KM Chebyshev UCL	3.967
97.5% KM Chebyshev UCL	4.768	99% KM Chebyshev UCL	6.341

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.511	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.734	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.211	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.257	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.819	k star (bias corrected MLE)	2.111
Theta hat (MLE)	0.832	Theta star (bias corrected MLE)	1.111
nu hat (MLE)	62.02	nu star (bias corrected)	46.44
Mean (detects)	2.345		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.567	Mean	2.091
Maximum	6.6	Median	1.529
SD	1.583	CV	0.757
k hat (MLE)	2.591	k star (bias corrected MLE)	2.083
Theta hat (MLE)	0.807	Theta star (bias corrected MLE)	1.004
nu hat (MLE)	72.54	nu star (bias corrected)	58.33
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (58.33, α)	41.77	Adjusted Chi Square Value (58.33, β)	39.92
95% Gamma Approximate UCL (use when n>=50)	2.92	95% Gamma Adjusted UCL (use when n<50)	3.056

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	2.115	SD (KM)	1.503
Variance (KM)	2.258	SE of Mean (KM)	0.425
k hat (KM)	1.982	k star (KM)	1.605
nu hat (KM)	55.48	nu star (KM)	44.93
theta hat (KM)	1.068	theta star (KM)	1.318
80% gamma percentile (KM)	3.249	90% gamma percentile (KM)	4.336
95% gamma percentile (KM)	5.388	99% gamma percentile (KM)	7.753

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (44.93, α)	30.55	Adjusted Chi Square Value (44.93, β)	28.99
95% Gamma Approximate KM-UCL (use when n>=50)	3.111	95% Gamma Adjusted KM-UCL (use when n<50)	3.279

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.915	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.85	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.198	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.251	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	2.122	Mean in Log Scale	0.573
SD in Original Scale	1.555	SD in Log Scale	0.582
95% t UCL (assumes normality of ROS data)	2.858	95% Percentile Bootstrap UCL	2.868
95% BCA Bootstrap UCL	3.065	95% Bootstrap t UCL	3.576
95% H-UCL (Log ROS)	2.976		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.568	KM Geo Mean	1.764
KM SD (logged)	0.563	95% Critical H Value (KM-Log)	2.112
KM Standard Error of Mean (logged)	0.162	95% H-UCL (KM -Log)	2.874
KM SD (logged)	0.563	95% Critical H Value (KM-Log)	2.112
KM Standard Error of Mean (logged)	0.162		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	2.056	Mean in Log Scale	0.522
SD in Original Scale	1.589	SD in Log Scale	0.609
95% t UCL (Assumes normality)	2.809	95% H-Stat UCL	2.953

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 2.867

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|COPPER

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	14
Number of Detects	12	Number of Non-Detects	2
Number of Distinct Detects	12	Number of Distinct Non-Detects	2
Minimum Detect	1.3	Minimum Non-Detect	2
Maximum Detect	9.42	Maximum Non-Detect	2.4
Variance Detects	10.3	Percent Non-Detects	14.29%
Mean Detects	4.617	SD Detects	3.209
Median Detects	3	CV Detects	0.695
Skewness Detects	0.733	Kurtosis Detects	-1.491
Mean of Logged Detects	1.307	SD of Logged Detects	0.696

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.788	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.299	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.243	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.2	KM Standard Error of Mean	0.846
KM SD	3.026	95% KM (BCA) UCL	5.591
95% KM (t) UCL	5.697	95% KM (Percentile Bootstrap) UCL	5.611
95% KM (z) UCL	5.591	95% KM Bootstrap t UCL	6.398
90% KM Chebyshev UCL	6.737	95% KM Chebyshev UCL	7.886
97.5% KM Chebyshev UCL	9.481	99% KM Chebyshev UCL	12.61

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.854	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.741	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.237	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.248	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.4	k star (bias corrected MLE)	1.855
Theta hat (MLE)	1.924	Theta star (bias corrected MLE)	2.488
nu hat (MLE)	57.6	nu star (bias corrected)	44.53
Mean (detects)	4.617		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.793	Mean	4.118
Maximum	9.42	Median	2.77
SD	3.216	CV	0.781
k hat (MLE)	1.906	k star (bias corrected MLE)	1.545
Theta hat (MLE)	2.161	Theta star (bias corrected MLE)	2.665
nu hat (MLE)	53.36	nu star (bias corrected)	43.26
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (43.26, α)	29.18	Adjusted Chi Square Value (43.26, β)	27.65
95% Gamma Approximate UCL (use when n>=50)	6.105	95% Gamma Adjusted UCL (use when n<50)	6.442

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.2	SD (KM)	3.026
Variance (KM)	9.156	SE of Mean (KM)	0.846
k hat (KM)	1.926	k star (KM)	1.561
nu hat (KM)	53.93	nu star (KM)	43.71
theta hat (KM)	2.18	theta star (KM)	2.69
80% gamma percentile (KM)	6.469	90% gamma percentile (KM)	8.666
95% gamma percentile (KM)	10.79	99% gamma percentile (KM)	15.59

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (43.71, α)	29.55	Adjusted Chi Square Value (43.71, β)	28.01
95% Gamma Approximate KM-UCL (use when n>=50)	6.212	95% Gamma Adjusted KM-UCL (use when n<50)	6.554

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.886	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.204	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.18	Mean in Log Scale	1.183
SD in Original Scale	3.155	SD in Log Scale	0.716
95% t UCL (assumes normality of ROS data)	5.673	95% Percentile Bootstrap UCL	5.588
95% BCA Bootstrap UCL	5.65	95% Bootstrap t UCL	6.316
95% H-UCL (Log ROS)	6.732		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.193	KM Geo Mean	3.295
KM SD (logged)	0.682	95% Critical H Value (KM-Log)	2.318
KM Standard Error of Mean (logged)	0.192	95% H-UCL (KM -Log)	6.451
KM SD (logged)	0.682	95% Critical H Value (KM-Log)	2.318
KM Standard Error of Mean (logged)	0.192		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	4.114	Mean in Log Scale	1.133
SD in Original Scale	3.217	SD in Log Scale	0.778
95% t UCL (Assumes normality)	5.637	95% H-Stat UCL	7.132

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Adjusted Gamma UCL	6.554	95% GROS Adjusted Gamma UCL	6.442

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|CADMIUM

General Statistics

Total Number of Observations	14	Number of Distinct Observations	7
		Number of Missing Observations	14
Number of Detects	6	Number of Non-Detects	8
Number of Distinct Detects	6	Number of Distinct Non-Detects	1
Minimum Detect	0.03	Minimum Non-Detect	0.2
Maximum Detect	2.14	Maximum Non-Detect	0.2
Variance Detects	0.7	Percent Non-Detects	57.14%
Mean Detects	0.437	SD Detects	0.837
Median Detects	0.115	CV Detects	1.916
Skewness Detects	2.422	Kurtosis Detects	5.893
Mean of Logged Detects	-2.017	SD of Logged Detects	1.533

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.562	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.788	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.454	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.325	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.242	KM Standard Error of Mean	0.156
KM SD	0.53	95% KM (BCA) UCL	0.533
95% KM (t) UCL	0.519	95% KM (Percentile Bootstrap) UCL	0.526
95% KM (z) UCL	0.499	95% KM Bootstrap t UCL	1.513
90% KM Chebyshev UCL	0.711	95% KM Chebyshev UCL	0.924
97.5% KM Chebyshev UCL	1.219	99% KM Chebyshev UCL	1.799

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.768	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.734	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.366	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.348	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	0.53	k star (bias corrected MLE)	0.376
Theta hat (MLE)	0.824	Theta star (bias corrected MLE)	1.161
nu hat (MLE)	6.357	nu star (bias corrected)	4.512
Mean (detects)	0.437		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.298
Maximum	2.14	Median	0.0855
SD	0.57	CV	1.912
k hat (MLE)	0.482	k star (bias corrected MLE)	0.426
Theta hat (MLE)	0.619	Theta star (bias corrected MLE)	0.699
nu hat (MLE)	13.5	nu star (bias corrected)	11.94
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (11.94, α)	5.185	Adjusted Chi Square Value (11.94, β)	4.608
95% Gamma Approximate UCL (use when n>=50)	0.686	95% Gamma Adjusted UCL (use when n<50)	0.772

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.242	SD (KM)	0.53
Variance (KM)	0.28	SE of Mean (KM)	0.156
k hat (KM)	0.209	k star (KM)	0.212
nu hat (KM)	5.848	nu star (KM)	5.928
theta hat (KM)	1.159	theta star (KM)	1.143
80% gamma percentile (KM)	0.328	90% gamma percentile (KM)	0.732
95% gamma percentile (KM)	1.228	99% gamma percentile (KM)	2.583

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (5.93, α)	1.603	Adjusted Chi Square Value (5.93, β)	1.325
95% Gamma Approximate KM-UCL (use when n>=50)	0.895	95% Gamma Adjusted KM-UCL (use when n<50)	1.083

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.884	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.788	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.255	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.325	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.262	Mean in Log Scale	-2.297
SD in Original Scale	0.55	SD in Log Scale	1.275
95% t UCL (assumes normality of ROS data)	0.523	95% Percentile Bootstrap UCL	0.542
95% BCA Bootstrap UCL	0.707	95% Bootstrap t UCL	1.666
95% H-UCL (Log ROS)	0.72		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-2.335	KM Geo Mean	0.0969
KM SD (logged)	1.095	95% Critical H Value (KM-Log)	2.951
KM Standard Error of Mean (logged)	0.407	95% H-UCL (KM -Log)	0.432
KM SD (logged)	1.095	95% Critical H Value (KM-Log)	2.951
KM Standard Error of Mean (logged)	0.407		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.244	Mean in Log Scale	-2.18
SD in Original Scale	0.547	SD in Log Scale	0.962
95% t UCL (Assumes normality)	0.503	95% H-Stat UCL	0.372

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

97.5% KM (Chebyshev) UCL	1.219	99% KM (Chebyshev) UCL	1.799

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dis_FFTA_RA_SW_Metals|IRON

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
Number of Detects	13	Number of Non-Detects	1
Number of Distinct Detects	13	Number of Distinct Non-Detects	1
Minimum Detect	91.5	Minimum Non-Detect	80
Maximum Detect	3570	Maximum Non-Detect	80
Variance Detects	823434	Percent Non-Detects	7.143%
Mean Detects	718.4	SD Detects	907.4
Median Detects	593	CV Detects	1.263
Skewness Detects	2.933	Kurtosis Detects	9.629
Mean of Logged Detects	6.072	SD of Logged Detects	1.033

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.614	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.33	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data Not Normal at 5% Significance Level	

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	672.8	KM Standard Error of Mean	238.1
KM SD	856.1	95% KM (BCA) UCL	1125
95% KM (t) UCL	1095	95% KM (Percentile Bootstrap) UCL	1108
95% KM (z) UCL	1065	95% KM Bootstrap t UCL	1604
90% KM Chebyshev UCL	1387	95% KM Chebyshev UCL	1711
97.5% KM Chebyshev UCL	2160	99% KM Chebyshev UCL	3042

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.637	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.756	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.197	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.242	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.128	k star (bias corrected MLE)	0.919
Theta hat (MLE)	636.8	Theta star (bias corrected MLE)	781.7
nu hat (MLE)	29.33	nu star (bias corrected)	23.9
Mean (detects)	718.4		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	667.1
Maximum	3570	Median	559
SD	892.7	CV	1.338
k hat (MLE)	0.528	k star (bias corrected MLE)	0.462
Theta hat (MLE)	1264	Theta star (bias corrected MLE)	1443
nu hat (MLE)	14.78	nu star (bias corrected)	12.95
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (12.95, α)	5.857	Adjusted Chi Square Value (12.95, β)	5.237
95% Gamma Approximate UCL (use when n>=50)	1475	95% Gamma Adjusted UCL (use when n<50)	1649

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	672.8	SD (KM)	856.1
Variance (KM)	732834	SE of Mean (KM)	238.1
k hat (KM)	0.618	k star (KM)	0.533
nu hat (KM)	17.3	nu star (KM)	14.92
theta hat (KM)	1089	theta star (KM)	1262
80% gamma percentile (KM)	1107	90% gamma percentile (KM)	1796
95% gamma percentile (KM)	2526	99% gamma percentile (KM)	4312

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (14.92, α)	7.208	Adjusted Chi Square Value (14.92, β)	6.508
95% Gamma Approximate KM-UCL (use when n>=50)	1393	95% Gamma Adjusted KM-UCL (use when n<50)	1543

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.925	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.866	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.189	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.234	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	669.7	Mean in Log Scale	5.896
SD in Original Scale	890.7	SD in Log Scale	1.192
95% t UCL (assumes normality of ROS data)	1091	95% Percentile Bootstrap UCL	1110
95% BCA Bootstrap UCL	1354	95% Bootstrap t UCL	1604
95% H-UCL (Log ROS)	2074		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	5.952	KM Geo Mean	384.4
KM SD (logged)	1.05	95% Critical H Value (KM-Log)	2.876
KM Standard Error of Mean (logged)	0.292	95% H-UCL (KM -Log)	1542
KM SD (logged)	1.05	95% Critical H Value (KM-Log)	2.876
KM Standard Error of Mean (logged)	0.292		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	670	Mean in Log Scale	5.902
SD in Original Scale	890.5	SD in Log Scale	1.179
95% t UCL (Assumes normality)	1091	95% H-Stat UCL	2018

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Gamma Distributed at 5% Significance Level

Suggested UCL to Use

95% KM Bootstrap t UCL	1593	95% Hall's Bootstrap	1542

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|LEAD

General Statistics

Total Number of Observations	14	Number of Distinct Observations	9
		Number of Missing Observations	14
Number of Detects	8	Number of Non-Detects	6
Number of Distinct Detects	8	Number of Distinct Non-Detects	1
Minimum Detect	0.07	Minimum Non-Detect	0.5
Maximum Detect	2.1	Maximum Non-Detect	0.5
Variance Detects	0.671	Percent Non-Detects	42.86%
Mean Detects	1.069	SD Detects	0.819
Median Detects	1.02	CV Detects	0.767
Skewness Detects	0.114	Kurtosis Detects	-2.134
Mean of Logged Detects	-0.374	SD of Logged Detects	1.186

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.874	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.725	KM Standard Error of Mean	0.208
KM SD	0.708	95% KM (BCA) UCL	1.097
95% KM (t) UCL	1.093	95% KM (Percentile Bootstrap) UCL	1.068
95% KM (z) UCL	1.067	95% KM Bootstrap t UCL	1.146
90% KM Chebyshev UCL	1.348	95% KM Chebyshev UCL	1.63
97.5% KM Chebyshev UCL	2.022	99% KM Chebyshev UCL	2.792

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.441	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.732	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.257	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.3	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	1.276	k star (bias corrected MLE)	0.881
Theta hat (MLE)	0.838	Theta star (bias corrected MLE)	1.213
nu hat (MLE)	20.41	nu star (bias corrected)	14.09
Mean (detects)	1.069		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.01	Mean	0.735
Maximum	2.1	Median	0.443
SD	0.738	CV	1.004
k hat (MLE)	0.847	k star (bias corrected MLE)	0.713
Theta hat (MLE)	0.867	Theta star (bias corrected MLE)	1.03
nu hat (MLE)	23.72	nu star (bias corrected)	19.97
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (19.97, α)	10.83	Adjusted Chi Square Value (19.97, β)	9.945
95% Gamma Approximate UCL (use when n>=50)	1.355	95% Gamma Adjusted UCL (use when n<50)	1.475

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.725	SD (KM)	0.708
Variance (KM)	0.502	SE of Mean (KM)	0.208
k hat (KM)	1.047	k star (KM)	0.87
nu hat (KM)	29.32	nu star (KM)	24.37
theta hat (KM)	0.692	theta star (KM)	0.833
80% gamma percentile (KM)	1.179	90% gamma percentile (KM)	1.727
95% gamma percentile (KM)	2.282	99% gamma percentile (KM)	3.583

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (24.37, α)	14.13	Adjusted Chi Square Value (24.37, β)	13.1
95% Gamma Approximate KM-UCL (use when n>=50)	1.25	95% Gamma Adjusted KM-UCL (use when n<50)	1.348

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.875	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.244	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.283	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.713	Mean in Log Scale	-0.909
SD in Original Scale	0.743	SD in Log Scale	1.166
95% t UCL (assumes normality of ROS data)	1.064	95% Percentile Bootstrap UCL	1.046
95% BCA Bootstrap UCL	1.068	95% Bootstrap t UCL	1.203
95% H-UCL (Log ROS)	2.148		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.884	KM Geo Mean	0.413
KM SD (logged)	1.145	95% Critical H Value (KM-Log)	3.039
KM Standard Error of Mean (logged)	0.414	95% H-UCL (KM -Log)	2.09
KM SD (logged)	1.145	95% Critical H Value (KM-Log)	3.039
KM Standard Error of Mean (logged)	0.414		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.718	Mean in Log Scale	-0.808
SD in Original Scale	0.734	SD in Log Scale	1.014
95% t UCL (Assumes normality)	1.065	95% H-Stat UCL	1.645

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.093

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dis_FFTA_RA_SW_Metals|NICKEL

General Statistics

Total Number of Observations	14	Number of Distinct Observations	12
Number of Detects	12	Number of Non-Detects	2
Number of Distinct Detects	11	Number of Distinct Non-Detects	1
Minimum Detect	0.92	Minimum Non-Detect	1.2
Maximum Detect	2.15	Maximum Non-Detect	1.2
Variance Detects	0.175	Percent Non-Detects	14.29%
Mean Detects	1.404	SD Detects	0.418
Median Detects	1.35	CV Detects	0.298
Skewness Detects	0.61	Kurtosis Detects	-0.803
Mean of Logged Detects	0.3	SD of Logged Detects	0.291

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.183	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.349	KM Standard Error of Mean	0.111
KM SD	0.395	95% KM (BCA) UCL	1.554
95% KM (t) UCL	1.545	95% KM (Percentile Bootstrap) UCL	1.53
95% KM (z) UCL	1.531	95% KM Bootstrap t UCL	1.582
90% KM Chebyshev UCL	1.681	95% KM Chebyshev UCL	1.831
97.5% KM Chebyshev UCL	2.04	99% KM Chebyshev UCL	2.45

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.327	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.731	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.189	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.245	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	12.87	k star (bias corrected MLE)	9.707
Theta hat (MLE)	0.109	Theta star (bias corrected MLE)	0.145
nu hat (MLE)	308.8	nu star (bias corrected)	233
Mean (detects)	1.404		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.915	Mean	1.349
Maximum	2.15	Median	1.213
SD	0.411	CV	0.305
k hat (MLE)	12.58	k star (bias corrected MLE)	9.931
Theta hat (MLE)	0.107	Theta star (bias corrected MLE)	0.136
nu hat (MLE)	352.2	nu star (bias corrected)	278.1
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (278.08, α)	240.5	Adjusted Chi Square Value (278.08, β)	235.8
95% Gamma Approximate UCL (use when n>=50)	1.561	95% Gamma Adjusted UCL (use when n<50)	1.591

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.349	SD (KM)	0.395
Variance (KM)	0.156	SE of Mean (KM)	0.111
k hat (KM)	11.65	k star (KM)	9.202
nu hat (KM)	326.2	nu star (KM)	257.6
theta hat (KM)	0.116	theta star (KM)	0.147
80% gamma percentile (KM)	1.702	90% gamma percentile (KM)	1.941
95% gamma percentile (KM)	2.154	99% gamma percentile (KM)	2.592

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (257.64, α)	221.5	Adjusted Chi Square Value (257.64, β)	217
95% Gamma Approximate KM-UCL (use when n>=50)	1.569	95% Gamma Adjusted KM-UCL (use when n<50)	1.601

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.939	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.176	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.352	Mean in Log Scale	0.262
SD in Original Scale	0.408	SD in Log Scale	0.287
95% t UCL (assumes normality of ROS data)	1.545	95% Percentile Bootstrap UCL	1.534
95% BCA Bootstrap UCL	1.535	95% Bootstrap t UCL	1.592
95% H-UCL (Log ROS)	1.573		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.259	KM Geo Mean	1.296
KM SD (logged)	0.278	95% Critical H Value (KM-Log)	1.876
KM Standard Error of Mean (logged)	0.0781	95% H-UCL (KM -Log)	1.557
KM SD (logged)	0.278	95% Critical H Value (KM-Log)	1.876
KM Standard Error of Mean (logged)	0.0781		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.289	Mean in Log Scale	0.184
SD in Original Scale	0.483	SD in Log Scale	0.398
95% t UCL (Assumes normality)	1.518	95% H-Stat UCL	1.62

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 1.545

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|NICKEL

General Statistics

Total Number of Observations	14	Number of Distinct Observations	11
		Number of Missing Observations	14
Number of Detects	12	Number of Non-Detects	2
Number of Distinct Detects	10	Number of Distinct Non-Detects	1
Minimum Detect	0.93	Minimum Non-Detect	1.2
Maximum Detect	8.09	Maximum Non-Detect	1.2
Variance Detects	3.722	Percent Non-Detects	14.29%
Mean Detects	2.1	SD Detects	1.929
Median Detects	1.55	CV Detects	0.919
Skewness Detects	3.196	Kurtosis Detects	10.66
Mean of Logged Detects	0.547	SD of Logged Detects	0.555

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.527	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.388	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.243	Detected Data Not Normal at 5% Significance Level

Detected Data Not Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	1.949	KM Standard Error of Mean	0.489
KM SD	1.75	95% KM (BCA) UCL	2.904
95% KM (t) UCL	2.814	95% KM (Percentile Bootstrap) UCL	2.843
95% KM (z) UCL	2.753	95% KM Bootstrap t UCL	4.737
90% KM Chebyshev UCL	3.415	95% KM Chebyshev UCL	4.079
97.5% KM Chebyshev UCL	5	99% KM Chebyshev UCL	6.81

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	1.392	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.74	Detected Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.295	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.248	Detected Data Not Gamma Distributed at 5% Significance Level

Detected Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.721	k star (bias corrected MLE)	2.096
Theta hat (MLE)	0.772	Theta star (bias corrected MLE)	1.002
nu hat (MLE)	65.29	nu star (bias corrected)	50.3
Mean (detects)	2.1		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.136	Mean	1.853
Maximum	8.09	Median	1.5
SD	1.884	CV	1.017
k hat (MLE)	1.683	k star (bias corrected MLE)	1.37
Theta hat (MLE)	1.101	Theta star (bias corrected MLE)	1.353
nu hat (MLE)	47.12	nu star (bias corrected)	38.35
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (38.35, α)	25.17	Adjusted Chi Square Value (38.35, β)	23.76
95% Gamma Approximate UCL (use when n>=50)	2.824	95% Gamma Adjusted UCL (use when n<50)	2.992

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	1.949	SD (KM)	1.75
Variance (KM)	3.062	SE of Mean (KM)	0.489
k hat (KM)	1.241	k star (KM)	1.022
nu hat (KM)	34.74	nu star (KM)	28.63
theta hat (KM)	1.571	theta star (KM)	1.906
80% gamma percentile (KM)	3.131	90% gamma percentile (KM)	4.463
95% gamma percentile (KM)	5.793	99% gamma percentile (KM)	8.876

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (28.63, α)	17.42	Adjusted Chi Square Value (28.63, β)	16.27
95% Gamma Approximate KM-UCL (use when n>=50)	3.203	95% Gamma Adjusted KM-UCL (use when n<50)	3.43

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.792	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.859	Detected Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.237	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.243	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Approximate Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	1.934	Mean in Log Scale	0.458
SD in Original Scale	1.825	SD in Log Scale	0.561
95% t UCL (assumes normality of ROS data)	2.797	95% Percentile Bootstrap UCL	2.831
95% BCA Bootstrap UCL	3.386	95% Bootstrap t UCL	4.833
95% H-UCL (Log ROS)	2.568		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	0.475	KM Geo Mean	1.607
KM SD (logged)	0.524	95% Critical H Value (KM-Log)	2.04
KM Standard Error of Mean (logged)	0.147	95% H-UCL (KM -Log)	2.48
KM SD (logged)	0.524	95% Critical H Value (KM-Log)	2.04
KM Standard Error of Mean (logged)	0.147		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	1.886	Mean in Log Scale	0.396
SD in Original Scale	1.856	SD in Log Scale	0.639
95% t UCL (Assumes normality)	2.764	95% H-Stat UCL	2.722

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Approximate Lognormal Distributed at 5% Significance Level

Suggested UCL to Use

KM H-UCL	2.48

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dis_FFTA_RA_SW_Metals|SELENIUM

General Statistics

Total Number of Observations	14	Number of Distinct Observations	8
Number of Detects	7	Number of Non-Detects	7
Number of Distinct Detects	7	Number of Distinct Non-Detects	1
Minimum Detect	0.23	Minimum Non-Detect	3
Maximum Detect	0.67	Maximum Non-Detect	3
Variance Detects	0.0325	Percent Non-Detects	50%
Mean Detects	0.429	SD Detects	0.18
Median Detects	0.35	CV Detects	0.421
Skewness Detects	0.491	Kurtosis Detects	-1.84
Mean of Logged Detects	-0.924	SD of Logged Detects	0.422

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.873	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.24	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	0.429	KM Standard Error of Mean	0.0682
KM SD	0.167	95% KM (BCA) UCL	0.543
95% KM (t) UCL	0.549	95% KM (Percentile Bootstrap) UCL	0.539
95% KM (z) UCL	0.541	95% KM Bootstrap t UCL	0.593
90% KM Chebyshev UCL	0.633	95% KM Chebyshev UCL	0.726
97.5% KM Chebyshev UCL	0.854	99% KM Chebyshev UCL	1.107

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.426	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.709	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.218	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.313	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	6.706	k star (bias corrected MLE)	3.927
Theta hat (MLE)	0.0639	Theta star (bias corrected MLE)	0.109
nu hat (MLE)	93.88	nu star (bias corrected)	54.98
Mean (detects)	0.429		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	0.2	Mean	0.429
Maximum	0.702	Median	0.382
SD	0.17	CV	0.397
k hat (MLE)	6.736	k star (bias corrected MLE)	5.34
Theta hat (MLE)	0.0636	Theta star (bias corrected MLE)	0.0803
nu hat (MLE)	188.6	nu star (bias corrected)	149.5
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (149.53, α)	122.3	Adjusted Chi Square Value (149.53, β)	119
95% Gamma Approximate UCL (use when n>=50)	0.524	95% Gamma Adjusted UCL (use when n<50)	0.539

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	0.429	SD (KM)	0.167
Variance (KM)	0.0279	SE of Mean (KM)	0.0682
k hat (KM)	6.584	k star (KM)	5.221
nu hat (KM)	184.3	nu star (KM)	146.2
theta hat (KM)	0.0651	theta star (KM)	0.0821
80% gamma percentile (KM)	0.573	90% gamma percentile (KM)	0.68
95% gamma percentile (KM)	0.776	99% gamma percentile (KM)	0.98

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (146.18, α)	119.2	Adjusted Chi Square Value (146.18, β)	116
95% Gamma Approximate KM-UCL (use when n>=50)	0.525	95% Gamma Adjusted KM-UCL (use when n<50)	0.54

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.907	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.189	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	0.427	Mean in Log Scale	-0.924
SD in Original Scale	0.17	SD in Log Scale	0.4
95% t UCL (assumes normality of ROS data)	0.508	95% Percentile Bootstrap UCL	0.502
95% BCA Bootstrap UCL	0.504	95% Bootstrap t UCL	0.516
95% H-UCL (Log ROS)	0.536		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	-0.924	KM Geo Mean	0.397
KM SD (logged)	0.391	95% Critical H Value (KM-Log)	1.975
KM Standard Error of Mean (logged)	0.16	95% H-UCL (KM -Log)	0.531
KM SD (logged)	0.391	95% Critical H Value (KM-Log)	1.975
KM Standard Error of Mean (logged)	0.16		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	0.964	Mean in Log Scale	-0.259
SD in Original Scale	0.569	SD in Log Scale	0.747
95% t UCL (Assumes normality)	1.234	95% H-Stat UCL	1.678

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 0.549

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dis_FFTA_RA_SW_Metals|ZINC

General Statistics

Total Number of Observations	14	Number of Distinct Observations	8
Number of Detects	7	Number of Non-Detects	7
Number of Distinct Detects	7	Number of Distinct Non-Detects	1
Minimum Detect	1.9	Minimum Non-Detect	10
Maximum Detect	10.4	Maximum Non-Detect	10
Variance Detects	8.877	Percent Non-Detects	50%
Mean Detects	5.2	SD Detects	2.979
Median Detects	4	CV Detects	0.573
Skewness Detects	0.946	Kurtosis Detects	0.0698
Mean of Logged Detects	1.508	SD of Logged Detects	0.577

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.921	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.228	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Normal at 5% Significance Level	

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	4.767	KM Standard Error of Mean	0.9
KM SD	2.409	95% KM (BCA) UCL	6.255
95% KM (t) UCL	6.361	95% KM (Percentile Bootstrap) UCL	6.275
95% KM (z) UCL	6.247	95% KM Bootstrap t UCL	6.941
90% KM Chebyshev UCL	7.467	95% KM Chebyshev UCL	8.69
97.5% KM Chebyshev UCL	10.39	99% KM Chebyshev UCL	13.72

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.208	**Anderson-Darling GOF Test**	
5% A-D Critical Value	0.71	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.192	**Kolmogorov-Smirnov GOF**	
5% K-S Critical Value	0.313	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	3.725	k star (bias corrected MLE)	2.224
Theta hat (MLE)	1.396	Theta star (bias corrected MLE)	2.339
nu hat (MLE)	52.15	nu star (bias corrected)	31.13
Mean (detects)	5.2		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.871	Mean	4.741
Maximum	10.4	Median	4.069
SD	2.418	CV	0.51
k hat (MLE)	4.418	k star (bias corrected MLE)	3.519
Theta hat (MLE)	1.073	Theta star (bias corrected MLE)	1.347
nu hat (MLE)	123.7	nu star (bias corrected)	98.52
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (98.52, α)	76.62	Adjusted Chi Square Value (98.52, β)	74.06
95% Gamma Approximate UCL (use when n>=50)	6.096	95% Gamma Adjusted UCL (use when n<50)	6.307

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	4.767	SD (KM)	2.409
Variance (KM)	5.802	SE of Mean (KM)	0.9
k hat (KM)	3.916	k star (KM)	3.125
nu hat (KM)	109.7	nu star (KM)	87.49
theta hat (KM)	1.217	theta star (KM)	1.525
80% gamma percentile (KM)	6.766	90% gamma percentile (KM)	8.382
95% gamma percentile (KM)	9.888	99% gamma percentile (KM)	13.14

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (87.49, α)	66.93	Adjusted Chi Square Value (87.49, β)	64.55
95% Gamma Approximate KM-UCL (use when n>=50)	6.231	95% Gamma Adjusted KM-UCL (use when n<50)	6.461

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.983	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.803	Detected Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.155	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.304	Detected Data appear Lognormal at 5% Significance Level	

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	4.671	Mean in Log Scale	1.428
SD in Original Scale	2.392	SD in Log Scale	0.493
95% t UCL (assumes normality of ROS data)	5.804	95% Percentile Bootstrap UCL	5.767
95% BCA Bootstrap UCL	5.906	95% Bootstrap t UCL	6.252
95% H-UCL (Log ROS)	6.195		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.439	KM Geo Mean	4.217
KM SD (logged)	0.497	95% Critical H Value (KM-Log)	2.008
KM Standard Error of Mean (logged)	0.196	95% H-UCL (KM -Log)	6.289
KM SD (logged)	0.497	95% Critical H Value (KM-Log)	2.008
KM Standard Error of Mean (logged)	0.196		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	5.1	Mean in Log Scale	1.559
SD in Original Scale	2.027	SD in Log Scale	0.396
95% t UCL (Assumes normality)	6.059	95% H-Stat UCL	6.387

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 6.361

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|ZINC

General Statistics

Total Number of Observations	14	Number of Distinct Observations	9
		Number of Missing Observations	14
Number of Detects	9	Number of Non-Detects	5
Number of Distinct Detects	8	Number of Distinct Non-Detects	1
Minimum Detect	2.2	Minimum Non-Detect	10
Maximum Detect	23	Maximum Non-Detect	10
Variance Detects	53.92	Percent Non-Detects	35.71%
Mean Detects	9.556	SD Detects	7.343
Median Detects	5.7	CV Detects	0.768
Skewness Detects	1.014	Kurtosis Detects	-0.315
Mean of Logged Detects	1.99	SD of Logged Detects	0.787

Normal GOF Test on Detects Only

Shapiro Wilk Test Statistic	0.86	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.256	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Normal at 5% Significance Level

Detected Data appear Normal at 5% Significance Level

Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs

KM Mean	7.946	KM Standard Error of Mean	1.776
KM SD	6.067	95% KM (BCA) UCL	11.13
95% KM (t) UCL	11.09	95% KM (Percentile Bootstrap) UCL	10.83
95% KM (z) UCL	10.87	95% KM Bootstrap t UCL	12.85
90% KM Chebyshev UCL	13.27	95% KM Chebyshev UCL	15.69
97.5% KM Chebyshev UCL	19.04	99% KM Chebyshev UCL	25.62

Gamma GOF Tests on Detected Observations Only

A-D Test Statistic	0.354	**Anderson-Darling GOF Test**
5% A-D Critical Value	0.73	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.223	**Kolmogorov-Smirnov GOF**
5% K-S Critical Value	0.282	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics on Detected Data Only

k hat (MLE)	2.022	k star (bias corrected MLE)	1.422
Theta hat (MLE)	4.726	Theta star (bias corrected MLE)	6.719
nu hat (MLE)	36.4	nu star (bias corrected)	25.6
Mean (detects)	9.556		

Gamma ROS Statistics using Imputed Non-Detects

GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs

GROS may not be used when kstar of detects is small such as <1.0, especially when the sample size is small (e.g., <15-20)

For such situations, GROS method may yield incorrect values of UCLs and BTVs

This is especially true when the sample size is small.

For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates

Minimum	1.266	Mean	8.009
Maximum	23	Median	5.55
SD	6.409	CV	0.8
k hat (MLE)	1.9	k star (bias corrected MLE)	1.541
Theta hat (MLE)	4.214	Theta star (bias corrected MLE)	5.197
nu hat (MLE)	53.21	nu star (bias corrected)	43.14
Adjusted Level of Significance (β)	0.0312		
Approximate Chi Square Value (43.14, α)	29.08	Adjusted Chi Square Value (43.14, β)	27.56
95% Gamma Approximate UCL (use when n>=50)	11.88	95% Gamma Adjusted UCL (use when n<50)	12.54

Estimates of Gamma Parameters using KM Estimates

Mean (KM)	7.946	SD (KM)	6.067
Variance (KM)	36.81	SE of Mean (KM)	1.776
k hat (KM)	1.716	k star (KM)	1.396
nu hat (KM)	48.04	nu star (KM)	39.08
theta hat (KM)	4.632	theta star (KM)	5.694
80% gamma percentile (KM)	12.39	90% gamma percentile (KM)	16.85
95% gamma percentile (KM)	21.21	99% gamma percentile (KM)	31.09

Gamma Kaplan-Meier (KM) Statistics

Approximate Chi Square Value (39.08, α)	25.76	Adjusted Chi Square Value (39.08, β)	24.33
95% Gamma Approximate KM-UCL (use when n>=50)	12.06	95% Gamma Adjusted KM-UCL (use when n<50)	12.76

Lognormal GOF Test on Detected Observations Only

Shapiro Wilk Test Statistic	0.954	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.829	Detected Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.18	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.274	Detected Data appear Lognormal at 5% Significance Level

Detected Data appear Lognormal at 5% Significance Level

Lognormal ROS Statistics Using Imputed Non-Detects

Mean in Original Scale	7.995	Mean in Log Scale	1.835
SD in Original Scale	6.296	SD in Log Scale	0.708
95% t UCL (assumes normality of ROS data)	10.98	95% Percentile Bootstrap UCL	10.97
95% BCA Bootstrap UCL	11.29	95% Bootstrap t UCL	13.11
95% H-UCL (Log ROS)	12.76		

Statistics using KM estimates on Logged Data and Assuming Lognormal Distribution

KM Mean (logged)	1.828	KM Geo Mean	6.219
KM SD (logged)	0.683	95% Critical H Value (KM-Log)	2.319
KM Standard Error of Mean (logged)	0.217	95% H-UCL (KM -Log)	12.19
KM SD (logged)	0.683	95% Critical H Value (KM-Log)	2.319
KM Standard Error of Mean (logged)	0.217		

DL/2 Statistics

DL/2 Normal		**DL/2 Log-Transformed**	
Mean in Original Scale	7.929	Mean in Log Scale	1.854
SD in Original Scale	6.19	SD in Log Scale	0.646
95% t UCL (Assumes normality)	10.86	95% H-Stat UCL	11.82

DL/2 is not a recommended method, provided for comparisons and historical reasons

Nonparametric Distribution Free UCL Statistics

Detected Data appear Normal Distributed at 5% Significance Level

Suggested UCL to Use

95% KM (t) UCL 11.09

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.15/24/2016 1:13:40 PM
From File	ProUCL Inputs_b.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Dis_FFTA_RA_SW_Metals|MANGANESE

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	0
Minimum	11	Mean	362.7
Maximum	1120	Median	231
SD	386.4	Std. Error of Mean	103.3
Coefficient of Variation	1.065	Skewness	0.864

Normal GOF Test

Shapiro Wilk Test Statistic	0.842	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.241	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	545.6	95% Adjusted-CLT UCL (Chen-1995)	558
		95% Modified-t UCL (Johnson-1978)	549.6

Gamma GOF Test

A-D Test Statistic	0.496	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.775	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.191	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.238	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.701	k star (bias corrected MLE)	0.598
Theta hat (MLE)	517.4	Theta star (bias corrected MLE)	606.1
nu hat (MLE)	19.63	nu star (bias corrected)	16.75
MLE Mean (bias corrected)	362.7	MLE Sd (bias corrected)	468.8
		Approximate Chi Square Value (0.05)	8.497
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	7.728

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	715.1	95% Adjusted Gamma UCL (use when n<50)	786.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.916	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	2.398	Mean of logged Data	5.032
Maximum of Logged Data	7.021	SD of logged Data	1.581

Assuming Lognormal Distribution

95% H-UCL	2883	90% Chebyshev (MVUE) UCL	1101
95% Chebyshev (MVUE) UCL	1395	97.5% Chebyshev (MVUE) UCL	1803
99% Chebyshev (MVUE) UCL	2603		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	532.6	95% Jackknife UCL	545.6
95% Standard Bootstrap UCL	521.3	95% Bootstrap-t UCL	577.2
95% Hall's Bootstrap UCL	527.1	95% Percentile Bootstrap UCL	534.1
95% BCA Bootstrap UCL	548.5		
90% Chebyshev(Mean, Sd) UCL	672.5	95% Chebyshev(Mean, Sd) UCL	812.9
97.5% Chebyshev(Mean, Sd) UCL	1008	99% Chebyshev(Mean, Sd) UCL	1390

Suggested UCL to Use

95% Adjusted Gamma UCL	786.3

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|MANGANESE

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	14
Minimum	28.3	Mean	407
Maximum	1190	Median	244.5
SD	430.1	Std. Error of Mean	114.9
Coefficient of Variation	1.057	Skewness	0.846

Normal GOF Test

Shapiro Wilk Test Statistic	0.821	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.245	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	610.6	95% Adjusted-CLT UCL (Chen-1995)	623.8
		95% Modified-t UCL (Johnson-1978)	614.9

Gamma GOF Test

A-D Test Statistic	0.712	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.77	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.218	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.237	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	0.771	k star (bias corrected MLE)	0.653
Theta hat (MLE)	528.1	Theta star (bias corrected MLE)	623.1
nu hat (MLE)	21.58	nu star (bias corrected)	18.29
MLE Mean (bias corrected)	407	MLE Sd (bias corrected)	503.6
		Approximate Chi Square Value (0.05)	9.601
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	8.776

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	775.4	95% Adjusted Gamma UCL (use when n<50)	848.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.878	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.191	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	3.343	Mean of logged Data	5.235
Maximum of Logged Data	7.082	SD of logged Data	1.429

Assuming Lognormal Distribution

95% H-UCL	2135	90% Chebyshev (MVUE) UCL	1052
95% Chebyshev (MVUE) UCL	1320	97.5% Chebyshev (MVUE) UCL	1693
99% Chebyshev (MVUE) UCL	2424		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	596.1	95% Jackknife UCL	610.6
95% Standard Bootstrap UCL	588.4	95% Bootstrap-t UCL	659.1
95% Hall's Bootstrap UCL	609.1	95% Percentile Bootstrap UCL	596.5
95% BCA Bootstrap UCL	644.2		
90% Chebyshev(Mean, Sd) UCL	751.8	95% Chebyshev(Mean, Sd) UCL	908
97.5% Chebyshev(Mean, Sd) UCL	1125	99% Chebyshev(Mean, Sd) UCL	1551

Suggested UCL to Use

95% Adjusted Gamma UCL 848.3

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Dis_FFTA_RA_SW_Metals|POTASSIUM

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	0
Minimum	755	Mean	2239
Maximum	3940	Median	1730
SD	1329	Std. Error of Mean	355.3
Coefficient of Variation	0.594	Skewness	0.267

Normal GOF Test

Shapiro Wilk Test Statistic	0.817	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.221	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Normal at 5% Significance Level

Data appear Approximate Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2868	95% Adjusted-CLT UCL (Chen-1995)	2850
		95% Modified-t UCL (Johnson-1978)	2872

Gamma GOF Test

A-D Test Statistic	0.918	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.743	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.209	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.231	Detected data appear Gamma Distributed at 5% Significance Level

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.832	k star (bias corrected MLE)	2.273
Theta hat (MLE)	790.5	Theta star (bias corrected MLE)	985
nu hat (MLE)	79.29	nu star (bias corrected)	63.63
MLE Mean (bias corrected)	2239	MLE Sd (bias corrected)	1485
		Approximate Chi Square Value (0.05)	46.28
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	44.32

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	3078	95% Adjusted Gamma UCL (use when n<50)	3214

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.857	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.199	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	6.627	Mean of logged Data	7.527
Maximum of Logged Data	8.279	SD of logged Data	0.652

Assuming Lognormal Distribution

95% H-UCL	3471	90% Chebyshev (MVUE) UCL	3490
95% Chebyshev (MVUE) UCL	4048	97.5% Chebyshev (MVUE) UCL	4823
99% Chebyshev (MVUE) UCL	6346		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2823	95% Jackknife UCL	2868
95% Standard Bootstrap UCL	2812	95% Bootstrap-t UCL	2904
95% Hall's Bootstrap UCL	2747	95% Percentile Bootstrap UCL	2809
95% BCA Bootstrap UCL	2830		
90% Chebyshev(Mean, Sd) UCL	3304	95% Chebyshev(Mean, Sd) UCL	3787
97.5% Chebyshev(Mean, Sd) UCL	4457	99% Chebyshev(Mean, Sd) UCL	5774

Suggested UCL to Use

95% Student's-t UCL 2868

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test

When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|POTASSIUM

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	14
Minimum	810	Mean	2325
Maximum	4180	Median	1805
SD	1349	Std. Error of Mean	360.6
Coefficient of Variation	0.58	Skewness	0.247

Normal GOF Test

Shapiro Wilk Test Statistic	0.835	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.232	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2964	95% Adjusted-CLT UCL (Chen-1995)	2944
		95% Modified-t UCL (Johnson-1978)	2968

Gamma GOF Test

A-D Test Statistic	0.875	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.743	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.204	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.231	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data follow Appr. Gamma Distribution at 5% Significance Level

Gamma Statistics

k hat (MLE)	2.961	k star (bias corrected MLE)	2.374
Theta hat (MLE)	785.4	Theta star (bias corrected MLE)	979.5
nu hat (MLE)	82.91	nu star (bias corrected)	66.48
MLE Mean (bias corrected)	2325	MLE Sd (bias corrected)	1509
		Approximate Chi Square Value (0.05)	48.71
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	46.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	3173	95% Adjusted Gamma UCL (use when n<50)	3310

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.863	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Data Not Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.208	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	6.697	Mean of logged Data	7.573
Maximum of Logged Data	8.338	SD of logged Data	0.637

Assuming Lognormal Distribution

95% H-UCL	3555	90% Chebyshev (MVUE) UCL	3593
95% Chebyshev (MVUE) UCL	4159	97.5% Chebyshev (MVUE) UCL	4944
99% Chebyshev (MVUE) UCL	6486		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2918	95% Jackknife UCL	2964
95% Standard Bootstrap UCL	2898	95% Bootstrap-t UCL	3010
95% Hall's Bootstrap UCL	2854	95% Percentile Bootstrap UCL	2903
95% BCA Bootstrap UCL	2926		
90% Chebyshev(Mean, Sd) UCL	3407	95% Chebyshev(Mean, Sd) UCL	3897
97.5% Chebyshev(Mean, Sd) UCL	4577	99% Chebyshev(Mean, Sd) UCL	5913

Suggested UCL to Use

95% Adjusted Gamma UCL 3310

When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test
When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|BARIUM

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	14
Minimum	0.99	Mean	8.094
Maximum	20.6	Median	4.42
SD	6.932	Std. Error of Mean	1.853
Coefficient of Variation	0.856	Skewness	0.845

Normal GOF Test

Shapiro Wilk Test Statistic	0.841	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.272	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	11.38	95% Adjusted-CLT UCL (Chen-1995)	11.59
		95% Modified-t UCL (Johnson-1978)	11.44

Gamma GOF Test

A-D Test Statistic	0.484	**Anderson-Darling Gamma GOF Test**	
5% A-D Critical Value	0.753	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.205	**Kolmogorov-Smirnov Gamma GOF Test**	
5% K-S Critical Value	0.233	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.371	k star (bias corrected MLE)	1.125
Theta hat (MLE)	5.902	Theta star (bias corrected MLE)	7.194
nu hat (MLE)	38.4	nu star (bias corrected)	31.51
MLE Mean (bias corrected)	8.094	MLE Sd (bias corrected)	7.631
		Approximate Chi Square Value (0.05)	19.68
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	18.45

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	12.96	95% Adjusted Gamma UCL (use when n<50)	13.82

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.924	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.15	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	-0.0101	Mean of logged Data	1.684
Maximum of Logged Data	3.025	SD of logged Data	1.004

Assuming Lognormal Distribution

95% H-UCL	19.45	90% Chebyshev (MVUE) UCL	15.91
95% Chebyshev (MVUE) UCL	19.27	97.5% Chebyshev (MVUE) UCL	23.94
99% Chebyshev (MVUE) UCL	33.1		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	11.14	95% Jackknife UCL	11.38
95% Standard Bootstrap UCL	11.01	95% Bootstrap-t UCL	12.13
95% Hall's Bootstrap UCL	10.96	95% Percentile Bootstrap UCL	11.16
95% BCA Bootstrap UCL	11.4		
90% Chebyshev(Mean, Sd) UCL	13.65	95% Chebyshev(Mean, Sd) UCL	16.17
97.5% Chebyshev(Mean, Sd) UCL	19.66	99% Chebyshev(Mean, Sd) UCL	26.53

Suggested UCL to Use

95% Adjusted Gamma UCL 13.82

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Total_FFTA_RA_SW_Metals|IRON

General Statistics

Total Number of Observations	14	Number of Distinct Observations	14
		Number of Missing Observations	14
Minimum	291	Mean	1752
Maximum	6480	Median	1098
SD	1947	Std. Error of Mean	520.2
Coefficient of Variation	1.111	Skewness	1.813

Normal GOF Test

Shapiro Wilk Test Statistic	0.732	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.238	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.226	Data Not Normal at 5% Significance Level

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	2673	95% Adjusted-CLT UCL (Chen-1995)	2877
		95% Modified-t UCL (Johnson-1978)	2715

Gamma GOF Test

A-D Test Statistic	0.528	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.757	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.125	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.234	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	1.158	k star (bias corrected MLE)	0.958
Theta hat (MLE)	1513	Theta star (bias corrected MLE)	1830
nu hat (MLE)	32.43	nu star (bias corrected)	26.81
MLE Mean (bias corrected)	1752	MLE Sd (bias corrected)	1790
		Approximate Chi Square Value (0.05)	16.01
Adjusted Level of Significance	0.0312	Adjusted Chi Square Value	14.91

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50)	2935	95% Adjusted Gamma UCL (use when n<50)	3151

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.935	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.874	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.132	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.226	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Lognormal Statistics

Minimum of Logged Data	5.673	Mean of logged Data	6.978
Maximum of Logged Data	8.776	SD of logged Data	1.016

Assuming Lognormal Distribution

95% H-UCL	3979	90% Chebyshev (MVUE) UCL	3222
95% Chebyshev (MVUE) UCL	3908	97.5% Chebyshev (MVUE) UCL	4859
99% Chebyshev (MVUE) UCL	6728		

Nonparametric Distribution Free UCL Statistics

Data appear to follow a Discernible Distribution at 5% Significance Level

Nonparametric Distribution Free UCLs

95% CLT UCL	2608	95% Jackknife UCL	2673
95% Standard Bootstrap UCL	2598	95% Bootstrap-t UCL	3889
95% Hall's Bootstrap UCL	7391	95% Percentile Bootstrap UCL	2607
95% BCA Bootstrap UCL	2939		
90% Chebyshev(Mean, Sd) UCL	3313	95% Chebyshev(Mean, Sd) UCL	4020
97.5% Chebyshev(Mean, Sd) UCL	5001	99% Chebyshev(Mean, Sd) UCL	6928

Suggested UCL to Use

95% Adjusted Gamma UCL 3151

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
Recommendations are based upon data size, data distribution, and skewness.
These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).
However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

General Statistics on Uncensored Data

Date/Time of Computation ProUCL 5.15/23/2016 12:52:41 PM

User Selected Options

From File ProUCL Inputs_a.xls

Full Precision OFF

From File: ProUCL Inputs_a.xls

General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method

Variable	NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
TA_RA_SE_Metals|SELENIUM	16	0	8	8	50.00%	0.21	1.5	0.947	1.873	1.368	1.445
FFTA_RA_SE_Metals|SILVER	16	0	14	2	12.50%	0.033	0.0608	0.508	0.422	0.649	1.279
TA_RA_SE_Metals|THALLIUM	16	0	15	1	6.25%	0.074	0.074	0.102	0.00417	0.0646	0.635
PestPCBs|TOTAL AROCLORS	16	0	15	1	6.25%	0.026	0.026	0.611	0.353	0.594	0.973
A_RA_SE_PestPCBs|4,4-DDD	16	0	6	10	62.50%	4.0000E-4	0.0063	0.00649	1.3649E-4	0.0117	1.801
A_RA_SE_PestPCBs|4,4-DDE	16	0	7	9	56.25%	4.0000E-4	0.0046	0.00154	2.0800E-6	0.00144	0.936
A_RA_SE_PestPCBs|4,4-DDT	16	0	7	9	56.25%	5.6000E-4	0.0063	0.00709	1.4132E-4	0.0119	1.677
_PestPCBs|ENDRIN KETONE	16	0	10	6	37.50%	5.0000E-4	0.0063	0.0681	0.00749	0.0865	1.27
SE_SVOCs|PHENANTHRENE	16	0	10	6	37.50%	0.3	1.2	0.688	2.728	1.652	2.401
FTA_RA_SE_VOCs|ACETONE	16	0	14	2	12.50%	0.043	0.06	0.801	0.932	0.965	1.205
FTA_RA_SE_VOCs|TOLUENE	16	0	14	2	12.50%	0.0028	0.01	0.0464	0.00638	0.0799	1.722

General Statistics for Raw Data Sets using Detected Data Only

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
TA_RA_SE_Metals|SELENIUM	8	0	0.33	5.5	1.554	0.695	3.395	1.843	0.4	1.837	1.186
FFTA_RA_SE_Metals|SILVER	14	0	0.06	2.34	0.575	0.225	0.481	0.693	0.15	1.719	1.206
TA_RA_SE_Metals|THALLIUM	15	0	0.06	0.3	0.104	0.075	0.00465	0.0682	0.0222	2.036	0.654
PestPCBs|TOTAL AROCLORS	15	0	0.028	2.1	0.65	0.44	0.377	0.614	0.535	1.059	0.946
A_RA_SE_PestPCBs|4,4-DDD	6	0	0.0016	0.043	0.0163	0.0123	2.5313E-4	0.0159	0.0153	1.036	0.979
A_RA_SE_PestPCBs|4,4-DDE	7	0	8.6000E-4	0.0061	0.00243	0.0018	3.3046E-6	0.00182	0.00126	1.644	0.748
A_RA_SE_PestPCBs|4,4-DDT	7	0	0.0031	0.043	0.0152	0.0065	2.3920E-4	0.0155	0.00504	1.344	1.018
_PestPCBs|ENDRIN KETONE	10	0	0.014	0.29	0.109	0.0745	0.00843	0.0918	0.0801	0.938	0.845
_RA_SE_SVOCs|PAH, TOTAL	16	0	0.04	43	3.805	0.64	111	10.53	0.856	3.896	2.768
FTA_RA_SE_VOCs|ACETONE	14	0	0.026	3	0.912	0.4	1.041	1.02	0.297	1.37	1.119
FTA_RA_SE_VOCs|TOLUENE	14	0	0.0029	0.31	0.0526	0.012	0.00752	0.0867	0.013	2.398	1.648

Percentiles using all Detects (Ds) and Non-Detects (NDs)

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
TA_RA_SE_Metals|SELENIUM	16	0	0.285	0.414	0.449	0.643	1.168	1.31	2.35	3.775	5.155
FFTA_RA_SE_Metals|SILVER	16	0	0.0604	0.118	0.15	0.2	0.467	0.81	1.455	1.785	2.229
TA_RA_SE_Metals|THALLIUM	16	0	0.06	0.06	0.063	0.0745	0.103	0.15	0.175	0.218	0.284
PestPCBs|TOTAL AROCLORS	16	0	0.047	0.079	0.14	0.365	0.953	1.2	1.35	1.575	1.995
A_RA_SE_PestPCBs|4,4-DDD	16	0	8.8000E-4	0.0015	0.00158	0.00245	0.00713	0.0096	0.0205	0.0303	0.0405
A_RA_SE_PestPCBs|4,4-DDE	16	0	7.1000E-4	9.5000E-4	0.00114	0.00195	0.00308	0.0033	0.0041	0.00498	0.00588
A_RA_SE_PestPCBs|4,4-DDT	16	0	0.00185	0.0022	0.0025	0.0041	0.00635	0.0065	0.021	0.034	0.0412
_PestPCBs|ENDRIN KETONE	16	0	6.5500E-4	0.0036	0.00405	0.0295	0.0985	0.13	0.195	0.23	0.278
_RA_SE_SVOCs|PAH, TOTAL	16	0	0.0625	0.077	0.214	0.64	2.525	2.6	3.8	13.83	37.17
FTA_RA_SE_VOCs|ACETONE	16	0	0.0515	0.2	0.2	0.36	0.985	1.3	2.5	2.925	2.985
A_SE_SVOCs|NAPHTHALENE	16	0	0.013	0.015	0.0158	0.023	0.0413	0.042	0.061	0.198	0.496

ATTACHMENT H

REFINED FOOD WEB MODEL – TERRESTRIAL EXPOSURE AREA

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ATTACHMENT H
REFINED FOOD WEB MODEL - TERRESTRIAL EXPOSURE AREA
TABLE OF CONTENTS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ATTACHMENT H TABLE 1
EXPOSURE PARAMETERS FOR ECOLOGICAL RECEPTORS IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Receptor Species	Average Body Weight (kg)	Food Ingestion Rate (kg_{dw}/day)	Dietary Assumptions (%; kg_{dw}/day)		Incidental Soil/Sediment Ingestion (%; kg_{dw}/day)	Water Ingestion Rate (L/day)	Exposure Duration	Area Use Factor
			Terrestrial Plants	Soil Invertebrates				
Birds								
American robin *(Turdus migratorius)*	0.0804 [a]	0.0119 [b]	--	100% [c] 0.0119	6.4% [d] 0.00076	0.0113 [e]	0.5 [f]	1 [g]
Mammals								
Meadow vole *(Microtus pennsylvanicus)*	0.0358 [a]	0.00174 [b]	100% [c] 0.00174	--	1.2% [d] 0.000021	0.0075 [e]	1 [f]	1 [g]
Short-tailed shrew *(Blarina brevicauda)*	0.0161 [a]	0.00143 [b]	--	100% [c] 0.0014	0.90% [d] 0.000013	0.0036 [e]	0.5 [f]	1 [g]

General Notes:

See individual organism notes for source, units, and conversion.

BW - Body Weight. FIR - Food Ingestion Rate. L/day - Liters per Day.

DW - Dry Weight. Kg - Kilogram.

Notes for American robin

[a] Average of adult body weights listed by USEPA (1993).

[b] Food ingestion rates were calculated from Nagy et al. (1999) for insectivorous birds as follows:
FIR (kJ/day)= (9.7*BW(g) $^{0.705}$) using average body weight of 0.0804 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18 kJ/g of dry matter for avian insectivores (Nagy et al., 1999) and then dividing by 1000.

[c] An exclusive soil invertebrate diet was selected.

[d] In the absence of data for the robin, the incidental soil ingestion rate is based on 50th percentile value for woodcock (USEPA, 2007a).

[e] Water ingestion rate of 0.14 L/day (USEPA, 1993) multiplied by average body weight.

[f] Northern robins migrate during the winter months typically between October to March (USEPA, 1993).

[g] Assumed the exposure area can support the entire dietary needs of the robin.

Notes for Meadow vole

[a] Average of adult body weights listed by USEPA (1993).

[b] Average food ingestion rate of 0.33 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0358 kg (USEPA, 1993) and 0.15 to convert to dry weight (grass ingestion).

[c] An exclusive terrestrial plant diet was selected.

[d] The incidental soil ingestion rate is based on 50th percentile value for vole (USEPA, 2007a).

[e] Maximum water ingestion rate of 0.21 L/day (USEPA, 1993) multiplied by average body weight.

[f] Vole assumed to be actively foraging all year round.

[g] Assumed the exposure area can support the entire dietary needs of the vole.

Notes for Short-tailed shrew

[a] Average of adult body weights listed by USEPA (1993).

[b] Average food ingestion rate of 0.555 g/g/day (USEPA, 1993) multiplied by average body weight of 0.0161 kg (USEPA, 1993) and 0.16 to convert to dry weight (earthworm ingestion).

[c] An exclusive soil invertebrate diet was selected.

[d] The incidental soil ingestion rate is based on 50th percentile value for shrew (USEPA, 2007a).

[e] Water ingestion rate of 0.223 L/day (USEPA, 1993) multiplied by average body weight.

[f] Foraging for soil invertebrates is assumed to be limited or not possible for approximately 6 months of the year (October through March) when colder air and soil temperatures limit invertebrate activity (Edwards and Bohlen, 1996).

[g] Assumed the exposure area can support the entire dietary needs of the shrew.

ATTACHMENT H TABLE 2
TERRESTRIAL MEDIA CONCENTRATIONS IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	Measured Media Concentrations [a]				Estimated Soil Invertebrate Tissue			Estimated Terrestrial Plant Tissue		
COPC	Refined Maximum Soil EPC (mg/kg_{dw})	Average Soil EPC (mg/kg_{dw})	Refined Maximum Surface Water EPC [Total] (mg/L)	Average Surface Water EPC [Total] (mg/L)	Soil-to-Invertebrate Uptake Factor	Maximum Invertebrate Tissue EPC (mg/kg_{dw})	Average Invertebrate Tissue EPC (mg/kg_{dw})	Soil-to-Plant Uptake Factor	Maximum Plant Tissue EPC (mg/kg_{dw})	Average Plant Tissue EPC (mg/kg_{dw})
Inorganics										
CADMIUM	0.31	0.15	0.0018	0.000242	Site-specific regression [b]	29.1	19.8	Eco-SSL regression [f]	0.33	0.22
CHROMIUM, TOTAL	28.4	26.8	ND	ND	Site-specific regression [b]	39.7	36.8	0.041 [f]	1.2	1.1
LEAD	14.5	12.6	0.00109	0.000725	Site-specific regression [b,j]	0.0	0.0	Eco-SSL regression [f]	1.2	1.1
MERCURY	0.0509	0.023	ND	ND	1.693 [d]	0.09	0.039	0.652 [i]	0.033	0.015
SELENIUM	1.2	0.46	0.00082	0.00059	Site-specific regression [b]	73.4	34.2	Eco-SSL regression [f]	0.64	0.22
ZINC	52.1	49.6	0.01109	0.007946	Site-specific regression [b]	1794	1768	Eco-SSL regression [f]	43	42.0
Organics										
TOTAL LMW PAHs	2.7	0.62	0.00020	0.00020	3.04 [c]	8.1	1.9	Eco-SSL regression [f]	0.42	0.21
TOTAL HMW PAHs	11.4	1.70	0.00026	0.00019	2.6 [c]	29.5	4.4	Eco-SSL regression [f]	1.8	0.3
TOTAL PCBs	68.9	17.81	0.00038	0.00038	Site-specific regression [b]	171.1	44.5	0.00865 [e,g]	0.60	0.15
4,4-DDT	0.17	0.052	NA	NA	Eco-SSL regression [c]	1.8	0.64	0.00378 [e]	0.00065	0.00020
DIELDRIN	0.105	0.026	NA	NA	14.7 [c]	1.5	0.38	0.41 [f]	0.043	0.011
ENDRIN	0.13	0.034	NA	NA	19.5 [e]	2.54	0.66	0.0371 [k]	0.0048	0.0013
ENDRIN ALDEHYDE	0.017	0.017	NA	NA	19.5 [e,h]	0.332	0.33	0.0371 [h,k]	0.00063	0.00063
ENDRIN KETONE	1.03	0.28	NA	NA	19.5 [e,h]	20.1	5.4	0.0371 [h,k]	0.038	0.0103

Notes:
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).
Unless otherwise noted, uptake factors derive tissue concentrations on a dry weight basis.

COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
NA - Not Analyzed
ND - Not Detected.
PCBs - Polychlorinated Biphenyls.
USEPA - United States Environmental Protection Agency.

[a] Summary statistics and EPCs for Tier 2, Step 3a refinement presented in Attachment G of the Ecological Risk Assessment appendix.
[b] Site-specific soil-to-worm regression equation derived for the Very Low Frequency (VLF) Peninsula (Resolution, 2015) adjusted to present dry weight tissue concentration assuming 84% moisture.

cadmium	tissue concentration = [9.235 * (soil concentration) + 1.801]/(1-% moisture)]
chromium	tissue concentration = [0.3008 * (soil concentration) - 2.1796]/(1-% moisture)]
lead	tissue concentration = [0.7107 * (soil concentration) - 18.466]/(1-% moisture)]
selenium	tissue concentration = [8.07 * (soil concentration) + 1.762]/(1-% moisture)]
zinc	tissue concentration = [1.6262 * (soil concentration) + 202.26]/(1-% moisture)]
Total PCBs	tissue concentration = [0.3967 * (soil concentration) + 0.0536]/(1-% moisture)]

[c] Soil-to-invertebrate uptake factors and regression equations recommended by USEPA in development of Ecological Soil Screening Levels (USEPA, 2007a)
[d] Soil-to-earthworm uptake factors from Sample, et al (1998) - median value from Table 11.
[e] Values identifiedin the Los Alamos National Laboratory Ecorisk Database (Release 3.3; LANL, 2015).
[f] Soil-to-plant uptake factors and regression equations recommended by USEPA in development of Ecological Soil Screening Levels (USEPA, 2007a)

cadmium	ln(tissue concentration) = 0.546 * ln(soil concentration) - 0.475
copper	ln(tissue concentration) = 0.394 * ln(soil concentration) + 0.668
lead	ln(tissue concentration) = 0.561 * ln(soil concentration) - 1.328
selenium	ln(tissue concentration) = 1.104 * ln(soil concentration) - 0.677
zinc	ln(tissue concentration) = 0.554 * ln(soil concentration) + 1.575
Total LMW PAHs	ln(tissue concentration) = 0.4544 * ln(soil concentration) - 1.3205
Total HMW PAHs	ln(tissue concentration) = 0.9469 * ln(soil concentration) - 1.7026

[g] Value for Aroclor 1254 used for Total PCBs.
[h] Value for endrin used as a surrogate due to structural similarity.
[i] Soil-to-plant uptake factors from Bechtel Jacobs (1998) - median value from Table 6.
[j] VLF soil-to-worm regression equation estimates a worm concentration of less than 0 mg/kg; therefore, a value of 0 mg/kg is used as the estimated worm tissue concentration.
[k] Values identified using the Risk Assessment Information System (http://rais.ornl.gov/cgi-bin/tools/TOX_search?select=chem_spef; accessed September 13, 2016).

ATTACHMENT H TABLE 3
TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	TRV (mg/kg $_{bw}$/day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Inorganics							
CADMIUM	1.47	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005a	
CADMIUM	*6.35*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005a*	
CADMIUM	0.77	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005a	
CADMIUM	*6.9*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005a*	
CHROMIUM, TOTAL	2.66	NOAEL	reproduction & growth	chronic	birds	USEPA, 2008	
CHROMIUM, TOTAL	*15.63*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2008*	
CHROMIUM, TOTAL	2.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2008	
CHROMIUM, TOTAL	*58.17*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2008*	
LEAD	1.63	NOAEL	reproduction & growth	chronic	birds	USEPA, 2005b	
LEAD	*44.6*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2005b*	
LEAD	4.7	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2005b	
LEAD	*186.4*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2005b*	
MERCURY	0.0064	estimated NOAEL	reproductive	chronic	mallard duck	Heinz, 1979	Sample et al., 1996
MERCURY	*0.064*	*LOAEL*	*reproductive*	*chronic*	*mallard duck*	*Heinz, 1979*	*Sample et al., 1996*
MERCURY	0.032	NOAEL	reproductive	chronic	rat	Verschuuren et al., 1976	Sample et al., 1996
MERCURY	*0.16*	*LOAEL*	*reproductive*	*chronic*	*rat*	*Verschuuren et al., 1976*	*Sample et al., 1996*
SELENIUM	0.29	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007b	
SELENIUM	*0.819*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007b*	
SELENIUM	0.143	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007b	
SELENIUM	*0.661*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007b*	
ZINC	66.1	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007c	
ZINC	*171.44*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007c*	
ZINC	75.4	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007c	
ZINC	*297.58*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007c*	
Organics							
TOTAL HMW PAHs	0.615	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007d	
TOTAL HMW PAHs	*38.4*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007d*	
TOTAL LMW PAHs	65.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007d	
TOTAL LMW PAHs	*356*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007d*	
TOTAL LMW PAHs / HMW PAHs	2	NOAEL	systemic	chronic	nestling/starlings	Trust et al., 1994 [a]	
TOTAL LMW PAHs / HMW PAHs	*20*	*LOAEL*	*systemic*	*chronic*	*nestling/starlings*	*Trust et al., 1994 [a]*	
4,4-DDT	0.227	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007e	
4,4-DDT	*2.7*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007e*	
4,4-DDT	0.147	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007e	
4,4-DDT	*5.56*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007e*	
DIELDRIN	0.0709	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007f	
DIELDRIN	*0.87*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007f*	
DIELDRIN	0.0150	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007f	
DIELDRIN	*1.27*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007f*	
ENDRIN	0.01035	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982	Sample et al., 1996
ENDRIN	0.1035	LOAEL	reproduction	chronic	screech owl	Fleming et al., 1982	Sample et al., 1996
ENDRIN	0.092	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969	Sample et al., 1996
ENDRIN	0.92	LOAEL	reproduction	chronic	mouse	Good and Ware, 1969	Sample et al., 1996
ENDRIN ALDEHYDE	0.01035	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982 [b]	Sample et al., 1996
ENDRIN ALDEHYDE	*0.1035*	*LOAEL*	*reproduction*	*chronic*	*screech owl*	*Fleming et al., 1982 [b]*	*Sample et al., 1996*
ENDRIN ALDEHYDE	0.092	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969 [b]	Sample et al., 1996
ENDRIN ALDEHYDE	*0.92*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*Good and Ware, 1969 [b]*	*Sample et al., 1996*
ENDRIN KETONE	0.0104	estimated NOAEL	reproduction	chronic	screech owl	Fleming et al., 1982 [b]	Sample et al., 1996
ENDRIN KETONE	*0.1035*	*LOAEL*	*reproduction*	*chronic*	*screech owl*	*Fleming et al., 1982 [b]*	*Sample et al., 1996*
ENDRIN KETONE	0.0920	estimated NOAEL	reproduction	chronic	mouse	Good and Ware, 1969 [b]	Sample et al., 1996
ENDRIN KETONE	*0.92*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*Good and Ware, 1969 [b]*	*Sample et al., 1996*
TOTAL PCBs	0.18	estimated NOAEL	reproduction	chronic	pheasant	Dahlgren et al., 1972 [c]	Sample et al., 1996
TOTAL PCBs	*1.8*	*LOAEL*	*reproduction*	*chronic*	*pheasant*	*Dahlgren et al., 1972 [c]*	*Sample et al., 1996*
TOTAL PCBs	0.068	estimated NOAEL	reproduction	chronic	mouse	McCoy et al., 1995 [c]	Sample et al., 1996
TOTAL PCBs	*0.68*	*LOAEL*	*reproduction*	*chronic*	*mouse*	*McCoy et al., 1995 [c]*	*Sample et al., 1996*

Notes:
NOAELs were estimated if a NOAEL was not identified in the literature. The LOAEL was divided by 10 to derive an estimated NOAEL.
LOAELs were estimated if a LOAEL was not identified in the literature. The NOAEL was multiplied by 10 to derive an estimated LOAEL.
LOAEL values from USEPA Eco-SSL documents were calculated as the geometric mean of growth and reproduction LOAEL values.
Additional LOAELs were identified in Sample et al (1996) and in other literature sources used to identify the NOAEL-based TRVs.

COPC - Chemical of Potential Concern.
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicological Reference Value

[a] 7,12-Dimethylbenz(a)anthracene used as a surrogate for PAHs.
[b] Endrin used as a surrogate for endrin aldehyde and endrin ketone.
[c] Aroclor 1254 used as a surrogate for Total PCBs.

ATTACHMENT H TABLE 4

POTENTIAL RISKS TO THE AMERICAN ROBIN IN TERRESTRIAL EXPOSURE AREA - REFINED MAXIMUM EPC
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE AMERICAN ROBIN	
Average Body Weight (kg)	0.080
Exposure Duration (migrates out of area October-March)	0.50
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.00076
Water Consumption Rate (kg/day)	0.0113
Soil Invt. Consumption Rate (kg_{dw}/day)	0.012

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NA - Not Available.
NC - Not Calculated.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).

FOOD WEB MODEL - REFINED MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)							
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Soil Invertebrate (mg/kg_{dw})	Soil	Surface Water	Soil Invertebrate	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
CADMIUM	3.1E-01	1.8E-03	2.9E+01	1.5E-03	1.3E-04	2.2E+00	2.2E+00	1.5E+00	**1.5E+00**	6.4E+00	3.4E-01
CHROMIUM, TOTAL	2.8E+01	ND	4.0E+01	1.3E-01	NC	2.9E+00	3.1E+00	2.7E+00	**1.2E+00**	1.6E+01	2.0E-01
LEAD	1.4E+01	1.1E-03	0.0E+00	6.9E-02	7.7E-05	0.0E+00	6.9E-02	1.6E+00	4.2E-02	4.5E+01	1.5E-03
MERCURY	5.1E-02	ND	8.6E-02	2.4E-04	NC	6.4E-03	6.6E-03	6.4E-03	1.0E+00	6.4E-02	1.0E-01
SELENIUM	1.2E+00	8.2E-04	7.3E+01	5.8E-03	5.7E-05	5.4E+00	5.4E+00	2.9E-01	**1.9E+01**	8.2E-01	**6.6E+00**
ZINC	5.2E+01	1.1E-02	1.8E+03	2.5E-01	7.8E-04	1.3E+02	1.3E+02	6.6E+01	**2.0E+00**	1.7E+02	7.7E-01
Organics											
TOTAL LMW PAHs	2.7E+00	2.0E-04	8.1E+00	1.3E-02	1.4E-05	6.0E-01	6.1E-01	2.0E+00	3.1E-01	2.0E+01	3.1E-02
TOTAL HMW PAHs	1.1E+01	2.6E-04	3.0E+01	5.4E-02	1.8E-05	2.2E+00	2.2E+00	2.0E+00	**1.1E+00**	2.0E+01	1.1E-01
TOTAL PCBs	6.9E+01	3.8E-04	1.7E+02	3.3E-01	2.7E-05	1.3E+01	1.3E+01	1.8E-01	**7.2E+01**	1.8E+00	**7.2E+00**
4,4-DDT	1.7E-01	NA	1.8E+00	8.2E-04	NC	1.3E-01	1.4E-01	2.3E-01	6.0E-01	2.7E+00	5.0E-02
DIELDRIN	1.1E-01	NA	1.5E+00	5.0E-04	NC	1.1E-01	1.1E-01	7.1E-02	**1.6E+00**	8.7E-01	1.3E-01
ENDRIN	1.3E-01	NA	2.5E+00	6.1E-04	NC	1.9E-01	1.9E-01	1.0E-02	**1.8E+01**	1.0E-01	**1.8E+00**
ENDRIN ALDEHYDE	1.7E-02	NA	3.3E-01	8.0E-05	NC	2.4E-02	2.5E-02	1.0E-02	**2.4E+00**	1.0E-01	2.4E-01
ENDRIN KETONE	1.0E+00	NA	2.0E+01	4.9E-03	NC	1.5E+00	1.5E+00	1.0E-02	**1.4E+02**	1.0E-01	**1.4E+01**

ATTACHMENT H TABLE 5

POTENTIAL RISKS TO THE AMERICAN ROBIN IN TERRESTRIAL EXPOSURE AREA - AVERAGE EPC
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE AMERICAN ROBIN	
Average Body Weight (kg)	0.080
Exposure Duration (migrates out of area October-March)	0.50
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.00076
Water Consumption Rate (kg/day)	0.0113
Soil Invt. Consumption Rate (kg_{dw}/day)	0.012

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NA - Not Available.
NC - Not Calculated.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).

SUPPORTING CALCULATIONS

FOOD WEB MODEL - AVERAGE EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)							
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Soil Invertebrate (mg/kg_{dw})	Soil	Surface Water	Soil Invertebrate	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
CADMIUM	1.5E-01	2.4E-04	2.0E+01	7.0E-04	1.7E-05	1.5E+00	1.5E+00	1.5E+00	1.0E+00	6.4E+00	2.3E-01
CHROMIUM, TOTAL	2.7E+01	ND	3.7E+01	1.3E-01	NC	2.7E+00	2.8E+00	2.7E+00	**1.1E+00**	1.6E+01	1.8E-01
LEAD	1.3E+01	7.3E-04	0.0E+00	6.0E-02	5.1E-05	0.0E+00	6.0E-02	1.6E+00	3.7E-02	4.5E+01	1.3E-03
MERCURY	2.3E-02	ND	3.9E-02	1.1E-04	NC	2.9E-03	3.0E-03	6.4E-03	4.6E-01	6.4E-02	4.6E-02
SELENIUM	4.6E-01	5.9E-04	3.4E+01	2.2E-03	4.1E-05	2.5E+00	2.5E+00	2.9E-01	**8.7E+00**	8.2E-01	**3.1E+00**
ZINC	5.0E+01	7.9E-03	1.8E+03	2.3E-01	5.6E-04	1.3E+02	1.3E+02	6.6E+01	**2.0E+00**	1.7E+02	7.6E-01
Organics											
TOTAL LMW PAHs	6.2E-01	2.0E-04	1.9E+00	2.9E-03	1.4E-05	1.4E-01	1.4E-01	2.0E+00	7.1E-02	2.0E+01	7.1E-03
TOTAL HMW PAHs	1.7E+00	1.9E-04	4.4E+00	8.0E-03	1.3E-05	3.3E-01	3.3E-01	2.0E+00	1.7E-01	2.0E+01	1.7E-02
TOTAL PCBs	1.8E+01	3.8E-04	4.4E+01	8.4E-02	2.7E-05	3.3E+00	3.4E+00	1.8E-01	**1.9E+01**	1.8E+00	**1.9E+00**
4,4-DDT	5.2E-02	NA	6.4E-01	2.4E-04	NC	4.7E-02	4.7E-02	2.3E-01	2.1E-01	2.7E+00	1.8E-02
DIELDRIN	2.6E-02	NA	3.8E-01	1.2E-04	NC	2.8E-02	2.8E-02	7.1E-02	4.0E-01	8.7E-01	3.2E-02
ENDRIN	3.4E-02	NA	6.6E-01	1.6E-04	NC	4.9E-02	4.9E-02	1.0E-02	**4.7E+00**	1.0E-01	4.7E-01
ENDRIN ALDEHYDE	1.7E-02	NA	3.3E-01	8.0E-05	NC	2.4E-02	2.5E-02	1.0E-02	**2.4E+00**	1.0E-01	2.4E-01
ENDRIN KETONE	2.8E-01	NA	5.4E+00	1.3E-03	NC	4.0E-01	4.0E-01	1.0E-02	**3.9E+01**	1.0E-01	**3.9E+00**

ATTACHMENT H TABLE 6

POTENTIAL RISKS TO THE MEADOW VOLE IN TERRESTRIAL EXPOSURE AREA - REFINED MAXIMUM EPC
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE MEADOW VOLE	
Average Body Weight (kg)	0.036
Exposure Duration	1
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.000021
Water Consumption Rate (kg/day)	0.0075
Terrestrial Plant Consumption Rate (kg_{dw}/day)	0.0017

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).

SUPPORTING CALCULATIONS

FOOD WEB MODEL - REFINED MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)							
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Terrestrial Plant (mg/kg_{dw})	Soil	Surface Water	Terrestrial Plant	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Organics											
TOTAL PCBs	6.9E+01	3.8E-04	6.0E-01	4.0E-02	8.0E-05	2.9E-02	6.9E-02	6.8E-02	1.0E+00	6.8E-01	1.0E-01

ATTACHMENT H TABLE 7

POTENTIAL RISKS TO THE MEADOW VOLE IN TERRESTRIAL EXPOSURE AREA - AVERAGE EPC
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE MEADOW VOLE	
Average Body Weight (kg)	0.036
Exposure Duration	1
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.000021
Water Consumption Rate (kg/day)	0.0075
Terrestrial Plant Consumption Rate (kg_{dw}/day)	0.0017

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).

SUPPORTING CALCULATIONS

FOOD WEB MODEL - AVERAGE EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)							
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Terrestrial Plant (mg/kg_{dw})	Soil	Surface Water	Terrestrial Plant	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Organics											
TOTAL PCBs	1.8E+01	3.8E-04	1.5E-01	1.0E-02	8.0E-05	7.5E-03	1.8E-02	6.8E-02	2.6E-01	6.8E-01	2.6E-02

ATTACHMENT H TABLE 8

POTENTIAL RISKS TO THE SHORT-TAILED SHREW IN TERRESTRIAL EXPOSURE AREA - REFINED MAXIMUM EPC
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE SHORT-TAILED SHREW	
Average Body Weight (kg)	0.0161
Exposure Duration (minimal invertebrate foraging October-March)	0.50
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.000013
Water Consumption Rate (kg/day)	0.0036
Soil Invt. Consumption Rate (kg_{dw}/day)	0.0014

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).

SUPPORTING CALCULATIONS

FOOD WEB MODEL - REFINED MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)							
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Soil Invertebrate (mg/kg_{dw})	Soil	Surface Water	Soil Invertebrate	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
CADMIUM	3.1E-01	1.8E-03	2.9E+01	1.2E-04	2.0E-04	1.3E+00	1.3E+00	7.7E-01	**1.7E+00**	6.9E+00	1.9E-01
SELENIUM	1.2E+00	8.2E-04	7.3E+01	4.9E-04	9.1E-05	3.3E+00	3.3E+00	1.4E-01	**2.3E+01**	6.6E-01	**4.9E+00**
ZINC	5.2E+01	1.1E-02	1.8E+03	2.1E-02	1.2E-03	8.0E+01	8.0E+01	7.5E+01	**1.1E+00**	3.0E+02	2.7E-01
Organics											
TOTAL HMW PAHs	1.1E+01	2.6E-04	3.0E+01	4.5E-03	2.9E-05	1.3E+00	1.3E+00	6.2E-01	**2.1E+00**	3.8E+01	3.4E-02
TOTAL PCBs	6.9E+01	3.8E-04	1.7E+02	2.8E-02	4.2E-05	7.6E+00	7.6E+00	6.8E-02	**1.1E+02**	6.8E-01	**1.1E+01**
DIELDRIN	1.1E-01	NA	1.5E+00	4.2E-05	NC	6.9E-02	6.9E-02	1.5E-02	**4.6E+00**	1.3E+00	5.4E-02
ENDRIN KETONE	1.0E+00	NA	2.0E+01	4.1E-04	NC	8.9E-01	8.9E-01	9.2E-02	**9.7E+00**	9.2E-01	9.7E-01

ATTACHMENT H TABLE 9

POTENTIAL RISKS TO THE SHORT-TAILED SHREW IN TERRESTRIAL EXPOSURE AREA - AVERAGE EPC
ECOLOGICAL RISK ASSESSMENT

FIRE TRAINING AREA, NCTAMS LANT DET CUTLER

CUTLER, MAINE

ASSUMPTIONS FOR THE SHORT-TAILED SHREW	
Average Body Weight (kg)	0.0161
Exposure Duration (minimal invertebrate foraging October-March)	0.50
Area Use Factor	1
Soil Consumption Rate (kg_{dw}/day)	0.000013
Water Consumption Rate (kg/day)	0.0036
Soil Invt. Consumption Rate (kg_{dw}/day)	0.0014

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).

SUPPORTING CALCULATIONS

FOOD WEB MODEL - AVERAGE EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)							
COPC	Soil (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Soil Invertebrate (mg/kg_{dw})	Soil	Surface Water	Soil Invertebrate	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
CADMIUM	1.5E-01	2.4E-04	2.0E+01	5.9E-05	2.7E-05	8.8E-01	8.8E-01	7.7E-01	**1.1E+00**	6.9E+00	1.3E-01
SELENIUM	4.6E-01	5.9E-04	3.4E+01	1.8E-04	6.6E-05	1.5E+00	1.5E+00	1.4E-01	**1.1E+01**	6.6E-01	**2.3E+00**
ZINC	5.0E+01	7.9E-03	1.8E+03	2.0E-02	8.9E-04	7.9E+01	7.9E+01	7.5E+01	1.0E+00	3.0E+02	2.6E-01
Organics											
TOTAL HMW PAHs	1.7E+00	1.9E-04	4.4E+00	6.8E-04	2.1E-05	2.0E-01	2.0E-01	6.2E-01	3.2E-01	3.8E+01	5.1E-03
TOTAL PCBs	1.8E+01	3.8E-04	4.4E+01	7.1E-03	4.2E-05	2.0E+00	2.0E+00	6.8E-02	**2.9E+01**	6.8E-01	**2.9E+00**
DIELDRIN	2.6E-02	NA	3.8E-01	1.0E-05	NC	1.7E-02	1.7E-02	1.5E-02	**1.1E+00**	1.3E+00	1.3E-02
ENDRIN KETONE	2.8E-01	NA	5.4E+00	1.1E-04	NC	2.4E-01	2.4E-01	9.2E-02	**2.6E+00**	9.2E-01	2.6E-01

ATTACHMENT H TABLE 10
SUMMARY OF REFINED RISKS TO WILDLIFE IN TERRESTRIAL EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	NOAEL-based HQs - Refined Maximum EPCs			LOAEL-based HQs - Refined Maximum EPCs		
COPC	**American Robin**	**Meadow Vole**	**Short-tailed Shrew**	**American Robin**	**Meadow Vole**	**Short-tailed Shrew**
Inorganics						
CADMIUM	**1.5E+00**	nCOPC	**1.7E+00**	3.4E-01	nCOPC	1.9E-01
CHROMIUM, TOTAL	**1.2E+00**	nCOPC	nCOPC	2.0E-01	nCOPC	nCOPC
LEAD	4.2E-02	nCOPC	nCOPC	1.5E-03	nCOPC	nCOPC
MERCURY	1.0E+00	nCOPC	nCOPC	1.0E-01	nCOPC	nCOPC
SELENIUM	**1.9E+01**	nCOPC	**2.3E+01**	**6.6E+00**	nCOPC	**4.9E+00**
ZINC	**2.0E+00**	nCOPC	**1.1E+00**	7.7E-01	nCOPC	2.7E-01
Organics						
TOTAL LMW PAHs	3.1E-01	nCOPC	nCOPC	3.1E-02	nCOPC	nCOPC
TOTAL HMW PAHs	**1.1E+00**	nCOPC	**2.1E+00**	1.1E-01	nCOPC	3.4E-02
TOTAL PCBs	**7.2E+01**	1.0E+00	**1.1E+02**	**7.2E+00**	1.0E-01	**1.1E+01**
4,4-DDT	6.0E-01	nCOPC	nCOPC	5.0E-02	nCOPC	nCOPC
DIELDRIN	**1.6E+00**	nCOPC	**4.6E+00**	1.3E-01	nCOPC	5.4E-02
ENDRIN	**1.8E+01**	nCOPC	nCOPC	**1.8E+00**	nCOPC	nCOPC
ENDRIN ALDEHYDE	**2.4E+00**	nCOPC	nCOPC	2.4E-01	nCOPC	nCOPC
ENDRIN KETONE	**1.4E+02**	nCOPC	**9.7E+00**	**1.4E+01**	nCOPC	9.7E-01

	NOAEL-based HQs - Average EPCs			LOAEL-based HQs - Average EPCs		
Inorganics						
CADMIUM	1.0E+00	nCOPC	**1.1E+00**	2.3E-01	nCOPC	1.3E-01
CHROMIUM, TOTAL	**1.1E+00**	nCOPC	nCOPC	1.8E-01	nCOPC	nCOPC
LEAD	3.7E-02	nCOPC	nCOPC	1.3E-03	nCOPC	nCOPC
MERCURY	4.6E-01	nCOPC	nCOPC	4.6E-02	nCOPC	nCOPC
SELENIUM	**8.7E+00**	nCOPC	**1.1E+01**	**3.1E+00**	nCOPC	**2.3E+00**
ZINC	**2.0E+00**	nCOPC	1.0E+00	7.6E-01	nCOPC	2.6E-01
Organics						
TOTAL LMW PAHs	7.1E-02	nCOPC	nCOPC	7.1E-03	nCOPC	nCOPC
TOTAL HMW PAHs	1.7E-01	nCOPC	3.2E-01	1.7E-02	nCOPC	5.1E-03
TOTAL PCBs	**1.9E+01**	2.6E-01	**2.9E+01**	**1.9E+00**	2.6E-02	**2.9E+00**
4,4-DDT	2.1E-01	nCOPC	nCOPC	1.8E-02	nCOPC	nCOPC
DIELDRIN	4.0E-01	nCOPC	**1.1E+00**	3.2E-02	nCOPC	1.3E-02
ENDRIN	**4.7E+00**	nCOPC	nCOPC	4.7E-01	nCOPC	nCOPC
ENDRIN ALDEHYDE	**2.4E+00**	nCOPC	nCOPC	2.4E-01	nCOPC	nCOPC
ENDRIN KETONE	**3.9E+01**	nCOPC	**2.6E+00**	**3.9E+00**	nCOPC	2.6E-01

Notes:
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).
Potential risk is calculated using the refined maximum and average EPCs and NOAEL- and LOAEL-based TRVs.
HQs above 1 are bolded and highlighted.

COPC - Chemical of Potential Concern.
HQ - Hazard Quotient.
LOAEL - Lowest Observed Adverse Effect Level.
NC - Not Calculated. Avian TRV not available.
nCOPC - Not a COPC for this media/receptor combinaion.
NOAEL - No Observed Adverse Effect Level.
PCBs - Polychlorinated Biphenyls.
TRV - Toxicity Reference Value.

ATTACHMENT H TABLE 11
REFERENCES CITED FOR TERRESTRIAL EXPOSURE AREA FOOD WEB MODEL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT I

REFINED FOOD WEB MODEL – WETLAND EXPOSURE AREA

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ATTACHMENT I
REFINED FOOD WEB MODEL - WETLAND EXPOSURE AREA
TABLE OF CONTENTS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ATTACHMENT I TABLE 1
EXPOSURE PARAMETERS FOR ECOLOGICAL RECEPTORS IN WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Receptor Species	Average Body Weight (kg)	Food Ingestion Rate (kg_{dw}/day)	Dietary Assumptions (%; kg_{dw}/day) Benthic Invertebrates	Incidental Soil/Sediment Ingestion (%; kg_{dw}/day)	Water Ingestion Rate (L/day)	Exposure Duration	Area Use Factor
Birds							
Marsh wren *(Cistothorus palustris)*	0.011 [a]	0.0029 [b]	100% [c] 0.0029	3.3% [d] 0.000094	0.0028 [e]	0.5 [f]	1 [g]
Mammals							
Raccoon *(Procyon lotor)*	5.636 [a]	0.1840 [b]	100% [c] 0.1840	9.4% [d] 0.017	0.47 [e]	0.67 [f]	0.05 [g]

General Notes:

See individual organism notes for source, units, and conversion.

AUF - Area Use Factor.
BW - Body Weight.
DW - Dry Weight.
FIR - Food Ingestion Rate.
Kg - Kilogram.
L/day - Liters per Day.

Notes for Marsh Wren

[a] Average of adult body weights listed by USEPA (1993).
[b] Food ingestion rate calculated using algorithm for insectivorous birds developed by Nagy, 2001 [FIR (g_{dw}/day) = 0.540*$BW^{0.705}$] using average body weight.
[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.
[d] In the absence of data for the wren, the incidental soil ingestion rate is based on the mallard based on dietary similarities (USACHPPM, 2004).
[e] Water ingestion rate calculated using algorithm for all birds developed by Calder and Braun, 1983 [WIR (kg/day) = 0.059*$BW^{0.67}$] using average body weight.
[f] Marsh wrens migrate during the winter months typically between October to March (USEPA, 1993).
[g] Assumed the exposure area can support the entire dietary needs of the marsh wren.

Notes for Raccoon

[a] Average of adult body weights listed by USEPA (1993; value is average of the average values from three studies).
[b] Food ingestion rate calculated using algorithm for carnivores developed by Nagy, et al. (1999) as follows:
FIR (kJ/day)= (2.23*BW(g) $^{0.85}$) using average body weight of 5.636 kg (USEPA, 1993). FIR is converted to kg/day by dividing by 18.7 kJ/g of dry matter for mammalian insectivores (Nagy et al., 1999) and then dividing by 1000.
[c] An exclusive diet was selected. Benthic invertebrates assumed to represent most relevant dietary exposure for the site.
[d] The incidental soil ingestion rate is based on the value identified by Beyer (1994) for raccoons.
[e] Water ingestion rate calculated using algorithm for all mammals developed by Calder and Braun, 1983 [WIR (kg/day) = 0.099*$BW^{0.90}$] using average body weight.
[f] Foraging for benthic or soil invertebrates is assumed to be limited or not possible for approximately 4 months of the year when frozen surface water and when colder air and soil temperatures limit invertebrate activity (Edwards and Bohlen, 1996).
[g] The AUF based on the raccoon home range (1558 acres) and approximately 3.3 acres of FTA wetlands is equal to 0.0021.
An AUF of 0.05 was assumed in the event that the FTA wetlands provide more attractive habitat than other areas.

ATTACHMENT I TABLE 2
MEDIA AND TISSUE CONCENTRATIONS FOR WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	Measured Media Concentrations [a]				**Estimated Benthic Invertebrate Tissue**			
COPC	Refined Maximum Sediment EPC (mg/kg_{dw})	Average Sediment EPC (mg/kg_{dw})	Refined Maximum Surface Water EPC (mg/L)	Average Surface Water EPC (mg/L)	Sediment-to-Invertebrate Uptake Factor		Refined Maximum Benthic Invertebrate Tissue EPC (mg/kg_{dw})	Average Benthic Invertebrate Tissue EPC (mg/kg_{dw})
Inorganics								
COPPER	57.1	43.1	0.0066	0.0042	1.556	[b]	88.8	67.1
MERCURY	0.14	0.088	ND	ND	1.1	[b]	0.16	0.10
SELENIUM	2.2	0.95	0.00082	0.00059	0.9	[c,d]	9.1	3.9

Notes:
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).
Moisture content assumed to be 78% for benthic invertebrates (USEPA, 1993).
Surface water used as a drinking water source.

COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
ND - Not Detected.
PCBs - Polychlorinated Biphenyls.
USEPA - United States Environmental Protection Agency.

[a] Summary statistics and EPCs for Tier 2, Step 3a refinement presented in Attachment G of the Ecological Risk Assessment appendix.
[b] Benthic invertebrate uptake factors obtained from Bechtel Jacobs (1998; Table 2; all data). Value selected is median uptake factor for depurated and non-depurated invertebrates combined expressed on a dry weight basis.

Invertebrate tissue $_{dw}$ = (uptake factor x sediment concentration)

[c] Sediment to invertebrate factors obtained from Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities: Appendix C, Media-to-Receptor Bioconcentration Factors (USEPA, 1999). Factor calculates tissue on a wet weight basis so tissue concentration is converted to dry weight assuming 78% moisture.

Invertebrate tissue $_{dw}$ = (uptake factor x sediment concentration)/(1-% moisture)

[d] Value for metals without empirical data. Value based on arithmetic average for cadmium, chromium, copper, lead, inorganic mercury, and zinc.

ATTACHMENT I TABLE 3
TOXICITY REFERENCE VALUES
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

COPC	TRV (mg/kg $_{bw}$/day)	Endpoint	Effect	Chronic/ Subchronic	Species	Primary Reference	Source of Reference
Inorganics							
COPPER	4.05	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007a	
COPPER	*34.87*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007a*	
COPPER	5.6	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007a	
COPPER	*82.7*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007a*	
MERCURY	0.0064	estimated NOAEL	reproductive	chronic	mallard duck	Heinz, 1979	Sample et al., 1996
MERCURY	*0.064*	*LOAEL*	*reproductive*	*chronic*	*mallard duck*	*Heinz, 1979*	*Sample et al., 1996*
MERCURY	0.032	NOAEL	reproductive	chronic	rat	Verschuuren et al., 1976	Sample et al., 1996
MERCURY	*0.16*	*LOAEL*	*reproductive*	*chronic*	*rat*	*Verschuuren et al., 1976*	*Sample et al., 1996*
SELENIUM	0.29	NOAEL	reproduction & growth	chronic	birds	USEPA, 2007b	
SELENIUM	*0.819*	*LOAEL*	*reproduction & growth*	*chronic*	*birds*	*USEPA, 2007b*	
SELENIUM	0.143	NOAEL	reproduction & growth	chronic	mammals	USEPA, 2007b	
SELENIUM	*0.661*	*LOAEL*	*reproduction & growth*	*chronic*	*mammals*	*USEPA, 2007b*	

Notes:
NOAELs were estimated if a NOAEL was not identified in the literature. The LOAEL was divided by 10 to derive an estimated NOAEL.
LOAELs were estimated if a LOAEL was not identified in the literature. The NOAEL was multiplied by 10 to derive an estimated LOAEL.
LOAEL values from USEPA Eco-SSL documents were calculated as the geometric mean of growth and reproduction LOAEL values.
Additional LOAELs were identified in Sample et al (1996) and in other literature sources used to identify the NOAEL-based TRVs.

COPC - Chemical of Potential Concern.
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicological Reference Value
USEPA - United States Environmental Protection Agency.

ATTACHMENT I TABLE 4
POTENTIAL RISKS TO THE MARSH WREN IN WETLAND EXPOSURE AREA - REFINED MAXIMUM EPC
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ASSUMPTIONS FOR THE MARSH WREN	
Average Body Weight (kg)	0.011
Exposure Duration (migrates out of area October-March)	0.50
Area Use Factor	1
Sediment Consumption Rate (kg_{dw}/day)	0.000094
Water Consumption Rate (kg/day)	0.0028
Invertebrate Consumption Rate (kg_{dw}/day)	0.0029

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).

SUPPORTING CALCULATIONS

FOOD WEB MODEL - REFINED MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{bw}/day)							
COPC	Sediment (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Benthic Invertebrate (mg/kg_{dw})	Sediment	Benthic Invertebrate	Surface Water	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
COPPER	5.7E+01	6.6E-03	8.9E+01	2.5E-01	1.2E+01	8.7E-04	1.2E+01	4.1E+00	**3.0E+00**	3.5E+01	3.5E-01
MERCURY	1.4E-01	ND	1.6E-01	6.2E-04	2.1E-02	NC	2.2E-02	6.4E-03	**3.4E+00**	6.4E-02	3.4E-01
SELENIUM	2.2E+00	8.2E-04	9.1E+00	9.9E-03	1.2E+00	1.1E-04	1.2E+00	2.9E-01	**4.3E+00**	8.2E-01	**1.5E+00**

ATTACHMENT I TABLE 5
POTENTIAL RISKS TO THE MARSH WREN IN WETLAND EXPOSURE AREA - AVERAGE EPC
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ASSUMPTIONS FOR THE MARSH WREN	
Average Body Weight (kg)	0.011
Exposure Duration (migrates out of area October-March)	0.50
Area Use Factor	1
Sediment Consumption Rate (kg_{dw}/day)	0.000094
Water Consumption Rate (kg/day)	0.0028
Invertebrate Consumption Rate (kg_{dw}/day)	0.0029

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NC - Not Calculated.
ND - Not Detected.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).

SUPPORTING CALCULATIONS

FOOD WEB MODEL - AVERAGE EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{bw}/day)							
COPC	Sediment (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Benthic Invertebrate (mg/kg_{dw})	Sediment	Benthic Invertebrate	Surface Water	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
COPPER	4.3E+01	4.2E-03	6.7E+01	1.9E-01	9.0E+00	5.6E-04	9.2E+00	4.1E+00	**2.3E+00**	3.5E+01	2.6E-01
MERCURY	8.8E-02	ND	1.0E-01	3.9E-04	1.3E-02	NC	1.4E-02	6.4E-03	**2.2E+00**	6.4E-02	2.2E-01
SELENIUM	9.5E-01	5.9E-04	3.9E+00	4.2E-03	5.2E-01	7.8E-05	5.3E-01	2.9E-01	**1.8E+00**	8.2E-01	6.4E-01

ATTACHMENT I TABLE 6
POTENTIAL RISKS TO THE RACCOON IN WETLAND EXPOSURE AREA - REFINED MAXIMUM EPC
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ASSUMPTIONS FOR THE RACCOON	
Average Body Weight (kg)	5.636
Exposure Duration (temps below freezing December-March)	0.67
Area Use Factor	0.05
Sediment Consumption Rate (kg_{dw}/day)	0.017
Water Consumption Rate (kg/day)	0.47
Invertebrate Consumption Rate (kg_{dw}/day)	0.18

$$\text{Total Daily Dose} = \frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s = Concentration of COPC in sediment or soil (mg/kg)
C_w = Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).
The AUF based on the raccoon home range (1558 acres) and approximately 3.3 acres of FTA wetlands is equal to 0.0021. An AUF of 0.05 was assumed in the event that the FTA wetlands provide more attractive habitat than other areas.

SUPPORTING CALCULATIONS

FOOD WEB MODEL - REFINED MAXIMUM EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{dw}/day)							
COPC	Sediment (mg/kg_{dw})	Total Recoverable Phase Surface (mg/L)	Benthic Invertebrate (mg/kg_{dw})	Sediment	Benthic Invertebrate	Surface Water	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
SELENIUM	2.2E+00	8.2E-04	9.1E+00	2.3E-04	1.0E-02	2.3E-06	1.0E-02	1.4E-01	7.1E-02	6.6E-01	1.5E-02

ATTACHMENT I TABLE 7
POTENTIAL RISKS TO THE RACCOON IN WETLAND EXPOSURE AREA - AVERAGE EPC
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

ASSUMPTIONS FOR THE RACCOON	
Average Body Weight (kg)	5.636
Exposure Duration	
(temps below freezing December-March)	0.67
Area Use Factor	0.05
Sediment Consumption Rate (kg_{dw}/day)	0.017
Water Consumption Rate (kg/day)	0.47
Invertebrate Consumption Rate (kg_{dw}/day)	0.18

Total Daily Dose = $\frac{\Sigma([IR_f \times C_f] + [IR_s \times C_s] + [IR_w \times C_w] \times ED \times AUF}{\text{Average Body Weight (kg)}}$

Where:
IR_f = Ingestion rate of food (kg/day)
IR_s = Incidental ingestion rate of sediment or soil (kg/day)
IR_w = Drinking water ingestion rate(L/day)
C_f = Concentration of COPC in food (mg/kg)
C_s= Concentration of COPC in sediment or soil (mg/kg)
C_w= Concentration of COPC in water(mg/L)
ED = Exposure duration (fraction of time receptor spends within exposure area)
AUF = Area use factor (ratio of the receptor's home range relative to the size of exposure area)

Notes:
COPC - Chemical of Potential Concern.
dw - Dry Weight.
EPC - Exposure Point Concentration.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
NOAEL - No Observed Adverse Effects Level.
TRV - Toxicity Reference Value.

HQs above 1 are bolded and highlighted.
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).
The AUF based on the raccoon home range (1558 acres) and approximately 3.3 acres of FTA wetlands is equal to 0.0021. An AUF of 0.05 was assumed in the event that the FTA wetlands provide more attractive habitat than other areas.

SUPPORTING CALCULATIONS

FOOD WEB MODEL - AVERAGE EPCs	Media Concentrations			Potential Daily Dose (mg/kg_{bw}/day)							
COPC	Sediment (mg/kg_{dw})	Total Recoverable Phase Surface Water (mg/L)	Benthic Invertebrate (mg/kg_{dw})	Sediment	Benthic Invertebrate	Surface Water	Total	NOAEL-based TRV (mg/kg_{bw}/day)	NOAEL-based HQ	LOAEL-based TRV (mg/kg_{bw}/day)	LOAEL-based HQ
Inorganics											
SELENIUM	9.5E-01	5.9E-04	3.9E+00	9.7E-05	4.2E-03	1.6E-06	4.3E-03	1.4E-01	3.0E-02	6.6E-01	6.6E-03

ATTACHMENT I TABLE 8
SUMMARY OF REFINED RISKS TO WILDLIFE FOR WETLAND EXPOSURE AREA
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

	NOAEL-based HQs - Refined Maximum EPCs		LOAEL-based HQs - Refined Maximum EPCs	
COPC	**Marsh Wren**	**Raccoon**	**Marsh Wren**	**Raccoon**
Inorganics				
COPPER	**3.0E+00**	nCOPC	3.5E-01	nCOPC
MERCURY	**3.4E+00**	nCOPC	3.4E-01	nCOPC
SELENIUM	**4.3E+00**	7.1E-02	**1.5E+00**	1.5E-02

	NOAEL-based HQs - Average EPCs		LOAEL-based HQs - AverageEPCs	
COPC	**Marsh Wren**	**Raccoon**	**Marsh Wren**	**Raccoon**
COPPER	**2.3E+00**	nCOPC	2.6E-01	nCOPC
MERCURY	**2.2E+00**	nCOPC	2.2E-01	nCOPC
SELENIUM	**1.8E+00**	3.0E-02	6.4E-01	6.6E-03

Notes:
Refined maximum EPCs are the recommended upper confidence limit (UCL) on the arithmetic mean (or the maximum detected concentration if a UCL could not be calculated).
Average EPCs represent the average of the detects (if all samples were detected) or the Kaplan-Meier mean (if data set included non-detects).
Potential risk is calculated using the refined maximum and average EPCs and NOAEL- and LOAEL-based TRVs.
HQs above 1 are bolded and highlighted.

COPC - Chemical of Potential Concern.
HQ - Hazard Quotient (Dose/TRV).
LOAEL - Lowest Observed Adverse Effects Level.
MATC - Maximum Allowable Toxicant Concentration.
nCOPC - Not a COPC for this media/receptor combination.
NOAEL - No Observed Adverse Effect Level.
TRV - Toxicity Reference Value.

ATTACHMENT I TABLE 9
REFERENCES CITED FOR WETLAND EXPOSURE AREA FOOD WEB MODEL
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

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ATTACHMENT J

ALTERNATE TOTAL PCB AND TOTAL PAH DATA TREATMENT SUMMARY

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ATTACHMENT J TABLE 1
SUMMARY OF TOTAL PCBS IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PCBs ND = 0 (mg/kg) Result		Total PCBs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
SURFACE SOIL									
FTA-ANOM1C-SO-SURF	FTA-ANOM1C-SO-SURF	N	9/25/2013	0 - 2 ft	0.97		1.0475		*0.0775*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF-D	FD	9/25/2013	0 - 2 ft	0.58		0.6516		*0.0716*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	N	9/25/2013	0 - 2 ft	0.59		0.6616		*0.0716*
FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-SURF	N	9/26/2013	0 - 2 ft	0.075		0.1452		*0.0702*
FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-SURF	N	9/25/2013	0 - 2 ft	1.8		1.8761		*0.0761*
FTA-AREAA-01	FTA-AREAA-01-0002	N	6/17/2014	0 - 2 ft	0.12		0.133		*0.013*
FTA-AREAA-02	FTA-AREAA-02-0002-D	FD	6/17/2014	0 - 2 ft	1.4		1.531		*0.131*
FTA-AREAA-02	FTA-AREAA-02-0002	N	6/17/2014	0 - 2 ft	0.58		0.5931		*0.0131*
FTA-AREAB-01	FTA-AREAB-01-0002	N	6/17/2014	0 - 2 ft	3.1		3.387		*0.287*
FTA-AREAB-02	FTA-AREAB-02-0002	N	6/17/2014	0 - 2 ft	11		11.621		*0.621*
FTA-AREAC-01	FTA-AREAC-01-0002	N	6/17/2014	0 - 2 ft	0.11		0.1239		*0.0139*
FTA-AREAD-01	FTA-AREAD-01-0002	N	6/19/2014	0 - 2 ft	0.083		0.0977		*0.0147*
FTA-AREAD-02	FTA-AREAD-02-0002	N	6/18/2014	0 - 2 ft	0.052		0.0668		*0.0148*
FTA-AREAF-01	FTA-AREAF-01-0002	N	6/19/2014	0 - 2 ft	0.24		0.2514		*0.0114*
FTA-AREAG-01	FTA-AREAG-01-0002	N	6/18/2014	0 - 2 ft	0.33		0.3431		*0.0131*
FTA-AREAG-02	FTA-AREAG-02-0002	N	6/18/2014	0 - 2 ft	1.2		1.347		*0.147*
FTA-AREAG-03	FTA-AREAG-03-0002	N	6/18/2014	0 - 2 ft	15		16.48		*1.48*
FTA-AREAH-01	FTA-AREAH-01-0002	N	6/18/2014	0 - 2 ft	0.57		0.5848		*0.0148*
FTA-AREAI-01	FTA-AREAI-01-0002	N	6/17/2014	0 - 2 ft	0.48		0.4923		*0.0123*
FTA-SB-200	FTA-SB-200-0002	N	11/8/2012	0 - 2 ft	0.58		1.071		*0.491*
FTA-SB-201	FTA-SB-201-0002	N	11/13/2012	0 - 2 ft	0.87		1.336		*0.466*
FTA-SB-202	FTA-SB-202-0002	N	11/7/2012	0 - 2 ft	< 0.012	U	< 0.092	U	*ND*
FTA-SB-203	FTA-SB-203-0002	N	11/7/2012	0 - 2 ft	< 0.0097	U	< 0.0753	U	*ND*
FTA-SB-204	FTA-SB-204-0002	N	11/8/2012	0 - 2 ft	0.1		0.1754		*0.0754*
FTA-SB-205	FTA-SB-205-0002-D	FD	11/8/2012	0 - 2 ft	0.019		0.0835		*0.0645*
FTA-SB-205	FTA-SB-205-0002	N	11/8/2012	0 - 2 ft	0.076		0.1528		*0.0768*
FTA-SB-206	FTA-SB-206-0002-D	FD	11/6/2012	0 - 2 ft	14		15.39		*1.39*
FTA-SB-206	FTA-SB-206-0002	N	11/6/2012	0 - 2 ft	15		16.04		*1.04*
FTA-SB-208	FTA-SB-208-0002	N	11/6/2012	0 - 2 ft	0.015		0.097		*0.082*
FTA-SB-209	FTA-SB-209-0002	N	11/6/2012	0 - 2 ft	8.7		9.44		*0.74*
FTA-SB-210	FTA-SB-210-0002	N	11/6/2012	0 - 2 ft	1.9		1.9723		*0.0723*
FTA-SB-211	FTA-SB-211-0002-D	FD	11/6/2012	0 - 2 ft	44		46.02		*2.02*
FTA-SB-211	FTA-SB-211-0002	N	11/6/2012	0 - 2 ft	16		16.892		*0.892*
FTA-SB-212	FTA-SB-212-0002	N	11/5/2012	0 - 2 ft	0.32		0.3954		*0.0754*
FTA-SB-213	FTA-SB-213-0002	N	11/5/2012	0 - 2 ft	0.054		0.121		*0.067*
FTA-SB-214	FTA-SB-214-0002-D	FD	11/5/2012	0 - 2 ft	0.71		0.7787		*0.0687*
FTA-SB-214	FTA-SB-214-0002	N	11/5/2012	0 - 2 ft	0.6		0.6716		*0.0716*
FTA-SB-215	FTA-SB-215-0002	N	11/7/2012	0 - 2 ft	1.1		1.1761		*0.0761*
FTA-SB-216	FTA-SB-216-0002	N	11/6/2012	0 - 2 ft	0.46		0.5389		*0.0789*
FTA-SB-217	FTA-SB-217-0002-D	FD	11/7/2012	0 - 2 ft	< 0.011	U	< 0.0846	U	*ND*
FTA-SB-217	FTA-SB-217-0002	N	11/7/2012	0 - 2 ft	< 0.011	U	< 0.0862	U	*ND*
FTA-SB-218	FTA-SB-218-0002	N	11/7/2012	0 - 2 ft	< 0.012	U	< 0.092	U	*ND*
FTA-SB-219	FTA-SB-219-0002	N	11/8/2012	0 - 2 ft	0.041		0.188		*0.147*
FTA-SB-220	FTA-SB-220-0002	N	11/6/2012	0 - 2 ft	1.5		1.5723		*0.0723*
DDA-E-1E	DDA-E-01E-SO-0002	N	7/15/2011	0 - 2 ft	3.45		3.558		*0.108*
DDA-N-5A	DDA-N-5A-SO-0002	N	8/20/2010	0 - 2 ft	0.599		0.698		*0.099*
DDA-NE-10D	DDA-NE-10D-SO-0002-D	FD	7/15/2011	0 - 2 ft	10.6		10.708		*0.108*
DDA-NE-10D	DDA-NE-10D-SO-0002	N	7/15/2011	0 - 2 ft	7.4		7.508		*0.108*
DDA-NE-13I	DDA-NE-13I-SO-0002	N	7/15/2011	0 - 2 ft	0.469		0.577		*0.108*
DDA-NE-2I	DDA-NE-02I-SO-0002-D	FD	7/14/2011	0 - 2 ft	0.192		0.3		*0.108*
DDA-NE-2I	DDA-NE-02I-SO-0002	N	7/14/2011	0 - 2 ft	0.169		0.277		*0.108*
DDA-NE-3E	DDA-NE-3E-0002	N	7/13/2011	0 - 2 ft	2.67		2.778		*0.108*
DDA-NE-5C	DDA-NE-5C-SO-0002	N	8/19/2010	0 - 2 ft	16		16.099		*0.099*
DDA-NE-5D	DDA-NE-5D-SO-0002	N	8/20/2010	0 - 2 ft	1.83		1.929		*0.099*
DDA-NE-5E	DDA-NE-05E-SO-0002	N	7/13/2011	0 - 2 ft	1.36		1.459		*0.099*
DDA-NE-6C	DDA-NE-6C-SO-0002	N	8/20/2010	0 - 2 ft	0.303		0.402		*0.099*
DDA-NE-6D	DDA-NE-6D-SO-0002	N	8/20/2010	0 - 2 ft	1.64		1.748		*0.108*
DDA-NE-7D	DDA-NE-07D-SO-0002	N	7/12/2011	0 - 2 ft	68.1		68.199		*0.099*
DDA-NE-7I	DDA-NE-07I-SO-0002	N	7/15/2011	0 - 2 ft	2.24		2.36		*0.12*
DDA-NE-8B	DDA-NE-08B-SO-0002	N	7/13/2011	0 - 2 ft	1.96		2.059		*0.099*
DDA-NW-10E	DDA-NW-10E-SO-0004	N	7/14/2011	0 - 2 ft	1.2		1.299		*0.099*
DDA-NW-10G	DDA-NW-10G-SO-0002	N	7/14/2011	0 - 2 ft	14.2		14.299		*0.099*
DDA-NW-10Q	DDA-NW-10Q-SO-0002	N	7/14/2011	0 - 2 ft	1.94		2.039		*0.099*
DDA-NW-2D	DDA-NW-2D-SO-0002	N	8/19/2010	0 - 2 ft	5.65		5.749		*0.099*
DDA-NW-2F	DDA-NW-2F-SO-0002	N	8/18/2010	0 - 2 ft	25.6		26.11		*0.51*
DDA-NW-2G	DDA-NW-2G-SO-0002-D	FD	8/20/2010	0 - 2 ft	81.7		83.68		*1.98*
DDA-NW-2G	DDA-NW-2G-SO-0002	N	8/20/2010	0 - 2 ft	78.9		80.88		*1.98*
DDA-NW-2P	DDA-NW-02P-SO-0002	N	7/12/2011	0 - 2 ft	0.31		0.409		*0.099*
DDA-NW-3E	DDA-NW-3E-SO-0002	N	8/20/2010	0 - 2 ft	22.2		22.71		*0.51*
DDA-NW-3F	DDA-NW-3F-SO-0002	N	8/18/2010	0 - 2 ft	3.61		3.709		*0.099*
DDA-NW-3R	DDA-NW-03R-SO-0002	N	7/14/2011	0 - 2 ft	0.166		0.265		*0.099*
DDA-NW-4D	DDA-NW-4D-SO-0002	N	8/19/2010	0 - 2 ft	8.47		8.569		*0.099*
DDA-NW-4F	DDA-NW-4F-SO-0001	N	8/18/2010	0 - 1 ft	11		11.099		*0.099*
DDA-NW-4F	DDA-NW-4F-SO-0002	N	8/18/2010	0 - 2 ft	1.3		1.399		*0.099*

ATTACHMENT J TABLE 1
SUMMARY OF TOTAL PCBS IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PCBs ND = 0 (mg/kg) Result		Total PCBs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
SURFACE SOIL									
DDA-NW-4R	DDA-NW-4R-0002-D	FD	7/14/2011	0 - 2 ft	0.63		0.729		*0.099*
DDA-NW-4R	DDA-NW-4R-0002	N	7/14/2011	0 - 2 ft	0.612		0.72		*0.108*
DDA-NW-4Y	DDA-NW-04Y-SO-0002	N	7/15/2011	0 - 2 ft	1.34		1.439		*0.099*
DDA-NW-5C	DDA-NW-5C-SO-0002	N	8/20/2010	0 - 2 ft	4.35		4.449		*0.099*
DDA-NW-5F	DDA-NW-5F-SO-0001	N	8/17/2010	0 - 1 ft	38.3		40.28		*1.98*
DDA-NW-5F	DDA-NW-5F-SO-0002	N	8/17/2010	0 - 2 ft	7.48		7.579		*0.099*
DDA-NW-5G	DDA-NW-5G-SO-0002	N	8/20/2010	0 - 2 ft	24.7		25.21		*0.51*
DDA-NW-6B	DDA-NW-6B-SO-0001	N	8/17/2010	0 - 1 ft	7.52		7.619		*0.099*
DDA-NW-6D	DDA-NW-6D-SO-0001-D	FD	8/17/2010	0 - 1 ft	45.4		46.39		*0.99*
DDA-NW-6D	DDA-NW-6D-SO-0001	N	8/17/2010	0 - 1 ft	45.6		46.59		*0.99*
DDA-NW-6E	DDA-NW-6E-SO-0001-D	FD	8/17/2010	0 - 1 ft	37.2		38.28		*1.08*
DDA-NW-6E	DDA-NW-6E-SO-0001	N	8/17/2010	0 - 1 ft	29.4		29.91		*0.51*
DDA-NW-6F	DDA-NW-6F-SO-0002	N	8/20/2010	0 - 2 ft	18.1		18.199		*0.099*
DDA-NW-6R	DDA-NW-06R-SO-0002-D	FD	7/14/2011	0 - 2 ft	0.576		0.675		*0.099*
DDA-NW-6R	DDA-NW-06R-SO-0002	N	7/14/2011	0 - 2 ft	0.471		0.57		*0.099*
DDA-NW-7B	DDA-NW-7B-SO-0002	N	8/20/2010	0 - 2 ft	3.55		3.649		*0.099*
DDA-NW-7E	DDA-NW-7E-SO-0002	N	8/20/2010	0 - 2 ft	5.21		5.309		*0.099*
DDA-NW-8R	DDA-NW-08R-SO-0002	N	7/14/2011	0 - 2 ft	7.85		7.949		*0.099*
DDA-NW-9B	DDA-NW-09B-SO-0002	N	7/12/2011	0 - 2 ft	0.109		0.208		*0.099*
DDA-NW-9E	DDA-NW-9E-0002	N	7/12/2011	0 - 2 ft	5.76		5.889		*0.129*
DDA-NW-9M	DDA-NW-09M-SO-0002	N	7/13/2011	0 - 2 ft	24		24.099		*0.099*
DDA-SE-5B	DDA-SE-05B-SO-0002	N	7/12/2011	0 - 2 ft	21.5		21.608		*0.108*
DDA-SW-2F	DDA-SW-2F-SO-0002	N	8/20/2010	0 - 2 ft	8.48		8.579		*0.099*
DDA-SW-2I	DDA-SW-02I-SO-0002	N	7/13/2011	0 - 2 ft	1.11		1.218		*0.108*
DDA-SW-3G	DDA-SW-03G-SO-0002	N	7/13/2011	0 - 2 ft	0.323		0.431		*0.108*
DDA-W-1F	DDA-W-1F-SO-0002	N	8/18/2010	0 - 2 ft	36		36.99		*0.99*
DDA-W-1G	DDA-W-1G-SO-0002	N	8/20/2010	0 - 2 ft	15.2		15.299		*0.099*
PCBAREA1-003	PCBAREA1-003	N	9/18/2013	2 - 2 ft	74		76.6		*2.6*
PCBAREA1-003	PCBAREA1-093	FD	9/18/2013	2 - 2 ft	67		72.13		*5.13*
PCBAREA1-004	PCBAREA1-004	N	9/18/2013	2 - 2 ft	0.4		0.4525		*0.0525*
PCBAREA1-005	PCBAREA1-005	N	9/18/2013	1 - 1 ft	0.37		0.4225		*0.0525*
PCBAREA1-006	PCBAREA1-006	N	9/18/2013	1 - 1 ft	0.13		0.1825		*0.0525*
PCBAREA1-009	PCBAREA1-009	N	9/18/2013	2 - 2 ft	0.048		0.1005		*0.0525*
PCBAREA1-010	PCBAREA1-010	N	9/19/2013	2 - 2 ft	3.2		3.2519		*0.0519*
PCBAREA1-011	PCBAREA1-011	N	9/19/2013	2 - 2 ft	240		247.4		*7.4*
PCBAREA1-012	PCBAREA1-012	N	9/19/2013	2 - 2 ft	8.9		9.7		*0.8*
PCBAREA1-013	PCBAREA1-013	N	9/19/2013	1 - 1 ft	610		621.7		*11.7*
PCBAREA1-014	PCBAREA1-014	N	9/19/2013	1 - 1 ft	140		144.69		*4.69*
PCBAREA1-017	PCBAREA1-017	N	9/19/2013	1 - 1 ft	1.3		1.3518		*0.0518*
PCBAREA1-207	PCBAREA1-207	N	9/27/2013	1.5 - 1.5 ft	1.1		1.1525		*0.0525*
PCBAREA1-208	PCBAREA1-208	N	9/27/2013	1.5 - 1.5 ft	66		71.19		*5.19*
PCBAREA1-219	PCBAREA1-219	N	9/27/2013	1.5 - 1.5 ft	1		1.0506		*0.0506*
PCBAREA1-220	PCBAREA1-220	N	9/27/2013	1 - 1 ft	35		39.63		*4.63*
PCBAREA2-001	PCBAREA2-001	N	9/18/2013	2 - 2 ft	5.2		5.725		*0.525*
PCBAREA2-001	PCBAREA2-091	FD	9/18/2013	2 - 2 ft	4.2		4.725		*0.525*
PCBAREA2-002	PCBAREA2-002	N	9/18/2013	1 - 1 ft	1.7		1.7525		*0.0525*
PCBAREA2-003	PCBAREA2-003	N	9/18/2013	1 - 1 ft	2.4		2.4525		*0.0525*
PCBAREA2-004	PCBAREA2-004	N	9/18/2013	1 - 1 ft	19		21.1		*2.1*
PCBAREA2-005	PCBAREA2-005	N	9/18/2013	1 - 1 ft	5		5.525		*0.525*
SEDIMENT									
FTA-SED-01	FTA-SED-01-0005	N	11/27/2012	0 - 0.5 ft	1.4		1.49		*0.09*
FTA-SED-01	FTA-SD-01-000.5	N	6/19/2014	0 - 0.5 ft	1.2		1.437		*0.237*
FTA-SED-02	FTA-SED-02-0005	N	11/27/2012	0 - 0.5 ft	1.3		1.414		*0.114*
FTA-SED-02	FTA-SED-02-0005-D	FD	11/27/2012	0 - 0.5 ft	1.3		1.407		*0.107*
FTA-SED-02	FTA-SD-02-000.5	N	6/19/2014	0 - 0.5 ft	0.079		0.0954		*0.0164*
FTA-SED-03	FTA-SED-03-0005	N	11/27/2012	0 - 0.5 ft	0.22		0.31		*0.09*
FTA-SED-03	FTA-SD-03-000.5	N	6/19/2014	0 - 0.5 ft	0.23		0.257		*0.027*
FTA-SED-04	FTA-SED-04-0005	N	11/27/2012	0 - 0.5 ft	2.1		2.23		*0.13*
FTA-SED-04	FTA-SD-04-000.5	N	6/21/2014	0 - 0.5 ft	0.6		0.6286		*0.0286*
FTA-SED-05	FTA-SED-05-0005	N	11/27/2012	0 - 0.5 ft	0.76		0.956		*0.196*
FTA-SED-05	FTA-SD-05-000.5	N	6/20/2014	0 - 0.5 ft	0.44		0.5079		*0.0679*
FTA-SED-06	FTA-SED-06-0005	N	11/27/2012	0 - 0.5 ft	0.29		0.552		*0.262*
FTA-SED-06	FTA-SD-06-000.5	N	6/19/2014	0 - 0.5 ft	0.63		0.6913		*0.0613*
FTA-SED-06	FTA-SD-06-000.5-D	FD	6/19/2014	0 - 0.5 ft	1.1		1.1482		*0.0482*
FTA-SED-07	FTA-SED-07-0005	N	11/28/2012	0 - 0.5 ft	0.066		0.222		*0.156*
FTA-SED-07	FTA-SD-07-000.5	N	6/19/2014	0 - 0.5 ft	0.16		0.2229		*0.0629*
FTA-SED-08	FTA-SED-08-0005	N	11/28/2012	0 - 0.5 ft	< 0.026	U	< 0.202	U	*ND*
FTA-SED-08	FTA-SD-08-000.5	N	6/19/2014	0 - 0.5 ft	0.028		0.0492		*0.0212*

Notes:

ND - Not Detected.

See Attachment A for data tables.

RL - Reporting Limit.

U - Not Detected at Specified Reporting Limit.

ND = RL Data Treatment - Total PCBs were calculated per sample by summing the individual Aroclor concentrations for detected results and the full reporting detection limit for non-detect results. For samples without any detections of individual Aroclors, the maximum reporting detection limit within the sample is presented as a non-detect value. This value is considered in the uncertainty section of the risk assessment.

ND = 0 Data Treatment - Total PCBs were calculated per sample by summing only the detected individual Aroclor concentrations. For samples without any detections of individual Aroclors, the maximum reporting detection limit within the sample is presented as a non-detect value. This approach was used in the risk assessment.

ATTACHMENT J TABLE 2
SUMMARY OF TOTAL PAHs IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total PAHs ND = 0 (mg/kg) Result		Total PAHs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
SURFACE SOIL									
FTA-ANOM1C-SO-SURF	FTA-ANOM1C-SO-SURF	N	9/25/2013	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF-D	FD	9/25/2013	0 - 2 ft	0.0027		2.8		*2.7973*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	N	9/25/2013	0 - 2 ft	0.011		2.9		*2.889*
FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-SURF	N	9/26/2013	0 - 2 ft	< 0.29	U	< 0.29	U	*ND*
FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-SURF	N	9/25/2013	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAA-01	FTA-AREAA-01-0002	N	6/17/2014	0 - 2 ft	< 0.26	U	< 0.26	U	*ND*
FTA-AREAA-02	FTA-AREAA-02-0002-D	FD	6/17/2014	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-AREAA-02	FTA-AREAA-02-0002	N	6/17/2014	0 - 2 ft	< 0.23	U	< 0.23	U	*ND*
FTA-AREAB-01	FTA-AREAB-01-0002	N	6/17/2014	0 - 2 ft	0.076		2.9		*2.824*
FTA-AREAB-02	FTA-AREAB-02-0002	N	6/17/2014	0 - 2 ft	0.031		3		*2.969*
FTA-AREAC-01	FTA-AREAC-01-0002	N	6/17/2014	0 - 2 ft	0.0071		2.8		*2.7929*
FTA-AREAD-01	FTA-AREAD-01-0002	N	6/19/2014	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-AREAD-02	FTA-AREAD-02-0002	N	6/18/2014	0 - 2 ft	0.0082		2.9		*2.8918*
FTA-AREAF-01	FTA-AREAF-01-0002	N	6/19/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAG-01	FTA-AREAG-01-0002	N	6/18/2014	0 - 2 ft	0.95		2.8		*1.85*
FTA-AREAG-02	FTA-AREAG-02-0002	N	6/18/2014	0 - 2 ft	0.21		3.1		*2.89*
FTA-AREAG-03	FTA-AREAG-03-0002	N	6/18/2014	0 - 2 ft	0.055		2.8		*2.745*
FTA-AREAH-01	FTA-AREAH-01-0002	N	6/18/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAI-01	FTA-AREAI-01-0002	N	6/17/2014	0 - 2 ft	0.002		2.8		*2.798*
FTA-SB-200	FTA-SB-200-0002	N	11/8/2012	0 - 2 ft	0.082		18		*17.918*
FTA-SB-201	FTA-SB-201-0002	N	11/13/2012	0 - 2 ft	0.071		16		*15.929*
FTA-SB-202	FTA-SB-202-0002	N	11/7/2012	0 - 2 ft	0.26		3.4		*3.14*
FTA-SB-203	FTA-SB-203-0002	N	11/7/2012	0 - 2 ft	5.9		6.8		*0.9*
FTA-SB-204	FTA-SB-204-0002	N	11/8/2012	0 - 2 ft	0.031		2.9		*2.869*
FTA-SB-205	FTA-SB-205-0002-D	FD	11/8/2012	0 - 2 ft	0.0056		3.1		*3.0944*
FTA-SB-205	FTA-SB-205-0002	N	11/8/2012	0 - 2 ft	0.0085		2.8		*2.7915*
FTA-SB-206	FTA-SB-206-0002-D	FD	11/6/2012	0 - 2 ft	0.1		3.2		*3.1*
FTA-SB-206	FTA-SB-206-0002	N	11/6/2012	0 - 2 ft	0.099		3.1		*3.001*
FTA-SB-208	FTA-SB-208-0002	N	11/6/2012	0 - 2 ft	< 0.29	U	< 0.29	U	*ND*
FTA-SB-209	FTA-SB-209-0002	N	11/6/2012	0 - 2 ft	2		3.2		*1.2*
FTA-SB-210	FTA-SB-210-0002	N	11/6/2012	0 - 2 ft	1.1		2.7		*1.6*
FTA-SB-211	FTA-SB-211-0002-D	FD	11/6/2012	0 - 2 ft	0.014		3		*2.986*
FTA-SB-211	FTA-SB-211-0002	N	11/6/2012	0 - 2 ft	0.015		3.1		*3.085*
FTA-SB-212	FTA-SB-212-0002	N	11/5/2012	0 - 2 ft	0.16		2.8		*2.64*
FTA-SB-213	FTA-SB-213-0002	N	11/5/2012	0 - 2 ft	< 0.22	U	< 0.22	U	*ND*
FTA-SB-214	FTA-SB-214-0002-D	FD	11/5/2012	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-SB-214	FTA-SB-214-0002	N	11/5/2012	0 - 2 ft	0.0042		2.8		*2.7958*
FTA-SB-215	FTA-SB-215-0002	N	11/7/2012	0 - 2 ft	0.12		3.1		*2.98*
FTA-SB-216	FTA-SB-216-0002	N	11/6/2012	0 - 2 ft	73		73		*0*
FTA-SB-217	FTA-SB-217-0002-D	FD	11/7/2012	0 - 2 ft	0.015		2.9		*2.885*
FTA-SB-217	FTA-SB-217-0002	N	11/7/2012	0 - 2 ft	0.01		2.7		*2.69*
FTA-SB-218	FTA-SB-218-0002	N	11/7/2012	0 - 2 ft	0.019		3.5		*3.481*
FTA-SB-219	FTA-SB-219-0002	N	11/8/2012	0 - 2 ft	0.073		6.1		*6.027*
FTA-SB-220	FTA-SB-220-0002	N	11/6/2012	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
SEDIMENT									
FTA-SED-01	FTA-SED-01-0005	N	11/27/2012	0 - 0.5 ft	43		42.685		*-0.315*
FTA-SED-01	FTA-SD-01-000.5	N	6/19/2014	0 - 0.5 ft	2.5		5.533		*3.033*
FTA-SED-02	FTA-SED-02-0005	N	11/27/2012	0 - 0.5 ft	1.2		1.236		*0.036*
FTA-SED-02	FTA-SED-02-0005-D	FD	11/27/2012	0 - 0.5 ft	2.1		2.1516		*0.0516*
FTA-SED-02	FTA-SD-02-000.5	N	6/19/2014	0 - 0.5 ft	0.077		3.3888		*3.3118*
FTA-SED-03	FTA-SED-03-0005	N	11/27/2012	0 - 0.5 ft	0.3		0.8145		*0.5145*
FTA-SED-03	FTA-SD-03-000.5	N	6/19/2014	0 - 0.5 ft	0.073		5.281		*5.208*
FTA-SED-04	FTA-SED-04-0005	N	11/27/2012	0 - 0.5 ft	3.5		3.542		*0.042*
FTA-SED-04	FTA-SD-04-000.5	N	6/21/2014	0 - 0.5 ft	0.56		5.8782		*5.3182*
FTA-SED-05	FTA-SED-05-0005	N	11/27/2012	0 - 0.5 ft	4.1		4.134		*0.034*
FTA-SED-05	FTA-SD-05-000.5	N	6/20/2014	0 - 0.5 ft	0.72		13.971		*13.251*
FTA-SED-06	FTA-SED-06-0005	N	11/27/2012	0 - 0.5 ft	1.1		2.237		*1.137*
FTA-SED-06	FTA-SD-06-000.5	N	6/19/2014	0 - 0.5 ft	4.9		12.574		*7.674*
FTA-SED-06	FTA-SD-06-000.5-D	FD	6/19/2014	0 - 0.5 ft	0.31		10.24		*9.93*
FTA-SED-07	FTA-SED-07-0005	N	11/28/2012	0 - 0.5 ft	0.052		0.8864		*0.8344*
FTA-SED-07	FTA-SD-07-000.5	N	6/19/2014	0 - 0.5 ft	0.3		12.442		*12.142*
FTA-SED-08	FTA-SED-08-0005	N	11/28/2012	0 - 0.5 ft	0.26		1.0908		*0.8308*
FTA-SED-08	FTA-SD-08-000.5	N	6/19/2014	0 - 0.5 ft	0.04		4.692		*4.652*

ATTACHMENT J TABLE 2
SUMMARY OF TOTAL PAHs IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total HMW PAHs ND = 0 (mg/kg) Result		Total HMW PAHs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
SURFACE SOIL									
FTA-ANOM1C-SO-SURF	FTA-ANOM1C-SO-SURF	N	9/25/2013	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF-D	FD	9/25/2013	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	N	9/25/2013	0 - 2 ft	0.011		1.3		*1.289*
FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-SURF	N	9/26/2013	0 - 2 ft	< 0.29	U	< 0.29	U	*ND*
FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-SURF	N	9/25/2013	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAA-01	FTA-AREAA-01-0002	N	6/17/2014	0 - 2 ft	< 0.26	U	< 0.26	U	*ND*
FTA-AREAA-02	FTA-AREAA-02-0002-D	FD	6/17/2014	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-AREAA-02	FTA-AREAA-02-0002	N	6/17/2014	0 - 2 ft	< 0.23	U	< 0.23	U	*ND*
FTA-AREAB-01	FTA-AREAB-01-0002	N	6/17/2014	0 - 2 ft	0.071		1.6		*1.529*
FTA-AREAB-02	FTA-AREAB-02-0002	N	6/17/2014	0 - 2 ft	0.031		1.7		*1.669*
FTA-AREAC-01	FTA-AREAC-01-0002	N	6/17/2014	0 - 2 ft	0.0071		1.5		*1.4929*
FTA-AREAD-01	FTA-AREAD-01-0002	N	6/19/2014	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-AREAD-02	FTA-AREAD-02-0002	N	6/18/2014	0 - 2 ft	0.0082		1.6		*1.5918*
FTA-AREAF-01	FTA-AREAF-01-0002	N	6/19/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAG-01	FTA-AREAG-01-0002	N	6/18/2014	0 - 2 ft	0.75		1.5		*0.75*
FTA-AREAG-02	FTA-AREAG-02-0002	N	6/18/2014	0 - 2 ft	0.19		1.8		*1.61*
FTA-AREAG-03	FTA-AREAG-03-0002	N	6/18/2014	0 - 2 ft	0.055		1.6		*1.545*
FTA-AREAH-01	FTA-AREAH-01-0002	N	6/18/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAI-01	FTA-AREAI-01-0002	N	6/17/2014	0 - 2 ft	0.002		1.5		*1.498*
FTA-SB-200	FTA-SB-200-0002	N	11/8/2012	0 - 2 ft	0.082		8.3		*8.218*
FTA-SB-201	FTA-SB-201-0002	N	11/13/2012	0 - 2 ft	0.071		7.2		*7.129*
FTA-SB-202	FTA-SB-202-0002	N	11/7/2012	0 - 2 ft	0.26		1.5		*1.24*
FTA-SB-203	FTA-SB-203-0002	N	11/7/2012	0 - 2 ft	0.85		1.3		*0.45*
FTA-SB-204	FTA-SB-204-0002	N	11/8/2012	0 - 2 ft	0.031		1.3		*1.269*
FTA-SB-205	FTA-SB-205-0002-D	FD	11/8/2012	0 - 2 ft	0.0056		1.4		*1.3944*
FTA-SB-205	FTA-SB-205-0002	N	11/8/2012	0 - 2 ft	0.0085		1.3		*1.2915*
FTA-SB-206	FTA-SB-206-0002-D	FD	11/6/2012	0 - 2 ft	0.1		1.5		*1.4*
FTA-SB-206	FTA-SB-206-0002	N	11/6/2012	0 - 2 ft	0.099		1.4		*1.301*
FTA-SB-208	FTA-SB-208-0002	N	11/6/2012	0 - 2 ft	< 0.29	U	< 0.29	U	*ND*
FTA-SB-209	FTA-SB-209-0002	N	11/6/2012	0 - 2 ft	1.5		2		*0.5*
FTA-SB-210	FTA-SB-210-0002	N	11/6/2012	0 - 2 ft	0.98		1.2		*0.22*
FTA-SB-211	FTA-SB-211-0002-D	FD	11/6/2012	0 - 2 ft	0.014		1.4		*1.386*
FTA-SB-211	FTA-SB-211-0002	N	11/6/2012	0 - 2 ft	0.015		1.4		*1.385*
FTA-SB-212	FTA-SB-212-0002	N	11/5/2012	0 - 2 ft	0.16		1.4		*1.24*
FTA-SB-213	FTA-SB-213-0002	N	11/5/2012	0 - 2 ft	< 0.22	U	< 0.22	U	*ND*
FTA-SB-214	FTA-SB-214-0002-D	FD	11/5/2012	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-SB-214	FTA-SB-214-0002	N	11/5/2012	0 - 2 ft	0.0042		1.3		*1.2958*
FTA-SB-215	FTA-SB-215-0002	N	11/7/2012	0 - 2 ft	0.12		1.5		*1.38*
FTA-SB-216	FTA-SB-216-0002	N	11/6/2012	0 - 2 ft	57		57		*0*
FTA-SB-217	FTA-SB-217-0002-D	FD	11/7/2012	0 - 2 ft	0.015		1.3		*1.285*
FTA-SB-217	FTA-SB-217-0002	N	11/7/2012	0 - 2 ft	0.01		1.2		*1.19*
FTA-SB-218	FTA-SB-218-0002	N	11/7/2012	0 - 2 ft	0.019		1.6		*1.581*
FTA-SB-219	FTA-SB-219-0002	N	11/8/2012	0 - 2 ft	0.03		2.8		*2.77*
FTA-SB-220	FTA-SB-220-0002	N	11/6/2012	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
SEDIMENT									
FTA-SED-01	FTA-SED-01-0005	N	11/27/2012	0 - 0.5 ft	30		30.31		*0.31*
FTA-SED-01	FTA-SD-01-000.5	N	6/19/2014	0 - 0.5 ft	2		3.29		*1.29*
FTA-SED-02	FTA-SED-02-0005	N	11/27/2012	0 - 0.5 ft	0.99		0.987		*-0.003*
FTA-SED-02	FTA-SED-02-0005-D	FD	11/27/2012	0 - 0.5 ft	1.7		1.687		*-0.013*
FTA-SED-02	FTA-SD-02-000.5	N	6/19/2014	0 - 0.5 ft	0.074		1.874		*1.8*
FTA-SED-03	FTA-SED-03-0005	N	11/27/2012	0 - 0.5 ft	0.25		0.6948		*0.4448*
FTA-SED-03	FTA-SD-03-000.5	N	6/19/2014	0 - 0.5 ft	0.073		2.893		*2.82*
FTA-SED-04	FTA-SED-04-0005	N	11/27/2012	0 - 0.5 ft	2.2		2.217		*0.017*
FTA-SED-04	FTA-SD-04-000.5	N	6/21/2014	0 - 0.5 ft	0.55		3.199		*2.649*
FTA-SED-05	FTA-SED-05-0005	N	11/27/2012	0 - 0.5 ft	3.1		3.148		*0.048*
FTA-SED-05	FTA-SD-05-000.5	N	6/20/2014	0 - 0.5 ft	0.69		7.89		*7.2*
FTA-SED-06	FTA-SED-06-0005	N	11/27/2012	0 - 0.5 ft	0.86		1.864		*1.004*
FTA-SED-06	FTA-SD-06-000.5	N	6/19/2014	0 - 0.5 ft	3.6		6.93		*3.33*
FTA-SED-06	FTA-SD-06-000.5-D	FD	6/19/2014	0 - 0.5 ft	0.29		5.693		*5.403*
FTA-SED-07	FTA-SED-07-0005	N	11/28/2012	0 - 0.5 ft	0.036		0.7495		*0.7135*
FTA-SED-07	FTA-SD-07-000.5	N	6/19/2014	0 - 0.5 ft	0.26		6.863		*6.603*
FTA-SED-08	FTA-SED-08-0005	N	11/28/2012	0 - 0.5 ft	< 0.59	U	< 0.806	U	*ND*
FTA-SED-08	FTA-SD-08-000.5	N	6/19/2014	0 - 0.5 ft	0.04		2.56		*2.52*

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SUMMARY OF TOTAL PAHs IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS
ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Location ID	Sample ID	Sample Type	Sample Date	Depth Interval	Total LMW PAHs ND = 0 (mg/kg) Result		Total LMW PAHs ND = RL (mg/kg) Result		*Absolute Difference Between Values (mg/kg)*
SURFACE SOIL									
FTA-ANOM1C-SO-SURF	FTA-ANOM1C-SO-SURF	N	9/25/2013	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF-D	FD	9/25/2013	0 - 2 ft	0.0027		1.5		*1.4973*
FTA-ANOM1D-SO-SURF	FTA-ANOM1D-SO-SURF	N	9/25/2013	0 - 2 ft	< 0.26	U	< 0.26	U	*ND*
FTA-ANOM1E-SO-SURF	FTA-ANOM1E-SO-SURF	N	9/26/2013	0 - 2 ft	< 0.29	U	< 0.29	U	*ND*
FTA-ANOM4-SO-SURF	FTA-ANOM4-SO-SURF	N	9/25/2013	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAA-01	FTA-AREAA-01-0002	N	6/17/2014	0 - 2 ft	< 0.26	U	< 0.26	U	*ND*
FTA-AREAA-02	FTA-AREAA-02-0002-D	FD	6/17/2014	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-AREAA-02	FTA-AREAA-02-0002	N	6/17/2014	0 - 2 ft	< 0.23	U	< 0.23	U	*ND*
FTA-AREAB-01	FTA-AREAB-01-0002	N	6/17/2014	0 - 2 ft	0.0046		1.3		*1.2954*
FTA-AREAB-02	FTA-AREAB-02-0002	N	6/17/2014	0 - 2 ft	< 0.27	U	< 0.27	U	*ND*
FTA-AREAC-01	FTA-AREAC-01-0002	N	6/17/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAD-01	FTA-AREAD-01-0002	N	6/19/2014	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-AREAD-02	FTA-AREAD-02-0002	N	6/18/2014	0 - 2 ft	< 0.26	U	< 0.26	U	*ND*
FTA-AREAF-01	FTA-AREAF-01-0002	N	6/19/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAG-01	FTA-AREAG-01-0002	N	6/18/2014	0 - 2 ft	0.2		1.2		*1*
FTA-AREAG-02	FTA-AREAG-02-0002	N	6/18/2014	0 - 2 ft	0.012		1.3		*1.288*
FTA-AREAG-03	FTA-AREAG-03-0002	N	6/18/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAH-01	FTA-AREAH-01-0002	N	6/18/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-AREAI-01	FTA-AREAI-01-0002	N	6/17/2014	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-SB-200	FTA-SB-200-0002	N	11/8/2012	0 - 2 ft	< 1.6	U	< 1.6	U	*ND*
FTA-SB-201	FTA-SB-201-0002	N	11/13/2012	0 - 2 ft	< 1.4	U	< 1.4	U	*ND*
FTA-SB-202	FTA-SB-202-0002	N	11/7/2012	0 - 2 ft	< 0.31	U	< 0.31	U	*ND*
FTA-SB-203	FTA-SB-203-0002	N	11/7/2012	0 - 2 ft	5.1		5.5		*0.4*
FTA-SB-204	FTA-SB-204-0002	N	11/8/2012	0 - 2 ft	< 0.26	U	< 0.26	U	*ND*
FTA-SB-205	FTA-SB-205-0002-D	FD	11/8/2012	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
FTA-SB-205	FTA-SB-205-0002	N	11/8/2012	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-SB-206	FTA-SB-206-0002-D	FD	11/6/2012	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
FTA-SB-206	FTA-SB-206-0002	N	11/6/2012	0 - 2 ft	< 0.27	U	< 0.27	U	*ND*
FTA-SB-208	FTA-SB-208-0002	N	11/6/2012	0 - 2 ft	< 0.29	U	< 0.29	U	*ND*
FTA-SB-209	FTA-SB-209-0002	N	11/6/2012	0 - 2 ft	0.51		1.3		*0.79*
FTA-SB-210	FTA-SB-210-0002	N	11/6/2012	0 - 2 ft	0.13		1.4		*1.27*
FTA-SB-211	FTA-SB-211-0002-D	FD	11/6/2012	0 - 2 ft	< 0.27	U	< 0.27	U	*ND*
FTA-SB-211	FTA-SB-211-0002	N	11/6/2012	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
FTA-SB-212	FTA-SB-212-0002	N	11/5/2012	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-SB-213	FTA-SB-213-0002	N	11/5/2012	0 - 2 ft	< 0.22	U	< 0.22	U	*ND*
FTA-SB-214	FTA-SB-214-0002-D	FD	11/5/2012	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-SB-214	FTA-SB-214-0002	N	11/5/2012	0 - 2 ft	< 0.25	U	< 0.25	U	*ND*
FTA-SB-215	FTA-SB-215-0002	N	11/7/2012	0 - 2 ft	< 0.27	U	< 0.27	U	*ND*
FTA-SB-216	FTA-SB-216-0002	N	11/6/2012	0 - 2 ft	15		16		*1*
FTA-SB-217	FTA-SB-217-0002-D	FD	11/7/2012	0 - 2 ft	< 0.26	U	< 0.26	U	*ND*
FTA-SB-217	FTA-SB-217-0002	N	11/7/2012	0 - 2 ft	< 0.24	U	< 0.24	U	*ND*
FTA-SB-218	FTA-SB-218-0002	N	11/7/2012	0 - 2 ft	< 0.31	U	< 0.31	U	*ND*
FTA-SB-219	FTA-SB-219-0002	N	11/8/2012	0 - 2 ft	0.043		3.3		*3.257*
FTA-SB-220	FTA-SB-220-0002	N	11/6/2012	0 - 2 ft	< 0.28	U	< 0.28	U	*ND*
SEDIMENT									
FTA-SED-01	FTA-SED-01-0005	N	11/27/2012	0 - 0.5 ft	12		12.375		*0.375*
FTA-SED-01	FTA-SD-01-000.5	N	6/19/2014	0 - 0.5 ft	0.48		2.243		*1.763*
FTA-SED-02	FTA-SED-02-0005	N	11/27/2012	0 - 0.5 ft	0.2		0.249		*0.049*
FTA-SED-02	FTA-SED-02-0005-D	FD	11/27/2012	0 - 0.5 ft	0.45		0.4646		*0.0146*
FTA-SED-02	FTA-SD-02-000.5	N	6/19/2014	0 - 0.5 ft	0.0028		1.5148		*1.512*
FTA-SED-03	FTA-SED-03-0005	N	11/27/2012	0 - 0.5 ft	0.045		0.1197		*0.0747*
FTA-SED-03	FTA-SD-03-000.5	N	6/19/2014	0 - 0.5 ft	< 0.47	U	< 2.388	U	*ND*
FTA-SED-04	FTA-SED-04-0005	N	11/27/2012	0 - 0.5 ft	1.3		1.325		*0.025*
FTA-SED-04	FTA-SD-04-000.5	N	6/21/2014	0 - 0.5 ft	0.0092		2.6792		*2.67*
FTA-SED-05	FTA-SED-05-0005	N	11/27/2012	0 - 0.5 ft	0.96		0.986		*0.026*
FTA-SED-05	FTA-SD-05-000.5	N	6/20/2014	0 - 0.5 ft	0.033		6.081		*6.048*
FTA-SED-06	FTA-SED-06-0005	N	11/27/2012	0 - 0.5 ft	0.25		0.373		*0.123*
FTA-SED-06	FTA-SD-06-000.5	N	6/19/2014	0 - 0.5 ft	1.2		5.644		*4.444*
FTA-SED-06	FTA-SD-06-000.5-D	FD	6/19/2014	0 - 0.5 ft	0.013		4.547		*4.534*
FTA-SED-07	FTA-SED-07-0005	N	11/28/2012	0 - 0.5 ft	0.017		0.1369		*0.1199*
FTA-SED-07	FTA-SD-07-000.5	N	6/19/2014	0 - 0.5 ft	0.037		5.579		*5.542*
FTA-SED-08	FTA-SED-08-0005	N	11/28/2012	0 - 0.5 ft	0.26		0.2848		*0.0248*
FTA-SED-08	FTA-SD-08-000.5	N	6/19/2014	0 - 0.5 ft	< 0.42	U	< 2.132	U	*ND*

ATTACHMENT J TABLE 2

SUMMARY OF TOTAL PAHs IN SOIL AND SEDIMENT USING TWO DATA TREATMENT METHODS

ECOLOGICAL RISK ASSESSMENT
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Notes:

ND - Not Detected. See Attachment A for data tables.

RL - Reporting Limit.

U - Not Detected at Specified Reporting Limit.

ND = RL Data Treatment - Total PAHs were calculated per sample by summing the individual PAH concentrations for detected results and the full reporting detection limit for non-detect results. For samples without any detections of individual PAHs, the maximum reporting detection limit within the sample is presented as a non-detect value. This value is considered in the uncertainty section of the risk assessment.

ND = 0 Data Treatment - Total PAHs were calculated per sample by summing only the detected individual PAH concentrations. For samples without any detections of individual PAHs, the maximum reporting detection limit within the sample is presented as a non-detect value. This approach was used in the risk assessment.

APPENDIX F

TECHNICAL MEMORANDUM EVALUATION OF GROUNDWATER ANALYTICAL RESULTS SITE 01 – FIRE TRAINING AREA

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APPENDIX F
TECHNICAL MEMORANDUM,
EVALUATION OF GROUNDWATER ANALYTICAL RESULTS

REMEDIAL INVESTIGATION REPORT
Site 1, Fire Training Area
Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det)
Cutler, Maine

Revision: 0

Prepared for:

Department of the Navy
Naval Facilities Engineering Command, Mid-Atlantic
9324 Virginia Avenue
Norfolk, VA 23511-3095

Prepared by:

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Contract Number N62470-11-D-8013
CTO WE31

STATE OF MAINE
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565
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August 2017

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TABLE OF CONTENTS

FIGURES

TABLES

ATTACHMENT

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ACRONYMS AND ABBREVIATIONS

µg/L	microgram per liter
ng/L	nanogram per liter
COPC	chemical of potential concern
DRO	diesel range organics
EPH	extractable petroleum hydrocarbons
FTA	Fire Training Area
GRO	gasoline range organics
HAL	Health Advisory Level
MCL	maximum contaminant level
MEDEP	Maine Department of Environmental Protection
NCTAMS LANT Det	Naval Computer and Telecommunications Area Master Station Atlantic Detachment
PCB	polychlorinated biphenyl
PFAS	poly- and perfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
PSL	project screening level
PFC	perfluorinated compound
QC	quality control
RI	Remedial Investigation
RSL	regional screening level
SAP	sampling and analysis plan
SVOC	semivolatile organic compound
TCE	trichloroethene

VLF	Very Low Frequency
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbons

1.0 INTRODUCTION

This Technical Memorandum presents the results of the September 2015 groundwater sampling event conducted at Site 1, Fire Training Area (FTA) of the Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det) in Cutler, Maine. This project was completed by Resolution Consultants on behalf of the Naval Facilities Engineering Command (Navy) under the Comprehensive Long-Term Environmental Action Navy Contract Number N62470-11-D-8013, Contract Task Order WE 33. This work was conducted in accordance with the Administrative Order of Consent between the Navy and the Maine Department of Environmental Protection (MEDEP), who is the lead regulatory agency, and in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act requirements.

The NCTAMS LANT Det Cutler is located near the town of Cutler, Washington County, Maine. Construction began in the late 1950s, and on June 23, 1961, NCTAMS LANT Det Cutler was established as a communications facility for the United States Navy. The facility occupied approximately 2,300 acres originally consisting of three main areas: 1) the Administrative and Housing Area, 2) the High Frequency Area, and 3) the Very Low Frequency (VLF) Area. In December 2003, the Administrative and Housing Area was transferred to the Cutler Development Corporation and is therefore no longer part of the military facility.

The FTA (referred to as the site) is located on the north end of the Cutler Peninsula, to the north of the VLF antenna array, east of Holmes and Machias Bays and west of Little Machias Bay (**Figure F-1**). The FTA is an abandoned gravel pit that was reportedly used for fire-training exercises by NCTAMS LANT Det Cutler personnel from the 1960s through the 1980s.

Undeveloped forested land and several freshwater wetlands (known locally as heaths) surround the site. The site was historically used for firefighting operations and disposal of fuel oil. A removal action has been conducted in the center of the site and a wetland was constructed during restoration activities. The rest of the site is mainly located in an open (cleared) area, with a forested area around the perimeter.

2.0 REMEDIAL INVESTIGATION OF THE FIRE TRAINING AREA

Multiple Remedial Investigation (RI) activities have been conducted at the FTA starting in 1991. RI activities have included multiple removal actions, surface and subsurface soil sampling, and groundwater monitoring. Previous groundwater sampling events have occurred at the FTA from 1999 to 2014. Volatile organic compounds (VOCs), extractable petroleum hydrocarbons (EPH), volatile petroleum hydrocarbons (VPH), and metals have been detected above project screening levels (PSLs) in groundwater at the FTA. The PSLs for groundwater are listed in **Table F-2** and discussed in detail in Section 4.2.4 of the RI.

As part of the RI conducted for the FTA, groundwater samples were collected at 12 monitoring well locations September 2015 as part of a sampling program to determine whether the groundwater has been impacted via contaminant runoff. Historically, low levels of VOCs and petroleum were detected in groundwater and the current samples will assess current groundwater conditions. The wells sampled in the June 2014 and September 2015 event included:

- FTA-MW-1
- FTA-MW-5
- FTA-MW-9
- FTA-MW-10
- FTA-MW-11
- FTA-MW-12
- FTA-MW-14
- FTA-MW-206
- FTA-MW-208
- FTA-MW-210
- FTA-MW-218
- FTA-DP-35

Figure F-2 presents the locations of the sampled monitoring wells. In accordance with the Sampling and Analysis Plan (SAP), groundwater samples were collected and analyzed for volatile organic compounds (including vinyl chloride by SIM analysis), VPH/EPH, semivolatile organic compounds (SVOCs) (including low level PAHs), and total and dissolved metals. Additionally, the monitoring wells were analyzed for poly- and perfluoroalkyl substances (PFAS), as part of the new emerging contaminant protocol (Resolution 2015). The data validation report is included in **Attachment A**.

3.0 SAMPLING OBJECTIVES

The primary objectives of the September 2015 FTA groundwater sampling event were to:

- Collect additional data to evaluate the current groundwater conditions at the FTA and confirm historical trends of contaminants of potential concern (COPCs).
- Obtain an additional groundwater dataset for use in the risk assessment which will be conducted as part of the RI report for the FTA.

4.0 SUMMARY OF FIELD ASSESSMENT RESULTS

Section 4.0 presents the results of the groundwater sampling conducted at the FTA in September 2015. Analytical results from the investigation were provided to MEDEP in their Electronic Data Deliverable format under separate cover.

4.1 Groundwater Elevations

Groundwater measurements were completed on two separate events; once during June 2015 and once during September 2015. The groundwater elevation data and measurements are presented in **Table F-1**.

Groundwater contour maps are illustrated on **Figure F-3** and **Figure F-4** based on groundwater measurements obtained in June and September 2015. Based on the groundwater elevations measured, groundwater appears to flow from south to northeast toward the constructed wetland. Groundwater flow appears to be consistent with topography and surface drainage at the site. Groundwater elevations illustrated on **Figure F-3** and **Figure F-4** are referenced to an arbitrary site datum rather than mean sea level.

4.2 Sampling Methodology

The groundwater sampling events were conducted from September 15 to 21, 2015. Prior to sample collection, water levels were measured to the nearest 0.01 feet using a water level meter. Water levels were used to develop groundwater contours and interpret flow direction. Monitoring wells were purged via low-flow sampling methodology using a peristaltic pump and polypropylene tubing. Water quality parameters including temperature, pH, specific conductivity, dissolved oxygen, turbidity and oxidation-reduction potential were measured in a flow-through cell during purging using an YSI 6820 v2 water quality meter. Purging continued until water quality parameters reached stabilization, at which point samples were collected.

Samples were collected into laboratory-supplied containers and submitted to the analytical laboratory for analysis of selected parameters. Samples were packaged on ice and transported via overnight commercial carrier under standard chain-of-custody procedures to Katahdin Analytical Services in Portland, Maine.

Quality control (QC) samples collected included field duplicates, matrix spike and matrix spike duplicate, and trip blanks. Field duplicates were collected at a rate of 10% and MS/MSD samples were collected at the rate of 5%. QC samples were analyzed for the same parameters as the accompanying samples. Trip blanks accompanied each cooler containing sample for VOC analysis. A temperature blank was also placed in each cooler to check that samples are preserved at or below four degrees Celsius during shipment.

4.3 Groundwater Analytical Results

A summary of the analytical results from the September 2015 groundwater sampling is presented below and in **Table F-2**.

4.3.1 Diesel/Gasoline Range Organics and EPH/VPH

The most heavily contaminated groundwater is found northwest and east of the FTA site, in the direction of groundwater flow from the spill area. Sampling conducted as part of site investigations prior to installation that contaminants were present in the FTA because concentrations were found to be at levels far exceeding the maximum contaminant levels (MCLs), starting in 1999. Historically, Maine required evaluation of petroleum contamination using diesel range organics (DRO) and gasoline range organics (GRO) analytical procedures, which measured the total concentration of petroleum hydrocarbon compounds, because cleanup guidelines were expressed in DRO and GRO. However, in 2010, the MEDEP developed a framework to evaluate petroleum contamination using hydrocarbon fractions of toxicological risk-based guidelines, developing the EPH and VPH standards. Starting in 2012, the SAP was revised to sample for EPH/VPH, versus the DRO/GRO standards.

In accordance with the SAP, EPH/VPH analyses were performed on samples collected at all 12 locations. Historically, petroleum contamination was found at the site; however, the petroleum impacts relating to the firefighting activities in the central portion of the FTA site were removed in a series of remedial excavations and replaced with clean fill. As of 2014, only the MW-5 location had a detection of EPH (C11–C22) at a concentration of 49 micrograms per liter (µg/L). The results of this sampling event in September 2015 indicate that there were no detections of COPCs above the MCL.

4.3.2 Volatile Organic Compounds

General decreasing trends in detected concentrations of site-related contaminants continue to be observed at many of the sampling locations for the VOCs of concern. These downward trends are most notably evident in results dating from 1999, to the most recent sampling event in 2015 (**Table F-3**). Historically, the prominent contaminants of concern included vinyl chloride, cis-1,2-dichloroethene, trichloroethene (TCE), and tetrachloroethene. The lower-order halogenated organics such as vinyl chloride may be the products of biological degradation of the more highly chlorinated compounds such as TCE.

Eleven of the 12 wells sampled show TCE concentrations below the MCL or non-detect for the recent sampling. FTA-MW-206 was the only sampling location to have a detection of TCE at a concentration of 10 µg/L.

Eleven of the 12 wells sampled in June 2014 show cis-1,2-dichloroethene concentrations below the MCL or non-detect for the recent sampling. FTA-MW-206 was the only sampling location in to have a detection of cis-1,2-dichloroethene (22 µg/L).

4.3.3 Semivolatile Organic Compounds

Historically, there have been no detections of significance for SVOCs at the FTA. The main locations where SVOCs have been detected include MW-5, MW-9, and MW-10, with trace detections at MW-14. Five SVOC analytes were detected in four of the 12 sampled groundwater wells in the September 2015 sampling event; however, no concentrations were detected above the MCL or regional screening levels (RSL). Naphthalene was detected at a concentration below the RSL at MW-9, while 2-Methylnaphthalene and Hexachlorocyclopentadiene were detected below the RSL at MW-206.

4.3.4 Poly- and Perfluoroalkyl Substances

PFAS have been found in some firefighting foams and are considered an emerging contaminant. PFAS include perfluorooctanesulfonic acid (also known as perfluorooctane sulfonate [PFOS]) and perfluorooctanoic acid (PFOA). PFAS have not been investigated at the FTA before 2012; however, it is possible that firefighting foam containing PFAS were used in firefighting activities at the FTA. PFOA and PFOS are fully fluorinated organic compounds and are the two perfluorinated chemicals most commonly found in firefighting reagents.

Groundwater samples obtained from wells during the most recent sampling event (September 2015) exhibited the following detected PFOA results: MW-1 (0.015 µg/L); MW-210 (0.012 µg/L); DP-35 (0.018 µg/L); MW-14 (0.350 µg/L); MW-5 (0.30 µg/L); MW-9 (0.021 µg/L); MW-11 (0.017 µg/L); MW-10 (0.022 µg/L), and MW-12 (0.0056 µg/L). Groundwater samples obtained from wells in September 2015 exhibited the following detected PFOS results: MW-10 (0.011 µg/L); MW-1 (0.0016 µg/L); MW-9 (0.14 µg/L); MW-11 (0.15 µg/L); and MW-12 (0.011 µg/L).

Results from the September 2015 sampling effort revealed that samples collected from MW-9 and MW-11 exhibited PFOS in excess of the USEPA's Lifetime Drinking Water Health Advisory Level (HAL) of 0.07 µg/L (USEPA 2016). The HAL for PFOS is protective of drinking water quality, and not groundwater from monitoring wells.

4.3.5 Total and Dissolved Metals

Historically, the primary metal COPCs in soil, sediment, surface water, and groundwater samples include chromium and manganese along with other trace metals.

Results from the metals analysis on groundwater samples have shown that the maximum concentrations of chromium and manganese were found in the northern portion of the site

(hydraulically downgradient of the rest of the site). These include 6.7 µg/L of chromium detected at MW-1 and 3,850 µg/L of manganese detected at MW-9.

5.0 HISTORICAL DATA TRENDS

Section 5.0 compares groundwater data collected in 2015 with groundwater data collected between 2007 and 2014 (**Table F-3**). **Figure F-5** shows groundwater analytical results in excess of the PSLs for the 2015 groundwater data.

The groundwater samples from the monitoring wells collected in 2012, 2014 and 2015 were analyzed for perfluorinated compounds (PFCs), as part of the new emerging-contaminant protocol. Results from the PFC sampling efforts have shown that the maximum concentrations of PFAS (as PFOS and PFOA) were found in the northern portion of the site (hydraulically downgradient) in MW-11 (250 nanograms per liter [ng/L] PFOS) and MW-14 (450 ng/L PFOA). No significant historic trends in PFOS or PFOA concentrations are observed in FTA monitoring wells.

Historically, the primary metal COPCs at FTA in soil, sediment, surface water samples include chromium and manganese along with other trace metals. Results from the metals analysis on groundwater samples have shown that the maximum concentrations of chromium and manganese were found in the northern portion of the site (hydraulically downgradient) in MW-05 and MW-9. The highest concentration of chromium was detected at MW-11 in 2014 at a concentration of 4.67 µg/L. The highest manganese concentration was detected at MW-9 in 2012 at a concentration of 3,460 µg/L. No significant historic trends in metals concentrations are observed in FTA monitoring wells.

The results show that there is no current polychlorinated biphenyl (PCB) contamination in groundwater as of 2015, which historically was the main contaminant of concern in other media.

6.0 CONCLUSIONS AND LIMITATIONS

This sampling event has defined the limits of the contamination at the FTA; identified the nature and extent of contamination in groundwater; and collected data of acceptable quality to adequately define the potential risks to human health and the environment from these areas. The results have shown that there is no current PCB contamination in groundwater as of 2015, which historically was the main contaminant of concern in other media, and that there are no significant historic trends in contaminant concentrations observed in FTA monitoring wells.

7.0 REFERENCES

Resolution Consultants (Resolution). 2015. *Final Sampling and Analysis Plan for Tier II Addendum: Groundwater Sampling at Site 1 Fire Training Area, Naval Computer and Telecommunications Area, Master Station Atlantic detachment, Cutler, Maine.* September.

United States Environmental Protection Agency (USEPA). 2016. Federal Ambient Water Quality Criteria. http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#altable.

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———. 2016. *Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS). Office of Water*. EPA-822-R-16-004. May. https://www.epa.gov/sites/production/files/2016-05/documents/pfos_health_advisory_final_508.pdf.

FIGURES

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Fire Training Area

Machias Bay

Little Machias Bay

Legend

Approximate Boundary of Fire Training Area

Property Boundary

Map Location

N

0 900 1,800

Feet

Drawn: AC 07/17/2017

Approved: TC 07/17/2017

Project #: 60282029

Figure F-1
Site Location Map
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\GW_Sampling_Report\Figure_1_Fire_Training_Area_Site_Location_Map.mxd

MW-14
MW-11
MW-8
MW-201
MW-9
MW-12
MW-10
MW-18
MW-5
MW-218
MW-17
MW-203
MW-13
MW-16
MW-204
MW-206
MW-210
MW-1
MW-208

Legend

Monitoring Well

Property Boundary

Map Location

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60285299	

N

0 50 100

Feet

Figure F-2
Monitoring Well Locaitons
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\GW_Sampling_Report\Figure_2_FTA_Well_Location_Map.mxd

MW-14
67.00

MW-11
66.97

MW-8

MW-201
ND

MW-9
69.15

MW-12
68.71

MW-5
70.68

MW-18

MW-10

MW-218
ND

MW-17

MW-203

MW-13

MW-16

MW-204
ND

MW-206
81.83

DP-35
78.25

MW-210
86.89

MW-1
87.79

MW-208
91.03

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Legend

- Monitoring Well
- June 2015 Groundwater Elevation (feet)
- Inferred June 2015 Groundwater Elevation (feet)
- Direction of Groundwater Flow

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60282029	

Map Location

N

0 37.5 75

Feet

Figure F-3
Groundwater Elevation Map June 2015
Site 1, Fire Training Area
Remedial Investigation
NCTAMS LANT Det
Cutler, Maine

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MW-14
66.87

MW-11
66.79

MW-8
67.99

MW-201
ND

MW-9
68.81

MW-12
68.6

MW-10
70.56

MW-18

MW-5
70.49

MW-218

MW-203
71.33

MW-13
71.42

MW-17

MW-16

MW-204
ND

MW-206
81.57

DP-35
78.34

MW-210
82.94

MW-1
84.54

MW-208
83.58

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Legend

- Monitoring Well
- September 2015 Groundwater Elevation (feet)
- Inferred September 2015 Groundwater Elevation (feet)
- Direction of Groundwater Flow

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60285299	

Map Location

N

0 37.5 75

Feet

Figure F-4
Groundwater Elevation Map September 2015
Site 1, Fire Training Area
Remedial Investigation Report
NCTAMS LANT Det
Cutler, Maine

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MW-14D		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**1.3 J**	
PFOA	**350**	
CALCIUM	**8710**	
ACETONE	**2.3 J**	1400
CHLOROMETHANE	**1.3 J**	19

MW-14		
Analyte (µg/L)	**Result**	PSL (µg/L)
PFOS	**1.3**	
PLOA	**350**	
CALCIUM	**8810**	
CHLOROMETHANE	**0.91 J**	19
TOLUENE	**0.3 J**	110

MW-9		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**140**	
PFOA	**21**	
CALCIUM	**9940**	
ACETONE	3.7 J	1400
1,1'-BIPHENYL	0.11 J	3.8
NAPHTHALENE	0.073 J	75

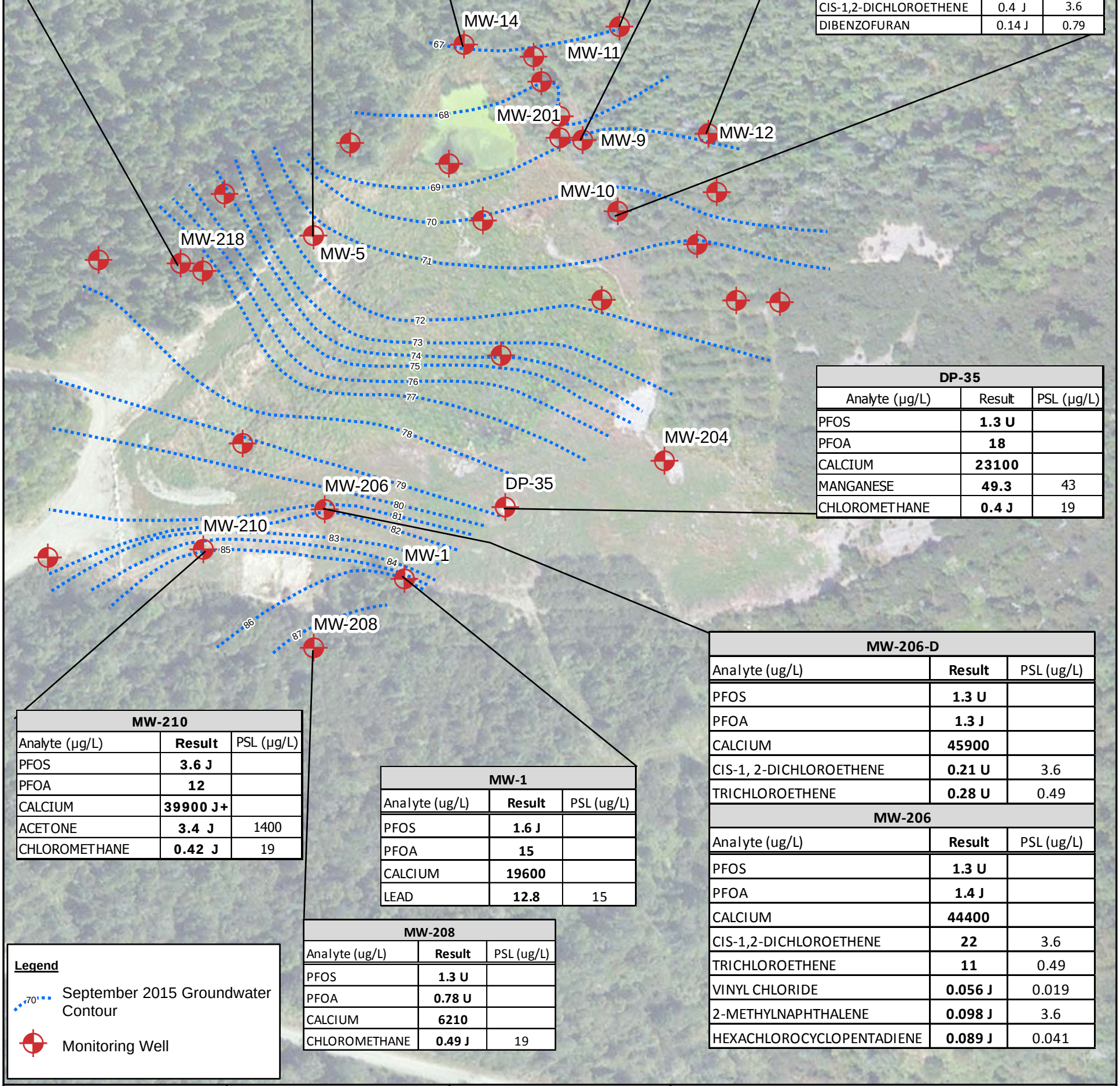
MW-5		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**1.3 U**	
PFOA	**300**	
CALCIUM	**7320**	
ACETONE	2.4 J	1400

MW-11		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**150**	
PFOA	**17**	
CALCIUM	**7490**	
ACETONE	**5.1**	1400
HEXACHLOROCYCLOPENTADIENE	**0.085 J**	0.041

MW-12		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**11**	
PLOA	**5.6**	
CALCIUM	**4480**	
ACETONE	3.5 J	1400
CHLOROMETHANE	0.86 J	19
CIS-1,2-DICHLOROETHENE	0.3 J	3.6

MW-218		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**1.3 U**	
PFOA	**1.3 J**	
CALCIUM	**479**	
ACETONE	2.9 J	1400

MW-10		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**11**	
PLOA	**12**	
CALCIUM	**4180**	
CHLOROMETHANE	0.63 J	19
CIS-1,2-DICHLOROETHENE	0.4 J	3.6
DIBENZOFURAN	0.14 J	0.79



DP-35		
Analyte (µg/L)	Result	PSL (µg/L)
PFOS	**1.3 U**	
PFOA	**18**	
CALCIUM	**23100**	
MANGANESE	**49.3**	43
CHLOROMETHANE	**0.4 J**	19

MW-210		
Analyte (µg/L)	**Result**	PSL (µg/L)
PFOS	**3.6 J**	
PFOA	**12**	
CALCIUM	**39900 J+**	
ACETONE	**3.4 J**	1400
CHLOROMETHANE	**0.42 J**	19

MW-1		
Analyte (ug/L)	**Result**	PSL (ug/L)
PFOS	**1.6 J**	
PFOA	**15**	
CALCIUM	**19600**	
LEAD	**12.8**	15

MW-208		
Analyte (ug/L)	**Result**	PSL (ug/L)
PFOS	**1.3 U**	
PFOA	**0.78 U**	
CALCIUM	**6210**	
CHLOROMETHANE	**0.49 J**	19

MW-206-D		
Analyte (ug/L)	**Result**	PSL (ug/L)
PFOS	**1.3 U**	
PFOA	**1.3 J**	
CALCIUM	**45900**	
CIS-1, 2-DICHLOROETHENE	**0.21 U**	3.6
TRICHLOROETHENE	**0.28 U**	0.49

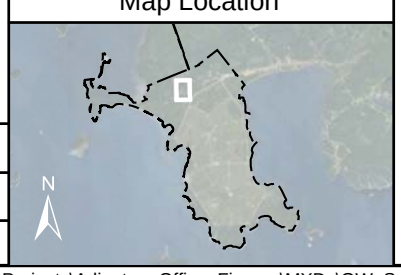
MW-206		
Analyte (ug/L)	**Result**	PSL (ug/L)
PFOS	**1.3 U**	
PFOA	**1.4 J**	
CALCIUM	**44400**	
CIS-1,2-DICHLOROETHENE	**22**	3.6
TRICHLOROETHENE	**11**	0.49
VINYL CHLORIDE	**0.056 J**	0.019
2-METHYLNAPHTHALENE	**0.098 J**	3.6
HEXACHLOROCYCLOPENTADIENE	**0.089 J**	0.041

Legend

70 — September 2015 Groundwater Contour

Monitoring Well

Map Location



N

0 75 150

Feet

Drawn: AC 07/17/2017

Approved: TC 07/17/2017

Project #: 60282029

Figure F-5
Groundwater Analytical Results, September 2015
Sire 1, Fire Training Area
Remedial Investigation
NCTAMS LANT DET
Cutler, Maine

Path: L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\GW_Sampling_Report\Figure_2_FTA_Fall_Groundwater_Contour_Map.mxd

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TABLES

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TABLE F-1
GROUNDWATER MEASUREMENTS
FIRE TRAINING AREA, NCTAMS LANT DET
CUTLER, MAINE

Well ID	Top of Screen (Feet Below Ground Surface [ft bgs])	Bottom of Screen (ft bgs)	Ground Surface Elevation (ft)	Top of PVC (TPVC) Elevation (ft)	Casing Elevation	Depth to Water from TPVC (ft bgs)	Groundwater Elevation	Depth to Water from TPVC (ft bgs)	Groundwater Elevation	Depth to Water from TPVC (ft bgs)	Groundwater Elevation	Depth to Water from TPVC (ft bgs)	Groundwater Elevation
						November 2012		June 2014		June 2015		September 2015	
DP-17	4.9	14.9	79.42	81.72	NA	5.34	76.38	4.65	77.07	7.55	74.17	5.76	75.96
DP-20	0.25	9.25	80.58	82.69	NA	6.23	76.46	4.75	77.94	NA	NA	5.72	76.97
DP-26	1.3	11.3	76.2	78.69	NA	5.03	73.66	4.35	74.34	5.30	73.39	4.88	73.81
DP-27	2.5	7.5	68.25	70.46	NA	3.2	67.26	3.07	67.39	3.03	67.43	3.5	66.96
DP-28	2.5	7.5	68.79	70.9	NA	3.03	67.87	2.91	67.99	2.98	67.92	3.18	67.72
DP-31	2.75	7.75	69.82	75.3	NA	5.42	69.88	5.64	69.66	5.8	69.5	5.86	69.44
DP-35	4	9	82.73	85.86	NA	7.7	78.16	7.32	78.54	7.61	78.25	7.52	78.34
DP-38	4	9	72.73	76.03	NA	NM	NM	4.8	71.23	5.02	71.01	NA	NM
DP-46	0.5	5.5	69.08	72.39	72.52	NM	NM	NM	NM	3.22	69.17	NM	NM
MW-1	4	14	91.09	93.09	93.21	7.15	85.94	6.8	86.29	5.3	87.79	8.55	84.54
MW-5	3	8	74.7	79.21	NA	8.31	70.9	8.21	71	8.53	70.68	8.72	70.49
MW-8	1.5	6.5	68.37	71.15	NA	3.04	68.11	3.05	68.1	3.07	68.08	3.16	67.99
MW-9	1.5	6.5	69.3	72.41	NA	3.24	69.17	3.31	69.1	3.26	69.15	3.6	68.81
MW-10	1.5	6.5	71.06	73.52	NA	2.85	70.67	2.84	70.68	2.95	70.57	2.96	70.56
MW-11	1.5	6.5	67.1	69.68	NA	2.75	66.93	2.72	66.96	2.71	66.97	2.89	66.79
MW-12	1.5	6.5	69.09	73.09	NA	4.07	69.02	4.28	68.81	4.38	68.71	4.49	68.6
MW-13	1	6	72.45	75.77	NA	4.71	71.06	4.35	71.42	4.67	71.1	4.35	71.42
MW-14	1.5	6.5	67.36	70.24	NA	3.16	67.08	3.19	67.05	3.24	67	3.37	66.87
MW-203	4	8	72.66	75.42	75.55	4.4	71.02	4.09	71.33	4.31	71.11	4.09	71.33
MW-206	6	11	81.53	84.33	84.57	2.18	82.15	2	82.33	2.50	81.83	2.76	81.57
MW-208	15	25	96.74	99.63	99.77	11.86	87.77	11.7	87.93	8.60	91.03	16.05	83.58
MW-210	4	9	85.05	87.89	88.06	2.9	84.99	2.9	84.99	1	86.89	4.95	82.94
MW-218	6	10	80.03	82.76	82.96	5.97	76.79	5.1	77.66	NM	NM	5.69	77.07
P-3	0	1.65	75.58	78.63	NA	4.05	74.58	dry	<76.98	3.5	75.13	4.31	74.32
P-4	7	9	82.65	86.22	NA	4.35	81.87	5.03	81.19	4.58	81.64	5.27	80.95
SG-1	NA	NA	68.07	NA	70.48	1.1	68.24	1.3	68.24	1.61	NA	1.6	NA

Notes:

BGS	below ground surface
FT	foot or feet
NA	not applicable
NM	not measured
TPVC	top of the polyvinyl chloride casing

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA	FTA-DP-35	FTA-MW-1	FTA-MW-10	FTA-MW-11	FTA-MW-12	FTA-MW-14	FTA-MW-14	FTA-MW-206	FTA-MW-206	FTA-MW-208
Sample Location					FTA-DP-35	FTA-MW-1	FTA-MW-10	FTA-MW-11	FTA-MW-12	FTA-MW-14	FTA-MW-14	FTA-MW-206	FTA-MW-206	FTA-MW-208
Sample Date					9/21/2015	9/18/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/18/2015	9/18/2015	9/21/2015
Sample Type					N	N	N	N	N	N	FD	N	FD	N
Sample ID					FTA-DP-35-092115	FTA-MW-1-091815	FTA-MW-10-092115	FTA-MW-11-092115	FTA-MW-12-092115	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-206-091815	FTA-MW-206-091815-D	FTA-MW-208-092115
TOTAL METALS (UG/L)														
ALUMINUM	7000	20000			41 J	1420	58 J	27 J	91 J	120 J	110 J	< 100 UJ	37 J	232 J
ANTIMONY	3	7.8	6		0.3 J	0.26 J	0.37 J	0.32 J	0.4 J	0.32 J	0.3 J	0.13 J	0.15 J	0.37 J
ARSENIC	**10**	**0.052**	**10**		**11**	**8.8**	**6.7**	< 4 U	**3 J**	< 4 U	< 4 U	**2.4 J**	**2.9 J**	**2.6 J**
BARIUM	1000	3800	2000		2.64 J	21.2	2 J	1.7 J	6.15	4.76 J	4.48 J	9.35 J	6.24 J	6.87
BERYLLIUM	10	25	4		0.049 J	0.28 J	0.038 J	0.036 J	0.047 J	0.072 J	0.078 J	< 0.2 U	< 0.2 U	0.052 J
CADMIUM	**1**	9.2	5		< 0.2 U	0.059 J	0.042 J	< 0.2 U	**1.34**	< 0.2 U	< 0.2 U	0.043 J	0.049 J	< 0.2 U
CALCIUM					23100	19600	4180	7490	4480	8810	8710	44400	45900	6210
CHROMIUM, TOTAL	20		100		2.99 J	6.7	3.72 J	3.57 J	4.51 J	3.77 J	3.25 J	1.2 J	1.5 J	4.72 J
COBALT	10	**6**			0.12 J	2.48	**8.02**	0.087 J	1.42	0.27 J	0.26 J	0.928 J	0.949 J	0.32 J
COPPER	500	800	1300		1.7 J	8.3	5.81	1.6 J	2.61 J	6 J	1.7 J	0.52 J	0.58 J	3.69
IRON	5000	14000			79 J	1890	2430	341	390	1230	1240	8.6 J	9.8 J	266
LEAD	**10**	15	15		0.29 J	**12.8**	0.44 J	0.13 J	0.41 J	0.23 J	0.23 J	< 0.5 U	0.078 J	0.64 J
MAGNESIUM					3840	2860	1250	2590	1590	2910	2900	8640	8920	2570
MANGANESE	**500**	**430**			49.3	94	**2150**	**794**	**1460**	88.5	86.5	176	184	10
MERCURY		5.7	2		< 0.1 U	< 0.1 U	0.017 J	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
NICKEL	**20**	390			0.69 J	**21**	3.42	0.85 J	1.85 J	1 J	1.2 J	1.2 J	1.3 J	2.33
POTASSIUM					2320	1280	701 J	456 J	621 J	1050	979 J	1680	1770	758 J
SELENIUM	40	100	50		< 3 U	0.62 J	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U
SILVER	40	94			< 0.4 U	< 0.4 U	0.45 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
SODIUM	20000				10400	5600	4060	5350	4980	7420	7120	8660	8910	6730
THALLIUM		0.2	2		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
VANADIUM	200	86			0.67 J	4.1 J	1 J	0.8 J	1.5 J	1.8 J	1.8 J	< 4 U	0.62 J	1.7 J
ZINC	2000	6000			< 10 U	12.8 J	1.8 J	2.4 J	5.5 J	2.6 J	3.4 J	3.1 J	< 10 U	2 J
DISSOLVED METALS (UG/L)														
ALUMINUM	7000	20000			15 J	100 J	< 100 U	44 J	49 J	110 J	100 J	34 J	15 J	16 J
ANTIMONY	3	7.8	6		0.28 J	0.25 J	0.29 J	0.34 J	0.37 J	0.36 J	0.24 J	0.14 J	0.11 J	0.38 J
ARSENIC	10	**0.052**	10		**9.2**	**5.6**	**6.4**	< 4 U	**3 J**	**2.4 J**	< 4 U	**3.6 J**	**3.1 J**	< 4 U
BARIUM	1000	3800	2000		2.64 J	2.2 J	1.9 J	1.7 J	6.16	4.24 J	3.94 J	6.32	6.58	3.48 J
BERYLLIUM	10	25	4		< 0.2 U	< 0.2 U	< 0.2 U	0.05 J	0.049 J	0.075 J	0.051 J	< 0.2 U	< 0.2 U	0.042 J
CADMIUM	1	9.2	5		< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.074 J	0.034 J	< 0.2 U	0.042 J	0.061 J	< 0.2 U
CALCIUM					22200	17800	4140	7590	4570	8910	8900	46800	45200	6100
CHROMIUM, TOTAL	20		100		2.92 J	4.1 J	3.13 J	2.25 J	3 J	4.05 J	2.95 J	0.87 J	1.4 J	4.27 J
COBALT	10	**6**			0.11 J	0.12 J	**7.56**	0.099 J	1.29	0.33 J	0.28 J	0.953 J	0.882 J	0.074 J
COPPER	500	800	1300		2.1 J	0.99 J	2.37 J	1.6 J	2.97 J	2.15 J	1.92 J	0.8 J	0.45 J	2.82 J
IRON	5000	14000			39 J	86.2 J	2310	319	351	1490	1460	< 80 UJ	6.4 J	24 J
LEAD	10	15	15		0.21 J	0.21 J	0.23 J	0.12 J	0.28 J	0.24 J	0.11 J	0.085 J	0.11 J	0.33 J
MAGNESIUM					3700	2320	1230	2520	1630	2980	2960	9130	8950	2490
MANGANESE	**500**	**430**			38.9	2.6 J	**2100**	**823**	**1460**	85.5	81	185	188	2 J
MERCURY		5.7	2		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
NICKEL	20	390			0.79 J	4.15	2.59	1.1 J	2.29	2.02 J	1.1 J	1.69 J	1.3 J	1 J
POTASSIUM					2150	1140	716 J	474 J	569 J	960 J	1050	1860	1850	699 J
SELENIUM	40	100	50		< 3 U	0.45 J	< 3 U	< 3 U	< 3 U	< 3 U	0.41 J	0.24 J	0.35 J	< 3 U
SILVER	40	94			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
SODIUM	20000				9500	5700	4010	5470	5130	7550	7450	9160	8880	6570
THALLIUM		0.2	2		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
VANADIUM	200	86			0.73 J	0.54 J	1.1 J	0.53 J	0.93 J	2.5 J	1.3 J	0.95 J	< 4 UJ	1.4 J
ZINC	2000	6000			1 J	< 10 U	2.2 J	2.2 J	8.29 J	3.3 J	5.7 J	< 10 U	< 10 U	< 10 U
SVOCs (UG/L)														
1,1-BIPHENYL	400	0.83			< 0.094 UJ	< 0.094 UJ	< 0.094 UJ	< 0.094 UJ	< 0.096 UJ	< 0.099 UJ	< 0.097 UJ	< 0.094 UJ	< 0.094 UJ	< 0.094 UJ
1,2,4,5-TETRACHLOROBENZENE		1.7			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
1,4-DIOXANE	4	0.46			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
2,2'-OXYBIS(1-CHLOROPROPANE)	300	710			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
2,3,4,6-TETRACHLOROPHENOL		240			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
2,4,5-TRICHLOROPHENOL	700	1200			< 18 U	< 18 U	< 18 U	< 18 U	< 18 U	< 19 U	< 18 U	< 18 U	< 18 U	< 18 U

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Sample Location					FTA-DP-35	FTA-MW-1	FTA-MW-10	FTA-MW-11	FTA-MW-12	FTA-MW-14	FTA-MW-14	FTA-MW-206	FTA-MW-206	FTA-MW-208
Sample Date					9/21/2015	9/18/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/18/2015	9/18/2015	9/21/2015
Sample Type					N	N	N	N	N	N	FD	N	FD	N
Sample ID					FTA-DP-35-092115	FTA-MW-1-091815	FTA-MW-10-092115	FTA-MW-11-092115	FTA-MW-12-092115	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-206-091815	FTA-MW-206-091815-D	FTA-MW-208-092115
Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA										
2,4,6-TRICHLOROPHENOL	7	4.1			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
2,4-DICHLOROPHENOL	20	46			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
2,4-DIMETHYLPHENOL	100	360			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
2,4-DINITROPHENOL	10	39			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
2,4-DINITROTOLUENE	1	0.24			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
2,6-DINITROTOLUENE	0.5	0.049			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
2-CHLORONAPHTHALENE		750			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
2-CHLOROPHENOL	40	91			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
2-METHYLNAPHTHALENE	30	36			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	0.098 J	< 0.094 UJ	< 0.094 U
2-METHYLPHENOL	40	930			< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.1 UJ	< 7.2 UJ	< 7.4 UJ	< 7.3 UJ	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ
2-NITROANILINE		190			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
2-NITROPHENOL					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
3- AND 4-METHYLPHENOL					< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
3,3-DICHLOROBENZIDINE	0.8	0.13			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
3-NITROANILINE					< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
4,6-DINITRO-2-METHYLPHENOL		1.5			< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U	< 0.72 U	< 0.74 U	< 0.73 U	< 0.71 U	< 0.71 U	< 0.71 U
4-BROMOPHENYL-PHENYLETHER					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
4-CHLORO-3-METHYLPHENOL		1400			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
4-CHLOROANILINE	2	0.37			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
4-CHLOROPHENYL-PHENYLETHER					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
4-NITROANILINE		3.8			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
4-NITROPHENOL	60				< 18 U	< 18 U	< 18 U	< 18 U	< 18 U	< 19 U	< 18 U	< 18 U	< 18 U	< 18 U
ACENAPHTHENE	400	530			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
ACENAPHTHYLENE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
ACETOPHENONE		1900			< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
ANTHRACENE	2000	1800			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
ATRAZINE	2	0.3	3		< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZALDEHYDE		19			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
BENZO[A]ANTHRACENE	0.5	0.012			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZO[A]PYRENE	0.05	0.0034	0.2		< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZO[B]FLUORANTHENE	0.5	0.034			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZO[G,H,I]PERYLENE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
BENZO[K]FLUORANTHENE	5	0.34			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
BIS(2-CHLOROETHOXY)METHANE		59			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
BIS(2-CHLOROETHYL)ETHER	0.3	0.014			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
BIS(2-ETHYLHEXYL)PHTHALATE	30	5.6	6		< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
BUTYLBENZYLPHTHALATE	200	16			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
CAPROLACTAM		9900			< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.1 UJ	< 7.2 UJ	< 7.4 UJ	< 7.3 UJ	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ
CARBAZOLE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
CHRYSENE	50	3.4			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
DIBENZ[A,H]ANTHRACENE	0.05	0.0034			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
DIBENZOFURAN		7.9			< 0.094 U	< 0.094 U	0.14 J	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
DIETHYLPHTHALATE	6000	15000			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
DIMETHYL PHTHALATE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
DI-N-BUTYLPHTHALATE	700	900			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
DI-N-OCTYLPHTHALATE		200			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
FLUORANTHENE	300	800			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
FLUORENE	300	290			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
HEXACHLOROBENZENE	0.2	0.0098	1		< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
HEXACHLOROBUTADIENE	4	0.14			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
HEXACHLOROCYCLOPENTADIENE	40	0.41	50		< 0.094 U	< 0.094 U	< 0.094 U	0.085 J	< 0.096 U	< 0.099 U	< 0.097 U	0.089 J	< 0.094 UJ	< 0.094 U
HEXACHLOROETHANE	5	0.33			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
INDENO[1,2,3-CD]PYRENE	0.5	0.034			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
ISOPHORONE	400	78			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
NAPHTHALENE	10	0.17			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

Sample Location					FTA-DP-35	FTA-MW-1	FTA-MW-10	FTA-MW-11	FTA-MW-12	FTA-MW-14	FTA-MW-14	FTA-MW-206	FTA-MW-206	FTA-MW-208
Sample Date					9/21/2015	9/18/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/18/2015	9/18/2015	9/21/2015
Sample Type					N	N	N	N	N	N	FD	N	FD	N
Sample ID					FTA-DP-35-092115	FTA-MW-1-091815	FTA-MW-10-092115	FTA-MW-11-092115	FTA-MW-12-092115	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-206-091815	FTA-MW-206-091815-D	FTA-MW-208-092115
Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA										
NITROBENZENE	1	0.14			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
N-NITROSODINPROPYLAMINE		0.011			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
N-NITROSODIPHENYLAMINE		12			< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
PENTACHLOROPHENOL	0.9	0.041	1		< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.5 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U
PHENANTHRENE					< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
PHENOL	2000	5800			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U
PYRENE	200	120			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.096 U	< 0.099 U	< 0.097 U	< 0.094 U	< 0.094 U	< 0.094 U
VOCs (UG/L)														
1,1,1-TRICHLOROETHANE	10000	8000	200		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-TETRACHLOROETHANE	2	0.076			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-TRICHLOROETHANE	6	0.28	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHANE	60	2.8			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHENE	40	280	7		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-TRICHLOROBENZENE	70	1.2	70		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROBENZENE	200	300	600		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHANE	4	0.17	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-DICHLOROBENZENE	1				< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-DICHLOROBENZENE	70	0.48	75		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-HEXANONE		38			< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
ACETONE	6000	14000			< 2.5 U	< 2.5 U	< 2.5 U	5.1	3.5 J	< 2.5 UJ	2.3 J	2.8 J	3 J	< 2.5 U
BENZENE	4	0.46	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CARBON TETRACHLORIDE	5	0.46	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROBENZENE	100	78	100		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROETHANE	7	21000			< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
CHLOROFORM	70	0.22	80		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROMETHANE	20	190			0.4 J	< 1 U	0.63 J	< 1 U	0.86 J	0.91 J	1.3 J	< 1 U	< 1 U	0.49 J
CIS-1,2-DICHLOROETHENE	**10**	36	70		< 0.5 U	< 0.5 U	0.4 J	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	**22**	**20**	< 0.5 U
ETHYLBENZENE	30	1.5	700		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ISOPROPYLBENZENE		450			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
M- AND P-XYLENE					< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
METHYL CYCLOHEXANE					< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYL TERT-BUTYL ETHER	40	14			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYLENE CHLORIDE	40	11	5		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE		190			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
STYRENE	100	1200	100		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TETRACHLOROETHENE	40	11	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
TOLUENE	600	1100	1000		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
TRANS-1,2-DICHLOROETHENE	100	360	100		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRICHLOROETHENE	**4**	**0.49**	**5**		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	**11**	**9.4**	< 0.5 U
VINYL CHLORIDE	**0.2**	**0.019**	2		< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.05 U	**0.056 J**	< 0.05 UJ	< 0.05 U
XYLENES, TOTAL	1000	190	10000		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
PCBs (UG/L)														
AROCLOR-1016		0.22										< 0.24 U	< 0.24 U	
AROCLOR-1221		0.0047										< 0.24 U	< 0.24 U	
AROCLOR-1232		0.0047										< 0.24 U	< 0.24 U	
AROCLOR-1242		0.0078										< 0.24 U	< 0.24 U	
AROCLOR-1248		0.0078										< 0.24 U	< 0.24 U	
AROCLOR-1254		0.0078										< 0.24 U	< 0.24 U	
AROCLOR-1260		0.0078										< 0.24 U	< 0.24 U	
AROCLOR-1262												< 0.24 U	< 0.24 U	
AROCLOR-1268												< 0.24 U	< 0.24 U	
PETROLEUM HYDROCARBONS (UG/L)														
TPH-C5-C8 ALIPHATICS	300				< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH-C9-C10 AROMATICS	200				< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH-C9-C12 ALIPHATICS	700				< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample Location	FTA-DP-35	FTA-MW-1	FTA-MW-10	FTA-MW-11	FTA-MW-12	FTA-MW-14	FTA-MW-14	FTA-MW-206	FTA-MW-206	FTA-MW-208
				Sample Date	9/21/2015	9/18/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/21/2015	9/18/2015	9/18/2015	9/21/2015
				Sample Type	N	N	N	N	N	N	FD	N	FD	N
				Sample ID	FTA-DP-35-092115	FTA-MW-1-091815	FTA-MW-10-092115	FTA-MW-11-092115	FTA-MW-12-092115	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-206-091815	FTA-MW-206-091815-D	FTA-MW-208-092115
Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA										
TPH-C11-C22 AROMATICS	200				< 71 U	< 71 U	< 71 U	< 74 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U
TPH-C19-C35 ALIPHATICS					< 71 U	< 71 U	< 71 U	< 74 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U
TPH-C9-C18 ALIPHATICS	700				< 71 U	< 71 U	< 71 U	< 74 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U
PFCs (UG/L)														
Perfluorooctanesulfonic Acid (PFOS)	**0.1**			**0.07**	< 0.0031 U	0.0016 J	0.011	**0.15 J+**	0.011	< 0.0031 UJ	0.0013 J	< 0.0030 U	< 0.0030 U	< 0.0031 U
Perfluorooctanoic Acid (PFOA)	**0.06**			**0.07**	0.018	0.015	0.022	0.017 J+	0.0056	**0.35**	**0.35**	0.0014 J	0.0013 J	< 0.0021 U

Notes:
Colored shading; blue = EPA Tap Water exceeded; orange = Maine Groundwater RAG exceeded; grey shading = detected; blank cell = not analyzed.
U = not detected
J = quantitation approximate

PROJECT SCREENING LEVELS:
Maine Groundwater RAGS - Maine Remedial Action Guidelines for Sites Contaminated with Hazardous Substances, Residential Scenario (February 2016)
EPA RSL - USEPA Regional Screening Levels for Tapwater, Residential Scenario, Hazard Quotient = 1.0 (May 2016)
EPA MCL - USEPA National Primary Drinking Water Regulations, 816-F-09-0004 (November 2015)
EPA HA - USEPA Drinking Water Health Advisories for PFOA and PFOS (May 2016)

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample Location	FTA-MW-210	FTA-MW-218	FTA-MW-5	FTA-MW-9
				Sample Date	9/21/2015	9/18/2015	9/18/2015	9/15/2015
				Sample Type	N	N	N	N
				Sample ID	FTA-MW-210-092115	FTA-MW-218-091815	FTA-MW-5-091815	FTA-MW-9-091515
Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA				
TOTAL METALS (UG/L)								
ALUMINUM	7000	20000			< 100 U	130 J	214 J	60 J
ANTIMONY	3	7.8	6		0.59 J	< 0.5 U	0.39 J	0.24 J
ARSENIC	**10**	**0.052**	**10**		**3.6 J**	< 4 U	**16**	**2.6 J**
BARIUM	1000	3800	2000		7.95	4.18 J	6.53	6.11
BERYLLIUM	10	25	4		0.038 J	0.058 J	0.064 J	< 0.2 U
CADMIUM	**1**	9.2	5		0.11 J	0.056 J	0.16 J	0.043 J
CALCIUM					39900 J+	479	7320	9940
CHROMIUM, TOTAL	20		100		5.72	2.35 J	2.72 J	1.6 J
COBALT	10	**6**			0.36 J	0.5 J	3.65	5.16
COPPER	500	800	1300		2.74 J	0.6 J	3.06	1 J
IRON	5000	14000			18 J	33 J	3800	4100
LEAD	**10**	15	15		3.46 J+	0.11 J	2.8	0.15 J
MAGNESIUM					7060	412	1720	2670
MANGANESE	**500**	**430**			87.1	11	**578 J**	**3850**
MERCURY		5.7	2		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
NICKEL	**20**	390			3.54	1.3 J	2.38	1.2 J
POTASSIUM					2050	130 J	820 J	576 J
SELENIUM	40	100	50		< 3 U	0.24 J	< 3 U	0.59 J
SILVER	40	94			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
SODIUM	20000				9310	4990	4420	4650
THALLIUM		0.2	2		0.065 J	< 0.4 U	< 0.4 U	< 0.4 U
VANADIUM	200	86			1.6 J	1 J	5.1	0.64 J
ZINC	2000	6000			1.4 J	3.2 J	3.5 J	1.5 J
DISSOLVED METALS (UG/L)								
ALUMINUM	7000	20000			< 100 U	110 J	26 J	17 J
ANTIMONY	3	7.8	6		0.42 J	0.084 J	0.12 J	0.16 J
ARSENIC	10	**0.052**	10		**3.7 J**	< 4 U	**9.7**	**2.4 J**
BARIUM	1000	3800	2000		7.84	3.82 J	4.21 J	6.78
BERYLLIUM	10	25	4		0.038 J	0.059 J	< 0.2 U	< 0.2 U
CADMIUM	1	9.2	5		< 0.2 U	0.053 J	0.045 J	< 0.2 U
CALCIUM					40400 J+	536	6980	10600
CHROMIUM, TOTAL	20		100		3.98 J	2.53 J	2.3 J	1.8 J
COBALT	10	**6**			0.25 J	0.5 J	2.4	5.5
COPPER	500	800	1300		3.75	1.1 J	0.57 J	0.86 J
IRON	5000	14000			< 80 U	15 J	2100	4280
LEAD	10	15	15		0.16 J	0.096 J	0.18 J	0.13 J
MAGNESIUM					7150	431	1700	2810
MANGANESE	**500**	**430**			63.7	11.2	334	**4080**
MERCURY		5.7	2		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U
NICKEL	20	390			4.33	2.11	2.11	1.2 J
POTASSIUM					1960	55 J	815 J	584 J
SELENIUM	40	100	50		< 3 U	0.2 J	0.24 J	< 3 U
SILVER	40	94			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
SODIUM	20000				9560	5330	4490	4940
THALLIUM		0.2	2		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
VANADIUM	200	86			1.4 J	0.84 J	1.2 J	0.7 J
ZINC	2000	6000			1.2 J	4.6 J	2.3 J	3.1 J
SVOCs (UG/L)								
1,1-BIPHENYL	400	0.83			< 0.094 UJ	< 0.094 UJ	< 0.094 UJ	0.11 J
1,2,4,5-TETRACHLOROBENZENE		1.7			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
1,4-DIOXANE	4	0.46			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U
2,2'-OXYBIS(1-CHLOROPROPANE)	300	710			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
2,3,4,6-TETRACHLOROPHENOL		240			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
2,4,5-TRICHLOROPHENOL	700	1200			< 18 U	< 18 U	< 18 U	< 18 U

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample Location	FTA-MW-210	FTA-MW-218	FTA-MW-5	FTA-MW-9
				Sample Date	9/21/2015	9/18/2015	9/18/2015	9/15/2015
				Sample Type	N	N	N	N
				Sample ID	FTA-MW-210-092115	FTA-MW-218-091815	FTA-MW-5-091815	FTA-MW-9-091515
Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA				
2,4,6-TRICHLOROPHENOL	7	4.1			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U
2,4-DICHLOROPHENOL	20	46			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U
2,4-DIMETHYLPHENOL	100	360			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
2,4-DINITROPHENOL	10	39			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U
2,4-DINITROTOLUENE	1	0.24			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
2,6-DINITROTOLUENE	0.5	0.049			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
2-CHLORONAPHTHALENE		750			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
2-CHLOROPHENOL	40	91			< 0.47 UJ	< 0.47 U	< 0.47 U	< 0.47 U
2-METHYLNAPHTHALENE	30	36			< 0.094 U	< 0.094 U	< 0.094 U	0.093 J
2-METHYLPHENOL	40	930			< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.1 U
2-NITROANILINE		190			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
2-NITROPHENOL					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
3- AND 4-METHYLPHENOL					< 0.47 UJ	< 0.47 U	< 0.47 U	< 0.47 U
3,3-DICHLOROBENZIDINE	0.8	0.13			< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 U
3-NITROANILINE					< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
4,6-DINITRO-2-METHYLPHENOL		1.5			< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U
4-BROMOPHENYL-PHENYLETHER					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
4-CHLORO-3-METHYLPHENOL		1400			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
4-CHLOROANILINE	2	0.37			< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U
4-CHLOROPHENYL-PHENYLETHER					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
4-NITROANILINE		3.8			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
4-NITROPHENOL	60				< 18 U	< 18 U	< 18 U	< 18 U
ACENAPHTHENE	400	530			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
ACENAPHTHYLENE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
ACETOPHENONE		1900			< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 UJ
ANTHRACENE	2000	1800			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
ATRAZINE	2	0.3	3		< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZALDEHYDE		19			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
BENZO[A]ANTHRACENE	0.5	0.012			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZO[A]PYRENE	0.05	0.0034	0.2		< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZO[B]FLUORANTHENE	0.5	0.034			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
BENZO[G,H,I]PERYLENE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
BENZO[K]FLUORANTHENE	5	0.34			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
BIS(2-CHLOROETHOXY)METHANE		59			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
BIS(2-CHLOROETHYL)ETHER	0.3	0.014			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
BIS(2-ETHYLHEXYL)PHTHALATE	30	5.6	6		< 0.47 UJ	< 0.47 U	< 0.47 U	< 0.47 U
BUTYLBENZYLPHTHALATE	200	16			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
CAPROLACTAM		9900			< 7.1 UJ	< 7.1 U	< 7.1 UJ	< 7.1 U
CARBAZOLE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
CHRYSENE	50	3.4			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
DIBENZ[A,H]ANTHRACENE	0.05	0.0034			< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 U
DIBENZOFURAN		7.9			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
DIETHYLPHTHALATE	6000	15000			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
DIMETHYL PHTHALATE					< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
DI-N-BUTYLPHTHALATE	700	900			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
DI-N-OCTYLPHTHALATE		200			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
FLUORANTHENE	300	800			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
FLUORENE	300	290			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
HEXACHLOROBENZENE	0.2	0.0098	1		< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
HEXACHLOROBUTADIENE	4	0.14			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
HEXACHLOROCYCLOPENTADIENE	40	0.41	50		< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
HEXACHLOROETHANE	5	0.33			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
INDENO[1,2,3-CD]PYRENE	0.5	0.034			< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 U
ISOPHORONE	400	78			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
NAPHTHALENE	10	0.17			< 0.094 U	< 0.094 U	< 0.094 U	0.073 J

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample Location	FTA-MW-210	FTA-MW-218	FTA-MW-5	FTA-MW-9
				Sample Date	9/21/2015	9/18/2015	9/18/2015	9/15/2015
				Sample Type	N	N	N	N
				Sample ID	FTA-MW-210-092115	FTA-MW-218-091815	FTA-MW-5-091815	FTA-MW-9-091515
Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA				
NITROBENZENE	1	0.14			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
N-NITROSODINPROPYLAMINE		0.011			< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 U
N-NITROSODIPHENYLAMINE		12			< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 UJ
PENTACHLOROPHENOL	0.9	0.041	1		< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U
PHENANTHRENE					< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
PHENOL	2000	5800			< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
PYRENE	200	120			< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U
VOCs (UG/L)								
1,1,1-TRICHLOROETHANE	10000	8000	200		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2,2-TETRACHLOROETHANE	2	0.076			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1,2-TRICHLOROETHANE	6	0.28	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHANE	60	2.8			1	< 0.5 U	< 0.5 U	< 0.5 U
1,1-DICHLOROETHENE	40	280	7		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-TRICHLOROBENZENE	70	1.2	70		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROBENZENE	200	300	600		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-DICHLOROETHANE	4	0.17	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,3-DICHLOROBENZENE	1				< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,4-DICHLOROBENZENE	70	0.48	75		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
2-HEXANONE		38			< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
ACETONE	6000	14000			3.4 J	2.9 J	2.4 J	3.7 J
BENZENE	4	0.46	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CARBON TETRACHLORIDE	5	0.46	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROBENZENE	100	78	100		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROETHANE	7	21000			< 1 U	< 1 U	< 1 U	< 1 U
CHLOROFORM	70	0.22	80		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
CHLOROMETHANE	20	190			0.42 J	< 1 U	< 1 U	< 1 U
CIS-1,2-DICHLOROETHENE	**10**	36	70		< 0.5 U	< 0.5 U	< 0.5 U	0.62 J
ETHYLBENZENE	30	1.5	700		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
ISOPROPYLBENZENE		450			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
M- AND P-XYLENE					< 1 U	< 1 U	< 1 U	< 1 U
METHYL CYCLOHEXANE					< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYL TERT-BUTYL ETHER	40	14			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
METHYLENE CHLORIDE	40	11	5		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
O-XYLENE		190			< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
STYRENE	100	1200	100		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TETRACHLOROETHENE	40	11	5		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TOLUENE	600	1100	1000		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRANS-1,2-DICHLOROETHENE	100	360	100		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
TRICHLOROETHENE	**4**	**0.49**	**5**		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VINYL CHLORIDE	**0.2**	**0.019**	2		< 0.05 U	< 0.05 U	< 0.05 U	**0.77**
XYLENES, TOTAL	1000	190	10000		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
PCBs (UG/L)								
AROCLOR-1016		0.22			< 0.24 U			
AROCLOR-1221		0.0047			< 0.24 U			
AROCLOR-1232		0.0047			< 0.24 U			
AROCLOR-1242		0.0078			< 0.24 U			
AROCLOR-1248		0.0078			< 0.24 U			
AROCLOR-1254		0.0078			< 0.24 U			
AROCLOR-1260		0.0078			< 0.24 U			
AROCLOR-1262					< 0.24 U			
AROCLOR-1268					< 0.24 U			
PETROLEUM HYDROCARBONS (UG/L)								
TPH-C5-C8 ALIPHATICS	300				< 75 U	< 75 U	< 75 U	< 75 U
TPH-C9-C10 AROMATICS	200				< 75 U	< 75 U	< 75 U	< 75 U
TPH-C9-C12 ALIPHATICS	700				< 75 U	< 75 U	< 75 U	< 75 U

TABLE F-2
SEPTEMBER 2015 GROUNDWATER ANALYTICAL RESULTS
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Sample Location	FTA-MW-210	FTA-MW-218	FTA-MW-5	FTA-MW-9
				Sample Date	9/21/2015	9/18/2015	9/18/2015	9/15/2015
				Sample Type	N	N	N	N
				Sample ID	FTA-MW-210-092115	FTA-MW-218-091815	FTA-MW-5-091815	FTA-MW-9-091515
Analyte	Maine Groundwater RAGS	EPA RSL (Tapwater. HQ=1.0)	EPA MCL	EPA HA				
TPH-C11-C22 AROMATICS	200				< 71 U	< 71 U	< 71 U	< 71 U
TPH-C19-C35 ALIPHATICS					< 71 U	< 71 U	< 71 U	< 71 U
TPH-C9-C18 ALIPHATICS	700				< 71 U	< 71 U	< 71 U	< 71 U
PFCs (UG/L)								
Perfluorooctanesulfonic Acid (PFOS)	**0.1**			**0.07**	0.0036 J	< 0.0030 U	< 0.0030 U	**0.14**
Perfluorooctanoic Acid (PFOA)	**0.06**			**0.07**	0.012	0.0013 J	**0.3**	0.021

Notes:
Colored shading; blue = EPA Tap Water exceeded; orange = Maine Groundwater RAG exceeded; grey shading =
U = not detected
J = quantitation approximate

PROJECT SCREENING LEVELS:
Maine Groundwater RAGS - Maine Remedial Action Guidelines for Sites Contaminated with Hazardous Substances Residential Scenario (February 2016)
EPA RSL - USEPA Regional Screening Levels for Tapwater, Residential Scenario, Hazard Quotient = 1.0 (May 2016)
EPA MCL - USEPA National Primary Drinking Water Regulations, 816-F-09-0004 (November 2015)
EPA HA - USEPA Drinking Water Health Advisories for PFOA and PFOS (May 2016)

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - 1999 GROUNDWATER DATA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	OU01-DP-02	OU01-DP-02	OU01-DP-04	OU01-DP-04	OU01-DP-05	OU01-DP-05	OU01-DP-06	OU01-DP-06	OU01-DP-06	OU01-DP-07	OU01-DP-07	OU01-DP-08	OU01-DP-08	OU01-DP-07	OU01-DP-09	OU01-DP-09	OU01-DP-09	OU01-DP-10	OU01-DP-10	OU01-DP-10	OU01-DP-11	OU01-DP-11	OU01-DP-11	OU01-DP-12	OU01-DP-12	OU01-DP-12	OU01-DP-13	OU01-DP-13	OU01-DP-14	OU01-DP-14	OU01-DP-15	OU01-DP-16
				Sample Date	5/24/1999	5/24/1999	5/19/1999	5/20/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/20/1999	5/25/1999	5/25/1999	5/25/1999	5/26/1999	5/26/1999	5/26/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/25/1999	5/26/1999
				Sample Type Code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
				Sample ID	DP-02-6	DP-02-6DL	DP-04-32	DP-04-6	DP-05-49	DP-05-6	DP-06-38	DP-06-6	DP-06-6DL	DP-07-36	DP-07-6	DP-08-5	DP-08-5DL	DP-07-6DL	DP-09-24	DP-09-6	DP-09-6DL	DP-10-40	DP-10-6	DP-10-6DL	DP-11-36	DP-11-6	DP-11-6DL	DP-12-32	DP-12-6	DP-12-6-D	DP-13-6	DP-13-6DL	DP-14-6	DP-14-6DL	DP-15-16	DP-16-17
				Screen Interval	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	49 - 49 ft	6 - 6 ft	38 - 38 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	5 - 5 ft	5 - 5 ft	6 - 6 ft	24 - 24 ft	6 - 6 ft	6 - 6 ft	40 - 40 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	16 - 16 ft	17 - 17 ft
Analyte Group	Compound	CAS	Fraction	Units																																
SVOCs_EPH	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 10 U		< 10 U	23	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	27				< 10 U	< 10 U		22	160 E	200 D	13	100		< 14 U	< 10 U	< 10 U	66		200 E	300 D	< 10 U	
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	4 J		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-METHYLPHENOL	106-44-5	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 10 U		< 10 U	2 J	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	4 J				< 10 U	< 10 U		< 10 U	8 J	9 JD	< 10 U	6 J		< 14 U	< 10 U	< 10 U	4 J		12	14 JD	< 10 U	
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		5 J	7 JD	< 10 U	
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		2 J	< 30 U	< 10 U	
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	2 J		10 J	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		4 J	< 10 U				< 10 U	< 10 U		4 J	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	3 J				< 10 U	< 10 U		< 10 U	3 J	< 20 U	< 10 U	12		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		4 J	< 30 U	< 10 U	
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	4 J				< 10 U	< 10 U		< 10 U	6 J	7 JD	< 10 U	5 J		< 14 U	< 10 U	< 10 U	3 J		12	16 JD	< 10 U	
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		2 J	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 10 U		8 J	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 10 U		< 10 U	4 J	< 10 U	< 10 U	< 10 U	4 J		< 10 U	8 J				< 10 U	< 10 U		3 J	11	14 JD	< 10 U	8 J		< 14 U	< 10 U	< 10 U	6 J		22	28 JD	< 10 U	
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 10 U		< 10 U	10 J	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	24				< 10 U	< 10 U		7 J	96	110 D	< 10 U	74		< 14 U	< 10 U	< 10 U	8 J		37	44 D	< 10 U	
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 50 U		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				< 50 U	< 50 U		< 50 U	< 50 U	< 100 U	< 50 U	< 50 U		< 71 U	< 50 U	< 50 U	< 50 U		< 50 U	< 150 U	< 50 U	
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L	< 10 U		< 10 U	3 J	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	7 J				< 10 U	3 J		5 J	18	20 D	3 J	11		< 14 U	< 10 U	< 10 U	7 J		47	54 D	< 10 U	
SVOCs_EPH	PHENOL	108-95-2	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		3 J	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		< 10 U	< 30 U	< 10 U	
SVOCs_EPH	PYRENE	129-00-0	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U				< 10 U	< 10 U		< 10 U	< 10 U	< 20 U	< 10 U	< 10 U		< 14 U	< 10 U	< 10 U	< 10 U		6 J	8 JD	< 10 U	
TPH	TPH-PURGEABLE	-240	N	ug/L	< 50 U		150	520	< 50 U	81	< 50 U	140		100	640	1100			110	1500		550	2100		99	1400		59	< 50 U	< 50 U	970		1800		< 50 U	< 50 U
TPH	TPH-TOTAL UNKNOWN DIESEL RANGE ORGANI	-3523	N	ug/L	5400 E	5500 D	80	1300	< 50 U	900	< 50 U	2700	2700 D	500	6300 E	5800 E	5800 D	6400 D	600	4600 E	5000 D	300	6500 E	7200 D	790	12000 E	12000 D	60 B	77 B	63 B	6800 E	7300 D	9600 E	9700 D	< 50 U	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	7	< 5 U	4 J		< 5 U	8	6			< 5 U	< 5 U		< 5 U	3 J		< 5 U	15		< 5 U	< 5 U		2 J		< 5 U		< 5 U	< 5 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	2-BUTANONE	78-93-3	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U	< 10 U			< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U		< 10 U		< 10 U	< 10 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U	< 10 U			< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U		< 10 U		< 10 U	< 10 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	N	ug/L	< 10 U		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	< 10 U	< 10 U			< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U	< 10 U		< 10 U		< 10 U		< 10 U	< 10 U
VOCs	ACETONE	67-64-1	N	ug/L	7 J		< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U		< 10 U	5 J	3 J			< 10 U	8 JB		< 10 U	< 10 U		< 10 U	4 J		< 10 U	5 JB		3 JB		< 10 U		< 10 U	5 JB
VOCs	BENZENE	71-43-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	BROMODICHLOROMETHANE	75-27-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	BROMOFORM	75-25-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	BROMOMETHANE	74-83-9	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U
VOCs	CARBON DISULFIDE	75-15-0	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U		4 J	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U		< 5 U	< 5 U

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - 1999 GROUNDWATER DATA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	OU01-DP-02	OU01-DP-02	OU01-DP-04	OU01-DP-04	OU01-DP-05	OU01-DP-05	OU01-DP-06	OU01-DP-06	OU01-DP-06	OU01-DP-07	OU01-DP-07	OU01-DP-08	OU01-DP-08	OU01-DP-07	OU01-DP-09	OU01-DP-09	OU01-DP-09	OU01-DP-10	OU01-DP-10	OU01-DP-10	OU01-DP-11	OU01-DP-11	OU01-DP-11	OU01-DP-12	OU01-DP-12	OU01-DP-12	OU01-DP-13	OU01-DP-13	OU01-DP-14	OU01-DP-14	OU01-DP-15	OU01-DP-16
					Sample Date	5/24/1999	5/24/1999	5/19/1999	5/20/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/24/1999	5/24/1999	5/25/1999	5/25/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/20/1999	5/25/1999	5/25/1999	5/25/1999	5/26/1999	5/26/1999	5/26/1999	5/25/1999	5/25/1999	5/20/1999	5/20/1999	5/25/1999	5/26/1999
					Sample Type Code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N
					Sample ID	DP-02-6	DP-02-6DL	DP-04-32	DP-04-6	DP-05-49	DP-05-6	DP-06-38	DP-06-6	DP-06-6DL	DP-07-36	DP-07-6	DP-08-5	DP-08-5DL	DP-07-6DL	DP-09-24	DP-09-6	DP-09-6DL	DP-10-40	DP-10-6	DP-10-6DL	DP-11-36	DP-11-6	DP-11-6DL	DP-12-32	DP-12-6	DP-12-6-D	DP-13-6	DP-13-6DL	DP-14-6	DP-14-6DL	DP-15-16	DP-16-17
					Screen Interval	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	49 - 49 ft	6 - 6 ft	38 - 38 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	5 - 5 ft	5 - 5 ft	6 - 6 ft	24 - 24 ft	6 - 6 ft	6 - 6 ft	40 - 40 ft	6 - 6 ft	6 - 6 ft	36 - 36 ft	6 - 6 ft	6 - 6 ft	32 - 32 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	6 - 6 ft	16 - 16 ft	17 - 17 ft
Analyte Group	Compound	CAS	Fraction	Units																																	
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	DIBROMOCHLOROMETHANE	124-48-1	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	16	8			< 5 U	< 5 U	3 J	16		< 5 U	26		< 5 U	< 5 U		2 J		< 5 U	< 5 U	< 5 U	< 5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U	< 5 U	< 5 U	< 5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 5 U				< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	23	23			< 5 U	< 5 U				< 5 U	82		< 5 U	< 5 U		3 J				< 5 U	< 5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	2 J	< 5 U			< 5 U	< 5 U	< 5 U	5 J		< 5 U	11		< 5 U	< 5 U		< 5 U		< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1 J		< 5 U	< 5 U	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 5 U		< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	1 J		< 5 U	3 J	< 5 U			< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	< 5 U		< 5 U	< 5 U		< 5 U		< 5 U	< 5 U	< 5 U	< 5 U
VOCs	XYLENES, TOTAL CALC (a)	RA-1330-20-7	N	ug/L	< 5 U				< 5 U	< 5 U	< 5 U	< 5 U	< 5 U		< 5 U	23	23			< 5 U	< 5 U				< 5 U	82		< 5 U	< 5 U		3				< 5 U	< 5 U

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
N - Normal sample.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
VOC - Volatile organic compound.
(a) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., xylene) concentrations. For samples without any detections of individual compounds (i.e., xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - 2007 GROUNDWATER DATA
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	A31-MW01	A31-MW02	A31-MW03	A31-MW04
				Sample Date	10/26/2007	10/26/2007	10/26/2007	10/26/2007
				Sample Type Code	N	N	N	N
				Sample ID	A31-MW01	A31-MW02	A31-MW03	A31-MW04
				Screen Interval	1.5 - 4.5 ft	0.5 - 4.5 ft	0.5 - 1.5 ft	1 - 3 ft
Analyte Group	Compound	CAS	Fraction	Units				
Other	DISSOLVED OXYGEN		N	ug/L	9660	8220	10050	6810
Other	OXIDATION REDUCTION POTENTIAL		N	MV	-18	59	170	33
Other	PH		N	SU	6.53	5.92	5.49	6.15
Other	SPECIFIC CONDUCTANCE		N	US/CM	0.169	0.131	0.084	0.122
Other	TEMPERATURE		N	DEG/C	13.42	13.82	12.64	12.99
Other	TURBIDITY		N	NTU	917	1000 >	128	9.66
TPH	TPH-DIESEL RANGE	-3527	N	ug/L	110 J	180 J	51 J	140 J
TPH	TPH-TOTAL UNKNOWN GASOLINE RANGE ORGANICS	-3524	N	ug/L	< 10 U	< 10 U	< 10 U	19
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	N	ug/L	< 5 UJ	< 5 UJ	< 5 UJ	< 5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DIBROMOETHANE	106-93-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 5 UJ	< 5 UJ	< 5 UJ	0.6 J
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,2-DICHLOROPROPANE	78-87-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 5 U	< 5 U	< 5 U	5
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 5 U	< 5 U	< 5 U	8
VOCs	2-BUTANONE	78-93-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	4-METHYL-2-PENTANONE	108-10-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	ACETONE	67-64-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BENZENE	71-43-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BROMODICHLOROMETHANE	75-27-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BROMOFORM	75-25-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	BROMOMETHANE	74-83-9	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CARBON DISULFIDE	75-15-0	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 5 U	< 5 U	< 5 U	3 J
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 5 UJ	< 5 UJ	< 5 UJ	< 5 UJ
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 5 U	< 5 U	1 J	3 J
VOCs	CIS-1,3-DICHLOROPROPENE	10061-01-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	CYCLOHEXANE	110-82-7	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	DIBROMOCHLOROMETHANE	124-48-1	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	DICHLORODIFLUOROMETHANE	75-71-8	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 10 U	< 10 U	< 10 U	< 10 U
VOCs	METHYL ACETATE	79-20-9	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRANS-1,3-DICHLOROPROPENE	10061-02-6	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 5 U	< 5 U	2 J	2 J
VOCs	TRICHLOROFLUOROMETHANE	75-69-4	N	ug/L	< 5 U	< 5 U	< 5 U	< 5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.15 U	< 0.15 U	< 0.15 U	< 0.15 U
VOCs	XYLENES, TOTAL CALC (a)	RA-1330-20-7	N	ug/L	< 10 U	< 10 U	< 10 U	< 10 U

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
FD - Field duplicate.
ft - feet.
J - Estimated value.
N - Normal sample.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
(a) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., xylene) concentrations. For samples without any detections of individual compounds (i.e., xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
					Sample Date	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
					Sample Type Code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Sample ID	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814	FTA-MW-5-061814-D	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
					Screen Interval	4 - 14 ft	4 - 14 ft	4 - 14 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft
Group	Compound	CAS	Fraction	Units																	
Metals	ALUMINUM	7429-90-5	F	ug/L		44.6 J	< 100 U	100 J	34.1 J	< 100 U	< 100 U	26 J	39.7 J	< 100 U	17 J	18.2 J	< 100 U	< 100 U	47.6 J	< 100 U	44 J
Metals	ANTIMONY	7440-36-0	F	ug/L		< 0.5 U	0.12 J	0.25 J	< 0.5 U	< 0.5 U	0.065 J	0.12 J	< 0.5 U	< 0.5 U	0.16 J	< 0.5 U	< 0.5 U	0.29 J	< 0.5 U	< 0.5 U	0.34 J
Metals	ARSENIC	7440-38-2	F	ug/L		< 4.8 U	6.4	5.6	7.4	4.8 J	4.6 J	9.7	< 4 U	2.6 J	2.4 J	4.3 J	3.4 J	6.4	2.8 J	< 4 U	< 4 U
Metals	BARIUM	7440-39-3	F	ug/L		< 3 U	2.36 J	2.2 J	6.6	3.33 J	3.09 J	4.21 J	4.6 J	4.36 J	6.78	1.9 J	< 3 U	1.9 J	1.3 J	< 3 U	1.7 J
Metals	BERYLLIUM	7440-41-7	F	ug/L		< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	0.05 J
Metals	CADMIUM	7440-43-9	F	ug/L		< 0.2 U	0.19 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	0.045 J	< 0.2 U	< 0.2 U	< 0.2 U	0.08 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	F	ug/L		11100	19100	17800	4210	6460	6380	6980	7730	6930	10600	3440	3820	4140	5110	4470	7590
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L		< 4 U	< 4 U	4.1 J	< 4 U	< 4 U	< 4 U	2.3 J	< 4 U	< 4 U	1.8 J	< 4 U	4.5 J	3.13 J	< 4 U	4.67 J	2.25 J
Metals	COBALT	7440-48-4	F	ug/L		0.21 J	0.072 J	0.12 J	2.3	1.86	1.87	2.4	4.1	4.18	5.5	5	5.39	7.56	0.15 J	0.079 J	0.099 J
Metals	COPPER	7440-50-8	F	ug/L		< 2 U	< 2 U	0.99 J	< 2 U	< 2 U	< 2 U	0.57 J	< 2 U	< 2 U	0.86 J	< 2 U	< 2 U	2.37 J	4	< 2 U	1.6 J
Metals	IRON	7439-89-6	F	ug/L		50.9 J	< 80 U	86.2 J	1970	1400	1380	2100	3270	3070	4280	1100	1210	2310	263	198	319
Metals	LEAD	7439-92-1	F	ug/L		< 0.5 U	< 0.5 U	0.21 J	< 0.5 U	0.12 J	0.12 J	0.18 J	< 0.5 U	0.24 J	0.13 J	< 0.5 U	0.18 J	0.23 J	< 0.5 U	0.094 J	0.12 J
Metals	MAGNESIUM	7439-95-4	F	ug/L		1860	2410	2320	1220	1470	1450	1700	2180	1850	2810	1110	1060	1230	1940	1570	2520
Metals	MANGANESE	7439-96-5	F	ug/L		1.6 J	1.8 J	2.6 J	196	203	206	334	3460	3020	4080	1650	1740	2100	551	463	823
Metals	MERCURY	7439-97-6	F	ug/L		< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	0.01 J	< 0.1 U	< 0.1 U	0.01 J	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L		5.9	3.88	4.15	1.1 J	1.64 J	0.88 J	2.11	0.52 J	1.2 J	1.2 J	1.2 J	2.9	2.59	0.26 J	1.4 J	1.1 J
Metals	POTASSIUM	7440-09-7	F	ug/L		< 940 U	1100	1140	660 J	715 J	684 J	815 J	414 J	550 J	584 J	714 J	678 J	716 J	539 J	528 J	474 J
Metals	SELENIUM	7782-49-2	F	ug/L		0.29 J	< 3 U	0.45 J	0.93 J	< 3 U	< 3 U	0.24 J	0.32 J	0.77 J	< 3 U	0.45 J	0.77 J	< 3 U	0.54 J	0.39 J	< 3 U
Metals	SILVER	7440-22-4	F	ug/L		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L		5520	4900	5700	3180	4550	4480	4490	4400	3820	4940	4200	3750	4010	4930	4350	5470
Metals	THALLIUM	7440-28-0	F	ug/L		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L		< 4 U	< 4 U	0.54 J	1.3 J	1.3 J	1.6 J	1.2 J	< 4 UJ	0.51 J	0.7 J	0.93 J	1.3 J	1.1 J	0.87 J	1.1 J	0.53 J
Metals	ZINC	7440-66-6	F	ug/L		< 10 U	4 J	< 10 U	< 10 U	2.2 J	1.8 J	2.3 J	< 10 U	2.6 J	3.1 J	< 10 U	4 J	2.2 J	< 10 U	2.5 J	2.2 J
Metals	ALUMINUM	7429-90-5	N	ug/L		3080	1660	1420	58.8 J	< 100 U	< 100 U	214 J	87.8 J	< 100 U	60 J	36.7 J	< 100 U	58 J	76.6 J	< 100 U	27 J
Metals	ANTIMONY	7440-36-0	N	ug/L		< 0.5 U	0.15 J	0.26 J	< 0.5 U	< 0.5 U	< 0.5 U	0.39 J	< 0.5 U	< 0.5 U	0.24 J	< 0.5 U	< 0.5 U	0.37 J	< 0.5 U	< 0.5 U	0.32 J
Metals	ARSENIC	7440-38-2	N	ug/L		< 6 U	7.9	8.8	7.6	3.9 J	4.9 J	16	2.7 J	2.7 J	2.6 J	4 J	4.3 J	6.7	< 4 U	< 4 U	< 4 U
Metals	BARIUM	7440-39-3	N	ug/L		14.4	8.98	21.2	6.4	3.74 J	4.89 J	6.53	5.1	4.97 J	6.11	1.7 J	< 3 U	2 J	1.4 J	< 3 U	1.7 J
Metals	BERYLLIUM	7440-41-7	N	ug/L		0.14 J	0.078 J	0.28 J	< 0.2 U	< 0.2 U	< 0.2 U	0.064 J	< 0.2 U	< 0.2 UJ	< 0.2 U	< 0.2 U	< 0.2 UJ	0.038 J	< 0.2 U	< 0.2 UJ	0.036 J
Metals	CADMIUM	7440-43-9	N	ug/L		< 0.2 U	< 0.2 U	0.059 J	< 0.2 U	< 0.2 U	< 0.2 U	0.16 J	< 0.2 U	< 0.2 U	0.043 J	0.09 J	< 0.2 U	0.042 J	< 0.2 U	< 0.2 U	< 0.2 U
Metals	CALCIUM	7440-70-2	N	ug/L		10500	19200	19600	4890	6530	6720	7320	7830	7010	9940	3490	3670	4180	5220	4580	7490
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L		7.6	< 4.08 U	6.7	< 4 U	5.15	< 4 U	2.72 J	< 4 U	4.28 J	1.6 J	< 4 U	4.41 J	3.72 J	< 4 U	4.61 J	3.57 J
Metals	CHROMIUM III	16065-83-1	N	ug/L																	
Metals	CHROMIUM VI	18540-29-9	N	ug/L																	
Metals	COBALT	7440-48-4	N	ug/L		1.4	0.899 J	2.48	2.1	2.09	2.05	3.65	4.2	4.22	5.16	4.9	5.07	8.02	0.1 J	0.1 J	0.087 J
Metals	COPPER	7440-50-8	N	ug/L		4.6	3.36	8.3	1.2 J	< 2 U	< 2 U	3.06	3.9	< 2 U	1 J	2.6 J	2.64 J	5.81	< 2 U	< 2 U	1.6 J
Metals	IRON	7439-89-6	N	ug/L		3020	1890	1890	1850	1520	1520	3800	3340	3210	4100	1180	1350	2430	277	241	341
Metals	LEAD	7439-92-1	N	ug/L		3	2.5	12.8	0.78 J	0.5 J	0.56 J	2.8	0.87 J	0.19 J	0.15 J	< 0.56 U	0.4 J	0.44 J	< 0.58 U	0.13 J	0.13 J
Metals	MAGNESIUM	7439-95-4	N	ug/L		2700	2880	2860	1360	1520	1540	1720	2180	1930	2670	1110	1040	1250	1990	1630	2590
Metals	MANGANESE	7439-96-5	N	ug/L		55.6	34.8	94	249	208	217	578 J	3510	3060	3850	1680	1690	2150	513	488	794
Metals	MERCURY	7439-97-6	N	ug/L		< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	0.017 J	< 0.1 UJ	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L		12.8	6.24	21	1 J	2.39	1.73 J	2.38	0.83 J	1.71 J	1.2 J	1.4 J	30	3.42	< 1.2 U	1.3 J	0.85 J
Metals	POTASSIUM	7440-09-7	N	ug/L		< 1560 U	1370	1280	667 J	735 J	728 J	820 J	422 J	553 J	576 J	757 J	662 J	701 J	574 J	500 J	456 J
Metals	SELENIUM	7782-49-2	N	ug/L		< 3 U	< 3 U	0.62 J	< 3 U	< 3 U	0.55 J	< 3 U	0.78 J	< 3 U	0.59 J	0.45 J	< 3 U	< 3 U	0.21 J	< 3 U	< 3 U
Metals	SILVER	7440-22-4	N	ug/L		< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.45 J	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L		5270	4990	5600	3520	4600	4750	4420	4470	3890	4650	4240	3630	4060	5000	4430	5350
Metals	THALLIUM	7440-28-0	N	ug/L		0.05 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L		< 5.4 U	< 4 U	4.1 J	1.6 J	1.5 J	1.5 J	5.1	0.8 J	1 J	0.64 J	< 4 UJ	0.6 J	1 J	0.85 J	1.4 J	0.8 J
Metals	ZINC	7440-66-6	N	ug/L		10.4 J	8.09 J	12.8 J	< 10 U	2.1 J	1.8 J	3.5 J	< 10 U	1.9 J	1.5 J	< 10 U	2 J	1.8 J	< 10 U	1.3 J	2.4 J
Pest_PCBs	4,4-DDD	72-54-8	N	ug/L																	
Pest_PCBs	4,4-DDE	72-55-9	N	ug/L																	
Pest_PCBs	4,4-DDT	50-29-3	N	ug/L																	
Pest_PCBs	ALDRIN	309-00-2	N	ug/L																	
Pest_PCBs	ALPHA-BHC	319-84-6	N	ug/L																	
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	N	ug/L																	
Pest_PCBs	AROCLOR-1016	12674-11-2	N	ug/L																	
Pest_PCBs	AROCLOR-1221	11104-28-2	N	ug/L																	
Pest_PCBs	AROCLOR-1232	11141-16-5	N	ug/L																	
Pest_PCBs	AROCLOR-1242	53469-21-9	N	ug/L																	
Pest_PCBs	AROCLOR-1248	12672-29-6	N	ug/L																	
Pest_PCBs	AROCLOR-1254	11097-69-1	N	ug/L																	
Pest_PCBs	AROCLOR-1260	11096-82-5	N	ug/L																	
Pest_PCBs	AROCLOR-1262	37324-23-5	N	ug/L																	
Pest_PCBs	AROCLOR-1268	11100-14-4	N	ug/L																	
Pest_PCBs	BETA-BHC	319-85-7	N	ug/L																	
Pest_PCBs	DELTA-BHC	319-86-8	N	ug/L																	
Pest_PCBs	DIELDRIN	60-57-1	N	ug/L																	
Pest_PCBs	ENDOSULFAN I	959-98-8	N	ug/L																	
Pest_PCBs	ENDOSULFAN II	33213-65-9	N	ug/L																	
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	N	ug/L																	
Pest_PCBs	ENDRIN	72-20-8	N	ug/L																	
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	N	ug/L																	
Pest_PCBs	ENDRIN KETONE	53494-70-5	N	ug/L																	
Pest_PCBs	HEPTACHLOR	76-44-8	N	ug/L																	
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	N	ug/L																	

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
					Sample Date	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
					Sample Type Code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Sample ID	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814	FTA-MW-5-061814-D	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
					Screen Interval	4 - 14 ft	4 - 14 ft	4 - 14 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft
Group	Compound	CAS	Fraction	Units																	
Pest_PCBs	LINDANE	58-89-9	N	ug/L																	
Pest_PCBs	METHOXYCHLOR	72-43-5	N	ug/L																	
Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS) (a)	1336-36-3	N	ug/L																	
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L																	
Pest_PCBs	TOTAL AROCLORS FULL DL	RATotAroFLDL	N	ug/L																	
Pest_PCBs	TOXAPHENE	8001-35-2	N	ug/L																	
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	N	ug/L																	
PFC	Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	N	ug/L		< 0.018 UJ	0.0016 J	< 0.02 U	< 0.018 U	< 0.018 U	< 0.0030 U	0.22	0.18	0.14		0.016 J	0.011		0.25	0.15 J+
PFC	Perfluorooctanoic Acid (PFOA)	335-67-1	N	ug/L		0.011 J	0.015	0.24	0.28	0.26	0.3	0.036	0.026	0.021		0.027	0.022		0.016 J	0.017 J+
SVOCs_EPH	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.1 UJ	< 0.1 UJ	< 0.094 UJ	< 0.095 UJ	< 0.094 UJ	< 0.094 UJ	< 0.094 UJ	0.14 J	0.12 J	0.11 J	0.21 J	0.11 J	< 0.094 UJ	< 0.095 UJ	< 0.095 UJ	< 0.094 UJ
SVOCs_EPH	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	1,4-DIOXANE	123-91-1	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.15 UJ	< 0.15 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U
SVOCs_EPH	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	UR	< 7.1 U	< 7.1 UJ	< 7.2 U	< 7.1 U	< 7.1 UJ		< 7.1 U
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 19 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U	< 18 UJ	UR	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 UJ		< 18 U
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 UJ	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 UJ	< 0.47 U	< 0.47 U	< 0.48 UJ	< 0.48 U	< 0.47 U	< 0.48 UJ	< 0.48 U	< 0.47 U
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.47 U
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	0.093 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 UJ	< 7.1 U	< 7.2 U	< 7.1 UJ	< 7.1 U	< 7.1 UJ
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 0.15 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 UJ	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.095 UJ	< 0.096 U	< 0.094 U	< 0.095 UJ	< 0.095 U	< 0.094 U
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 19 U	< 0.1 U	< 0.094 U	< 18 U	< 0.094 U	< 0.094 U	< 0.094 U	< 18 U	< 0.094 U	< 0.094 U	< 18 U	< 0.096 U	< 0.094 U	< 18 U	< 0.095 U	< 0.094 U
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.77 U	< 0.76 U	< 0.71 U	< 0.71 UJ	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 UJ	< 0.71 U	< 0.71 U	< 0.71 UJ	< 0.72 U	< 0.71 U	< 0.71 UJ	< 0.71 U	< 0.71 U
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 19 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U	< 18 UJ	UR	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 UJ		< 18 U
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ACETOPHENONE	98-86-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	ATRAZINE	1912-24-9	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	0.07 J	< 0.094 U	< 0.094 U	0.055 J	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZALDEHYDE	100-52-7	N	ug/L	< 7.7 UJ	< 7.6 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.2 UJ	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.2 U	< 0.1 U	< 0.094 U	< 0.18 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.18 U	< 0.096 U	< 0.094 U	< 0.18 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.1 U	< 7.6 U	< 7.1 U	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.2 U	< 7.1 U	< 0.095 U		< 7.1 U
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.1 UJ	< 7.6 U	< 7.1 U	< 0.095 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 UJ	< 7.1 U	< 7.1 U	< 0.095 UJ	< 7.2 U	< 7.1 U	< 0.095 UJ		< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.1 U	< 7.6 U	< 7.1 U	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U	< 0.094 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.2 U	< 7.1 U	< 0.095 U		< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.79 U	< 0.5 UJ	< 0.47 U	0.5 J	< 0.47 UJ	< 0.47 UJ	< 0.47 U	0.72 J	< 0.47 UJ	< 0.47 U	< 0.48 U	< 0.48 UJ	< 0.47 U	< 0.48 U	< 0.48 UJ	< 0.47 U
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	CAPROLACTAM	105-60-2	N	ug/L	UR	UR	< 7.1 U	< 7.1 U	UR	UR	< 7.1 U	< 7.1 U	UR	< 7.1 UJ	< 7.1 U	UR	< 7.1 UJ	< 7.1 U		< 7.1 UJ
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 UJ	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 UJ	< 0.094 U	< 0.095 U	< 0.095 UJ	< 0.094 U
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.1 U	< 0.1 UJ	< 0.094 U	< 0.095 U	< 0.094 UJ	< 0.094 UJ	< 0.094 U	< 0.094 U	< 0.094 UJ	< 0.094 U	< 0.095 U	< 0.096 UJ	< 0.094 U	< 0.095 U	< 0.095 UJ	< 0.094 U
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	0.074 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	0.086 J	< 0.096 U	0.14 J	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.2 U	< 7.1 U	< 7.1 UJ		< 7.1 U
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	0.11 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	0.085 J
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	0.073 J	< 0.094 U	0.081 J	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 0.15 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.1 U	< 0.1 U	< 0.094 U	< 0.095 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.7 U	< 7.6 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.52 U	< 0.5 U	< 0.47 U	< 0.48 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-1			FTA-MW-5				FTA-MW-9			FTA-MW-10			FTA-MW-11		
					Sample Date	11/28/2012	6/18/2014	9/18/2015	11/27/2012	6/18/2014	6/18/2014	9/18/2015	11/27/2012	6/17/2014	9/15/2015	11/27/2012	6/17/2014	9/21/2015	11/27/2012	6/17/2014	9/21/2015
					Sample Type Code	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N
					Sample ID	FTA-MW-1-112812	FTA-MW-1-061814	FTA-MW-1-091815	FTA-MW-5-112712	FTA-MW-5-061814	FTA-MW-5-061814-D	FTA-MW-5-091815	FTA-MW-9-112712	FTA-MW-9-061714	FTA-MW-9-091515	FTA-MW-10-112712	FTA-MW-10-061714	FTA-MW-10-092115	FTA-MW-11-112712	FTA-MW-11-061714	FTA-MW-11-092115
					Screen Interval	4 - 14 ft	4 - 14 ft	4 - 14 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	3 - 8 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft
Group	Compound	CAS	Fraction	Units																	
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L		< 0.1 U	< 0.1 U	< 0.094 U	0.14 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
SVOCs_EPH	PHENOL	108-95-2	N	ug/L		< 7.7 U	< 7.6 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	UR	< 7.1 U	< 7.1 U	< 7.2 U	< 7.1 U	< 7.1 U		< 7.1 U
SVOCs_EPH	PYRENE	129-00-0	N	ug/L		< 0.1 U	< 0.1 U	< 0.094 U	0.069 J	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.096 U	< 0.094 U	< 0.095 U	< 0.095 U	< 0.094 U
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L		< 71 U	< 71 U	< 75 U	470	< 71 U	49 J	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 74 U
TPH	TPH-C11-C22 AROMATICS UNADJUSTED	-196	N	ug/L		< 71 U	< 71 U	< 75 U	470	< 71 U	49 J	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U
TPH	TPH-C19-C36 ALIPHATICS UNADJUSTED	-1255	N	ug/L		< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 75 U
TPH	TPH-C9-C18 ALIPHATICS UNADJUSTED	-1256	N	ug/L		< 71 U	< 71 U		< 71 U	< 71 U	< 71 U		< 71 U	< 71 U		< 71 U	< 71 U		< 71 U	< 71 U	
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C5-C8 ALIPHATICS UNADJUSTED	-193	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	
TPH	TPH-C9-C10 AROMATICS UNADJUSTED	-195	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C9-C12 ALIPHATICS UNADJUSTED	-194	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U		< 75 U	< 75 U		< 75 U	< 75 U		< 75 U	< 75 U	
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L		< 0.5 U			< 0.5 UJ				0.58 J			0.4 J			0.34 J		
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L		< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L		< 2.5 U	3 J	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	2.4 J	< 2.5 U	< 2.5 U	3.7 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	5.1
VOCs	BENZENE	71-43-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L		< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L		< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	0.63 J	< 1 U	< 1 U	< 1 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	0.58 J	0.38 J	0.62 J	0.4 J	< 0.5 U	0.4 J	0.34 J	0.24 J	< 0.5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L		< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 U	0.024 J	0.012 J	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 UJ
VOCs	TOLUENE	108-88-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L		< 0.025 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U	0.72	0.84	0.77	0.069	0.081 J	< 0.05 U	< 0.025 U	< 0.05 U	< 0.05 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L		< 1 U	< 1 U		< 1 U	< 1 U	< 1 U		< 1 U	< 1 U		< 1 U	< 1 U		< 1 U	< 1 U	

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-12			FTA-MW-14					FTA-MW-203		FTA-MW-206				
					Sample Date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/27/2012	6/18/2014	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
					Sample Type Code	N	N	N	N	FD	N	N	FD	N	N	N	N	N	N	FD
					Sample ID	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712	FTA-MW-14-112712-D	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-203-112712	FTA-MW-203-061814	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
					Screen Interval	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	4 - 8 ft	4 - 8 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft
Group	Compound	CAS	Fraction	Units																
Metals	ALUMINUM	7429-90-5	F	ug/L	63.4 J	< 100 U	49 J	102 J	84.4 J	< 100 U	110 J	100 J	30.5 J	< 100 U	22.4 J		< 100 U	34 J	15 J
Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.5 U	< 0.5 U	0.37 J	< 0.5 U	< 0.5 U	< 0.5 U	0.36 J	0.24 J	< 0.5 U	< 0.5 U	< 0.5 U		0.14 J	0.14 J	0.11 J
Metals	ARSENIC	7440-38-2	F	ug/L	< 4 U	< 4 U	3 J	2.6 J	< 4 U	< 4 U	2.4 J	< 4 U	< 4 U	< 4 U	< 4.8 U		2.6 J	3.6 J	3.1 J
Metals	BARIUM	7440-39-3	F	ug/L	5.4	4.71 J	6.16	4.4 J	4.3 J	3.92 J	4.24 J	3.94 J	7.8	< 3 U	11.4		6.2	6.32	6.58
Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 U	0.049 J	< 0.2 U	< 0.2 U	< 0.2 U	0.075 J	0.051 J	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	0.074 J	0.04 J	0.03 J	< 0.2 U	0.034 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	0.042 J	0.061 J
Metals	CALCIUM	7440-70-2	F	ug/L	5870	4150	4570	9200	8510	6860	8910	8900	3490	2990	39100		38600	46800	45200
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	4.45 J	3 J	< 4 U	3.9 J	< 4 U	4.05 J	2.95 J	< 4 U	< 4 U	< 4 U		< 4 U	0.87 J	1.4 J
Metals	COBALT	7440-48-4	F	ug/L	2.5	1.47	1.29	0.58 J	0.32 J	0.23 J	0.33 J	0.28 J	0.39 J	< 0.3 U	1.4		0.989 J	0.953 J	0.882 J
Metals	COPPER	7440-50-8	F	ug/L	< 2 U	< 2 U	2.97 J	< 2 U	< 2 U	< 2 U	2.15 J	1.92 J	< 2 U	1.8 J	< 2 U		< 2 U	0.8 J	0.45 J
Metals	IRON	7439-89-6	F	ug/L	3230	539	351	1070	1010	745	1490	1460	< 80 U	< 80 U	< 80 U		< 80 U	< 80 UJ	6.4 J
Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	0.12 J	0.28 J	< 0.5 U	< 0.5 U	< 0.5 U	0.24 J	0.11 J	< 0.5 U	0.079 J	< 0.5 U		< 0.5 U	0.085 J	0.11 J
Metals	MAGNESIUM	7439-95-4	F	ug/L	1920	1410	1630	3140	2880	2430	2980	2960	1330	983	7770		8300	9130	8950
Metals	MANGANESE	7439-96-5	F	ug/L	3110	1570	1460	101	94.8	70.2	85.5	81	80.1	12.6	300		210	185	188
Metals	MERCURY	7439-97-6	F	ug/L	< 0.1 U	< 0.1 U	< 0.1 U	0.02 J	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 UJ		< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L	0.66 J	1.75 J	2.29	0.75 J	0.62 J	0.59 J	2.02 J	1.1 J	0.49 J	0.98 J	1.1 J		0.98 J	1.69 J	1.3 J
Metals	POTASSIUM	7440-09-7	F	ug/L	711 J	730 J	569 J	901 J	833 J	941 J	960 J	1050	573 J	536 J	< 2060 U		1490	1860	1850
Metals	SELENIUM	7782-49-2	F	ug/L	0.28 J	< 3 U	< 3 U	0.67 J	0.76 J	< 3 U	< 3 U	0.41 J	< 3 U	< 3 U	< 3 U		< 3 U	0.24 J	0.35 J
Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L	5370	4460	5130	8240	7700	6240	7550	7450	3600	3300	8670		7390	9160	8880
Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.11 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		0.38 J	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L	0.66 J	0.76 J	0.93 J	1.9 J	2.9 J	< 4 U	2.5 J	1.3 J	0.74 J	1.3 J	< 4 U		< 4 U	0.95 J	< 4 UJ
Metals	ZINC	7440-66-6	F	ug/L	< 10 U	4.2 J	8.29 J	14.9 J	< 10 U	< 10 U	3.3 J	5.7 J	< 10 U	2.9 J	< 10 U		< 10 U	< 10 U	< 10 U
Metals	ALUMINUM	7429-90-5	N	ug/L	116 J	269 J	91 J	504	246 J	279 J	120 J	110 J	46.6 J	< 100 U	36 J		< 100 U	< 100 UJ	37 J
Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	< 0.5 U	0.4 J	< 0.5 U	< 0.5 U	< 0.5 U	0.32 J	0.3 J	< 0.5 U	< 0.5 U	< 0.5 U		0.14 J	0.13 J	0.15 J
Metals	ARSENIC	7440-38-2	N	ug/L	2.5 J	< 4 U	3 J	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 4 U	< 6.6 U		2.5 J	2.4 J	2.9 J
Metals	BARIUM	7440-39-3	N	ug/L	5.8	7.67	6.15	11.6	6.1	5.82	4.76 J	4.48 J	7.4	< 3 U	11.6		7.17	9.35 J	6.24 J
Metals	BERYLLIUM	7440-41-7	N	ug/L	< 0.2 U	< 0.2 U	0.047 J	0.05 J	< 0.2 U	< 0.2 U	0.072 J	0.078 J	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	< 0.2 U	< 0.2 U
Metals	CADMIUM	7440-43-9	N	ug/L	0.08 J	1.6	1.34	0.05 J	0.04 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U		< 0.2 U	0.043 J	0.049 J
Metals	CALCIUM	7440-70-2	N	ug/L	5960	3780	4480	8660	8220	6660	8810	8710	3330	2940	39500		41700	44400	45900
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	< 4 U	4.32 J	4.51 J	< 4 U	4 J	< 4 U	3.77 J	3.25 J	< 4 U	< 4 U	< 4 U		< 4 U	1.2 J	1.5 J
Metals	CHROMIUM III	16065-83-1	N	ug/L															
Metals	CHROMIUM VI	18540-29-9	N	ug/L															
Metals	COBALT	7440-48-4	N	ug/L	2.5	1.49	1.42	0.33 J	0.32 J	0.27 J	0.27 J	0.26 J	0.31 J	< 0.3 U	1.3		1.02	0.928 J	0.949 J
Metals	COPPER	7440-50-8	N	ug/L	< 2 U	< 2 U	2.61 J	< 2 U	< 2 U	< 2 U	6 J	1.7 J	< 2 U	< 2 U	< 2 U		< 2 U	0.52 J	0.58 J
Metals	IRON	7439-89-6	N	ug/L	3330	744	390	1050	878	827	1230	1240	50.4 J	< 80 U	< 80 U		< 80 U	8.6 J	9.8 J
Metals	LEAD	7439-92-1	N	ug/L	< 0.5 U	0.63 J	0.41 J	0.68 J	< 0.5 U	< 0.5 U	0.23 J	0.23 J	< 0.5 U	0.21 J	< 0.5 U		0.12 J	< 0.5 U	0.078 J
Metals	MAGNESIUM	7439-95-4	N	ug/L	2000	1330	1590	3000	2810	2430	2910	2900	1290	958	7540		7590	8640	8920
Metals	MANGANESE	7439-96-5	N	ug/L	3190	1500	1460	99.8	94	70	88.5	86.5	69.5	11.6	308		220	176	184
Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 UJ	< 1 U	< 0.1 UJ		< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L	0.62 J	1.79 J	1.85 J	0.59 J	0.62 J	0.62 J	1 J	1.2 J	0.46 J	0.71 J	1.3 J		0.84 J	1.2 J	1.3 J
Metals	POTASSIUM	7440-09-7	N	ug/L	705 J	663 J	621 J	893 J	857 J	893 J	1050	979 J	497 J	519 J	< 2150 U		1560	1680	1770
Metals	SELENIUM	7782-49-2	N	ug/L	0.43 J	< 3 U	< 3 U	0.65 J	0.27 J	< 3 U	< 3 U	< 3 U	< 3 U	< 3 U	0.26 J		< 3 U	< 3 U	< 3 U
Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L	5470	3960	4980	7400	7370	6090	7420	7120	3380	3200	8470		7850	8660	8910
Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	0.14 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L	0.77 J	1.6 J	1.5 J	1.6 J	3 J	< 4 U	1.8 J	1.8 J	0.64 J	1.4 J	< 4 U		0.61 J	< 4 U	0.62 J
Metals	ZINC	7440-66-6	N	ug/L	< 10 U	3.8 J	5.5 J	< 10 U	< 10 U	< 10 U	2.6 J	3.4 J	< 10 U	3.2 J	< 10 U		4.6 J	3.1 J	< 10 U
Pest_PCBs	4,4-DDD	72-54-8	N	ug/L												< 0.048 UJ			
Pest_PCBs	4,4-DDE	72-55-9	N	ug/L												< 0.048 UJ			
Pest_PCBs	4,4-DDT	50-29-3	N	ug/L												< 0.048 UJ			
Pest_PCBs	ALDRIN	309-00-2	N	ug/L												< 0.024 UJ			
Pest_PCBs	ALPHA-BHC	319-84-6	N	ug/L												< 0.024 UJ			
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	N	ug/L												< 0.024 UJ			
Pest_PCBs	AROCLOR-1016	12674-11-2	N	ug/L											< 0.24 U	< 0.24 UJ		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1221	11104-28-2	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1232	11141-16-5	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1242	53469-21-9	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1248	12672-29-6	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1254	11097-69-1	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1260	11096-82-5	N	ug/L											< 0.24 U	< 0.24 UJ		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1262	37324-23-5	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	AROCLOR-1268	11100-14-4	N	ug/L											< 0.24 U	< 0.24 U		< 0.24 U	< 0.24 U
Pest_PCBs	BETA-BHC	319-85-7	N	ug/L												< 0.024 UJ			
Pest_PCBs	DELTA-BHC	319-86-8	N	ug/L												< 0.024 UJ			
Pest_PCBs	DIELDRIN	60-57-1	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDOSULFAN I	959-98-8	N	ug/L												< 0.024 UJ			
Pest_PCBs	ENDOSULFAN II	33213-65-9	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDRIN	72-20-8	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	N	ug/L												< 0.048 UJ			
Pest_PCBs	ENDRIN KETONE	53494-70-5	N	ug/L												< 0.048 UJ			
Pest_PCBs	HEPTACHLOR	76-44-8	N	ug/L												< 0.024 UJ			
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	N	ug/L												< 0.024 UJ			

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-12			FTA-MW-14					FTA-MW-203		FTA-MW-206				
					Sample Date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/27/2012	6/18/2014	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
					Sample Type Code	N	N	N	N	FD	N	N	FD	N	N	N	N	N	N	FD
					Sample ID	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712	FTA-MW-14-112712-D	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-203-112712	FTA-MW-203-061814	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
					Screen Interval	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	4 - 8 ft	4 - 8 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft
Group	Compound	CAS	Fraction	Units																
Pest_PCBs	LINDANE	58-89-9	N	ug/L													< 0.024 UJ			
Pest_PCBs	METHOXYCHLOR	72-43-5	N	ug/L													< 0.24 UJ			
Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS) (a)	1336-36-3	N	ug/L												< 0.24 U				
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L												< 0.24 U	< 0.24 U			
Pest_PCBs	TOTAL AROCLORS FULL DL	RATotAroFLDL	N	ug/L												< 2.16 U	< 2.16 U			
Pest_PCBs	TOXAPHENE	8001-35-2	N	ug/L													< 0.48 U			
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	N	ug/L													< 0.024 UJ			
PFC	Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	N	ug/L			0.015 J	0.011	< 0.019 U	< 0.02 U	< 0.018 U	< 0.0031 UJ	0.0013 J		< 0.018 U			0.011 J	< 0.0030 U	< 0.0030 U
PFC	Perfluorooctanoic Acid (PFOA)	335-67-1	N	ug/L			< 0.0074 U	0.0056	0.48	0.41	0.43	0.35	0.35		< 0.0074 U			< 0.0075 U	0.0014 J	0.0013 J
SVOCs_EPH	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.095 UJ	< 0.11 UJ	< 0.096 UJ	< 0.097 UJ	< 0.1 UJ	< 0.094 UJ	< 0.099 UJ	< 0.097 UJ	< 0.095 UJ	< 0.094 UJ	< 0.095 UJ		< 0.094 UJ	< 0.094 UJ	< 0.094 UJ
SVOCs_EPH	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U		< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 UJ	< 0.16 UJ	< 0.14 U	< 0.14 UJ	< 0.15 UJ	< 0.14 UJ	< 0.15 U	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ		< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 7.1 UJ		< 7.2 U	< 7.3 UJ	< 7.5 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 UJ	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 UJ		< 18 U	< 18 UJ	< 19 UJ	< 18 U	< 19 U	< 18 U	< 18 UJ	< 18 UJ	< 18 U		< 18 U	< 18 U	< 18 U
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 UJ	< 0.53 U	< 0.48 U	< 0.48 UJ	< 0.5 UJ	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 UJ	< 0.47 U	< 0.48 U		< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U		< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 UJ		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U		< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U		< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	0.098 J	< 0.094 UJ
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.1 U		< 7.2 UJ	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 UJ	< 7.3 UJ	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 UJ	< 7.1 UJ
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.16 U	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U		< 0.14 U	< 0.14 U	< 0.14 U
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	UR		< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.095 UJ	< 0.11 U	< 0.096 U	< 0.097 UJ	< 0.1 UJ	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 UJ	< 0.094 U	UR		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 0.11 U	< 0.096 U	< 18 U	< 19 U	< 0.094 U	< 0.099 U	< 0.097 U	< 18 U	< 0.094 U	< 18 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.71 UJ	< 0.8 U	< 0.72 U	< 0.73 UJ	< 0.75 UJ	< 0.71 U	< 0.74 U	< 0.73 U	< 0.71 UJ	< 0.71 U	< 0.71 U		< 0.71 U	< 0.71 U	< 0.71 U
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U		< 0.47 U	< 0.47 U	< 0.47 U
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 18 UJ		< 18 U	< 18 UJ	< 19 UJ	< 18 U	< 19 U	< 18 U	< 18 UJ	< 18 U	< 18 U		< 18 U	< 18 U	< 18 U
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.8 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACETOPHENONE	98-86-2	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ATRAZINE	1912-24-9	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZALDEHYDE	100-52-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 UJ	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 UJ	< 7.1 UJ		< 7.1 UJ	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 UJ	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.17 U	< 0.11 U	< 0.096 U	< 0.17 U	< 0.1 UJ	< 0.094 U	< 0.099 U	< 0.097 U	< 0.17 U	< 0.094 U	< 0.095 UJ	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.095 U		< 7.2 U	< 0.097 U	< 0.1 U	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.095 UJ		< 7.2 U	< 0.097 UJ	< 0.1 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 UJ	< 7.1 U	< 0.095 UJ	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.095 U		< 7.2 U	< 0.097 U	< 0.1 U	< 7.1 U	< 7.4 U	< 7.3 U	< 0.095 U	< 7.1 U	< 0.095 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 UJ		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 0.48 U	< 0.53 UJ	< 0.48 U	< 0.48 U	0.97 J	< 0.47 UJ	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 UJ	< 1.5 U		< 0.47 UJ	< 0.47 U	< 0.47 U
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CAPROLACTAM	105-60-2	N	ug/L	< 7.1 U		< 7.2 UJ	< 7.3 U	< 7.5 U	UR	< 7.4 UJ	< 7.3 UJ	< 7.1 U	UR	UR		UR	< 7.1 UJ	< 7.1 UJ
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 0.095 U	< 0.11 UJ	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 UJ	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 UJ	< 0.095 U	< 1.4 U	< 0.094 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.095 U	< 0.11 UJ	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 UJ	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 UJ	< 0.095 U	< 1.4 U	< 0.094 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 7.1 UJ		< 7.2 U	< 7.3 UJ	< 7.5 UJ	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 UJ	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U	< 1.4 U	< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	0.089 J	< 0.094 UJ
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 UJ		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.16 UJ	< 0.14 U	< 0.14 U	< 0.15 U	< 0.14 UJ	< 0.15 U	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U		< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U		< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 U	< 0.53 U	< 0.48 U	< 0.48 U	< 0.5 U	< 0.47 U	< 0.5 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.48 U		< 0.47 U	< 0.47 U	< 0.47 U

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-12			FTA-MW-14					FTA-MW-203		FTA-MW-206				
					Sample Date	11/27/2012	6/17/2014	9/21/2015	11/27/2012	11/27/2012	6/17/2014	9/21/2015	9/21/2015	11/27/2012	6/18/2014	11/28/2012	9/26/2013	6/18/2014	9/18/2015	9/18/2015
					Sample Type Code	N	N	N	N	FD	N	N	FD	N	N	N	N	N	N	FD
					Sample ID	FTA-MW-12-112712	FTA-MW-12-061714	FTA-MW-12-092115	FTA-MW-14-112712	FTA-MW-14-112712-D	FTA-MW-14-061714	FTA-MW-14-092115	FTA-MW-14-092115-D	FTA-MW-203-112712	FTA-MW-203-061814	FTA-MW-206-112812	FTA-MW206-092613	FTA-MW-206-061814	FTA-MW-206-091815	FTA-MW-206-091815-D
					Screen Interval	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	1.5 - 6.5 ft	4 - 8 ft	4 - 8 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft	6 - 11 ft
Group	Compound	CAS	Fraction	Units																
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L		< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
SVOCs_EPH	PHENOL	108-95-2	N	ug/L		< 7.1 U		< 7.2 U	< 7.3 U	< 7.5 U	< 7.1 U	< 7.4 U	< 7.3 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.1 U	< 7.1 U	< 7.1 U
SVOCs_EPH	PYRENE	129-00-0	N	ug/L		< 0.095 U	< 0.11 U	< 0.096 U	< 0.097 U	< 0.1 U	< 0.094 U	< 0.099 U	< 0.097 U	< 0.095 U	< 0.094 U	< 0.095 U	< 1.4 U	< 0.094 U	< 0.094 U	< 0.094 U
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L		< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U
TPH	TPH-C11-C22 AROMATICS UNADJUSTED	-196	N	ug/L		< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U
TPH	TPH-C19-C36 ALIPHATICS UNADJUSTED	-1255	N	ug/L		< 71 U	< 71 U	< 75 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U	< 71 U	< 71 U	< 71 U	< 71 U	< 71 U	< 75 U	< 75 U
TPH	TPH-C9-C18 ALIPHATICS UNADJUSTED	-1256	N	ug/L		< 71 U	< 71 U		< 71 U	< 71 U	< 71 U			< 71 U	< 71 U	< 71 U	< 71 U	< 71 U		
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U
TPH	TPH-C5-C8 ALIPHATICS UNADJUSTED	-193	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U			< 75 U	< 75 U	< 75 U		< 75 U		< 75 U
TPH	TPH-C9-C10 AROMATICS UNADJUSTED	-195	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U			< 75 U	< 75 U	< 75 U		< 75 U		< 75 U
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L		< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U	< 75 U
TPH	TPH-C9-C12 ALIPHATICS UNADJUSTED	-194	N	ug/L		< 75 U	< 75 U		< 75 U	< 75 U	< 75 U			< 75 U	< 75 U	< 75 U		< 75 U		
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L		0.43 J			< 0.5 U	< 0.5 U				< 0.5 U		18				
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L		< 2.5 UJ	< 2.5 U	3.5 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 UJ	2.3 J	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	2.8 J	3 J
VOCs	BENZENE	71-43-2	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L		< 1 UJ	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L		< 1 UJ	< 1 U	0.86 J	< 1 U	< 1 U	< 1 U	0.91 J	1.3 J	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 U
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L		0.43 J	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	18	26	22	22	20
VOCs	ETHYLBENZENE	100-41-4	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L		< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L		< 0.025 U	< 0.025 U	< 0.5 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 UJ	< 0.025 U	< 0.025 U	< 0.025 UJ	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 U
VOCs	TOLUENE	108-88-3	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L		< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	6.9	7.5	8.2	11	9.4
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L		< 0.025 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.05 U	0.053 J	0.069	0.054 J	0.056 J	< 0.05 UJ
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L		< 1 U	< 1 U		< 1 U	< 1 U	< 1 U			< 1 U	< 1 U	< 1 U	< 1 U	< 1 U		

Notes:

< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-208					FTA-MW-210						FTA-MW-218			FTA-DP-35
					Sample Date	11/29/2012	6/18/2014	6/18/2014	9/21/2015	11/2/2016	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015	11/27/2012	6/18/2014	9/18/2015	9/21/2015
					Sample Type Code	N	N	FD	N	N	FD	N	FD	N	N	N	N	N	N	N
					Sample ID	FTA-MW-208-112912	FTA-MW-208-061814	FTA-MW-208-061814-D	FTA-MW-208-092115	MW208-N-110216	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115	FTA-MW-218-112712	FTA-MW-218-061814	FTA-MW-218-091815	FTA-DP-35-092115
					Screen Interval	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft		4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	6 - 10 ft	6 - 10 ft	6 - 10 ft	
Group	Compound	CAS	Fraction	Units																
Metals	ALUMINUM	7429-90-5	F	ug/L	81.5 J	< 100 U	< 100 U	16 J		29.4 J	36 J			< 100 U	< 100 U	68 J	< 140 U	110 J	15 J
Metals	ANTIMONY	7440-36-0	F	ug/L	< 0.57 U	0.13 J	0.15 J	0.38 J		< 0.5 U	< 0.5 U			0.14 J	0.42 J	< 0.5 U	< 0.5 U	0.084 J	0.28 J
Metals	ARSENIC	7440-38-2	F	ug/L	< 4 U	< 4 U	< 4 U	< 4 U		< 4 U	< 4 U			< 4 U	3.7 J	< 4 U	< 4 U	< 4 U	9.2
Metals	BARIUM	7440-39-3	F	ug/L	11	4.67 J	4.57 J	3.48 J		10	10.5			6.01	7.84	9.4	6.5	3.82 J	2.64 J
Metals	BERYLLIUM	7440-41-7	F	ug/L	< 0.2 U	< 0.2 UJ	< 0.2 UJ	0.042 J		< 0.2 U	< 0.2 U			< 0.2 UJ	0.038 J	0.05 J	0.078 J	0.059 J	< 0.2 U
Metals	CADMIUM	7440-43-9	F	ug/L	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U		0.03 J	0.03 J			< 0.2 U	< 0.2 U	0.05 J	< 0.2 U	0.053 J	< 0.2 U
Metals	CALCIUM	7440-70-2	F	ug/L	10600	6120	6360	6100		35800	35000			32800	40400 J+	760	1170	536	22200
Metals	CHROMIUM, TOTAL	7440-47-3	F	ug/L	< 4 U	< 4 U	< 4 U	4.27 J		< 4 U	< 4 U			< 4 U	3.98 J	< 4 U	< 4 U	2.53 J	2.92 J
Metals	COBALT	7440-48-4	F	ug/L	1.5	< 0.3 U	< 0.3 U	0.074 J		0.26 J	0.32 J			0.26 J	0.25 J	1.8	1	0.5 J	0.11 J
Metals	COPPER	7440-50-8	F	ug/L	< 2 U	< 2 U	8.62	2.82 J		< 2 U	< 2 U			< 2 U	3.75	< 2 U	< 2 U	1.1 J	2.1 J
Metals	IRON	7439-89-6	F	ug/L	85.1 J	< 80 U	< 80 U	24 J		< 80 U	< 80 U			< 80 U	< 80 U	< 80 U	< 80 U	15 J	39 J
Metals	LEAD	7439-92-1	F	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	0.33 J		< 0.5 U	< 0.5 U			< 0.5 U	0.16 J	< 0.5 U	0.077 J	0.096 J	0.21 J
Metals	MAGNESIUM	7439-95-4	F	ug/L	2870	1990	2070	2490		6350	6300			6160	7150	685	858	431	3700
Metals	MANGANESE	7439-96-5	F	ug/L	619	41.8	43.1	2 J		47.6	49.6			47	63.7	65.8	25.7	11.2	38.9
Metals	MERCURY	7439-97-6	F	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U		< 0.1 UJ	< 0.1 UJ			< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	F	ug/L	2.4	0.57 J	0.6 J	1 J		1.5 J	1.4 J			2.14	4.33	2.1	2.01	2.11	0.79 J
Metals	POTASSIUM	7440-09-7	F	ug/L	< 1670 U	966 J	979 J	699 J		< 1850 U	< 2070 U			1570	1960	< 500 U	160 J	55 J	2150
Metals	SELENIUM	7782-49-2	F	ug/L	< 3 U	< 3 U	< 3 U	< 3 U		< 3 U	< 3 U			< 3 U	< 3 U	0.27 J	< 3 U	0.2 J	< 3 U
Metals	SILVER	7440-22-4	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	F	ug/L	20400	9000	9240	6570		9000	8760			7850	9560	6860	6910	5330	9500
Metals	THALLIUM	7440-28-0	F	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	F	ug/L	< 4 U	< 4 U	< 4 U	1.4 J		< 4 U	< 4 U			< 4 U	1.4 J	1.2 J	1.1 J	0.84 J	0.73 J
Metals	ZINC	7440-66-6	F	ug/L	< 10 U	0.89 J	5.1 J	< 10 U		< 10 U	< 10 U			1.7 J	1.2 J	< 10 U	2.6 J	4.6 J	1 J
Metals	ALUMINUM	7429-90-5	N	ug/L	13400	648	619	232 J		62.8 J	66.9 J			24 J	< 100 U	235 J	276 J	130 J	41 J
Metals	ANTIMONY	7440-36-0	N	ug/L	< 0.5 U	0.22 J	0.18 J	0.37 J		< 0.5 U	< 0.5 U			0.13 J	0.59 J	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J
Metals	ARSENIC	7440-38-2	N	ug/L	< 9.2 U	< 4 U	2.5 J	2.6 J		< 4 U	< 4 U			< 4 U	3.6 J	< 4 U	< 4 U	< 4 U	11
Metals	BARIUM	7440-39-3	N	ug/L	74.8	8.43	7.81	6.87		9.8	12.2			6.06	7.95	10.6	6.72	4.18 J	2.64 J
Metals	BERYLLIUM	7440-41-7	N	ug/L	0.71 J	< 0.2 UJ	< 0.2 UJ	0.052 J		< 0.2 U	< 0.2 U			< 0.2 U	0.038 J	0.06 J	< 0.2 U	0.058 J	0.049 J
Metals	CADMIUM	7440-43-9	N	ug/L	0.08 J	< 0.2 U	< 0.2 U	< 0.2 U		0.04 J	< 0.2 U			< 0.2 U	0.11 J	0.05 J	< 0.2 U	0.056 J	< 0.2 U
Metals	CALCIUM	7440-70-2	N	ug/L	12400	6180	6270	6210		34800	37000			33000	39900 J+	801	1150	479	23100
Metals	CHROMIUM, TOTAL	7440-47-3	N	ug/L	26.6	< 4 U	< 4 U	4.72 J	9.97	< 4 U	< 4 U			< 4 U	5.72	< 4 U	< 4 U	2.35 J	2.99 J
Metals	CHROMIUM III	16065-83-1	N	ug/L					5.2 J										
Metals	CHROMIUM VI	18540-29-9	N	ug/L					4.8 J										
Metals	COBALT	7440-48-4	N	ug/L	9	0.46 J	0.45 J	0.32 J		0.22 J	0.25 J			0.15 J	0.36 J	1.9	1.03	0.5 J	0.12 J
Metals	COPPER	7440-50-8	N	ug/L	22.5	2.11 J	2.18 J	3.69		< 2 U	< 2 U			4.26	2.74 J	< 2 U	< 2 U	0.6 J	1.7 J
Metals	IRON	7439-89-6	N	ug/L	16100	766	777	266		< 80 U	39.8 J			< 80 U	18 J	172	128	33 J	79 J
Metals	LEAD	7439-92-1	N	ug/L	10.2	0.56 J	0.63 J	0.64 J		< 0.5 U	< 0.5 U			< 0.5 U	3.46 J+	< 0.5 U	0.19 J	0.11 J	0.29 J
Metals	MAGNESIUM	7439-95-4	N	ug/L	7000	2150	2190	2570		6310	6520			6100	7060	744	867	412	3840
Metals	MANGANESE	7439-96-5	N	ug/L	957	53.8	52.4	10		47.3	56.3			47	87.1	75.1	28.7	11	49.3
Metals	MERCURY	7439-97-6	N	ug/L	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U		< 0.1 UJ	< 0.1 UJ			< 0.1 U	< 0.1 U	< 0.1 UJ	< 0.1 U	< 0.1 U	< 0.1 U
Metals	NICKEL	7440-02-0	N	ug/L	18.5	1.54 J	1.4 J	2.33		1.3 J	1.4 J			1.86 J	3.54	2.4	1.92 J	1.3 J	0.69 J
Metals	POTASSIUM	7440-09-7	N	ug/L	3330	1090	1090	758 J		< 1810 U	< 2010 U			1540	2050	< 500 U	190 J	130 J	2320
Metals	SELENIUM	7782-49-2	N	ug/L	0.63 J	< 3 U	< 3 U	< 3 U		< 3 U	< 3 U			< 3 U	< 3 U	0.35 J	< 3 U	0.24 J	< 3 U
Metals	SILVER	7440-22-4	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	SODIUM	7440-23-5	N	ug/L	18800	9180	9310	6730		8710	9240			7990	9310	7160	6800	4990	10400
Metals	THALLIUM	7440-28-0	N	ug/L	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U		< 0.4 U	< 0.4 U			< 0.4 U	0.065 J	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Metals	VANADIUM	7440-62-2	N	ug/L	19.5	< 4 U	< 4 U	1.7 J		< 4 U	< 4 U			< 4 U	1.6 J	1 J	0.7 J	1 J	0.67 J
Metals	ZINC	7440-66-6	N	ug/L	46.6	3 J	3.5 J	2 J		< 10 U	< 10 U			4.9 J	1.4 J	< 10 U	2.7 J	3.2 J	<10 U
Pest_PCBs	4,4-DDD	72-54-8	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	4,4-DDE	72-55-9	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	4,4-DDT	50-29-3	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ALDRIN	309-00-2	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	ALPHA-BHC	319-84-6	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	ALPHA-CHLORDANE	5103-71-9	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	AROCLOR-1016	12674-11-2	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 UJ	< 0.26 UJ		< 0.24 U				
Pest_PCBs	AROCLOR-1221	11104-28-2	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1232	11141-16-5	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1242	53469-21-9	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1248	12672-29-6	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1254	11097-69-1	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1260	11096-82-5	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 UJ	< 0.26 UJ		< 0.24 U				
Pest_PCBs	AROCLOR-1262	37324-23-5	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	AROCLOR-1268	11100-14-4	N	ug/L						< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U		< 0.24 U				
Pest_PCBs	BETA-BHC	319-85-7	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	DELTA-BHC	319-86-8	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	DIELDRIN	60-57-1	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDOSULFAN I	959-98-8	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	ENDOSULFAN II	33213-65-9	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDOSULFAN SULFATE	1031-07-8	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDRIN	72-20-8	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDRIN ALDEHYDE	7421-93-4	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	ENDRIN KETONE	53494-70-5	N	ug/L								< 0.052 UJ	< 0.052 UJ						
Pest_PCBs	HEPTACHLOR	76-44-8	N	ug/L								< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	HEPTACHLOR EPOXIDE	1024-57-3	N	ug/L								< 0.026 UJ	< 0.026 UJ						

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

					Location ID	FTA-MW-208					FTA-MW-210						FTA-MW-218			FTA-DP-35
					Sample Date	11/29/2012	6/18/2014	6/18/2014	9/21/2015	11/2/2016	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015	11/27/2012	6/18/2014	9/18/2015	9/21/2015
					Sample Type Code	N	N	FD	N	N	FD	N	FD	N	N	N	N	N	N	N
					Sample ID	FTA-MW-208-112912	FTA-MW-208-061814	FTA-MW-208-061814-D	FTA-MW-208-092115	MW208-N-110216	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115	FTA-MW-218-112712	FTA-MW-218-061814	FTA-MW-218-091815	FTA-DP-35-092115
					Screen Interval	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft		4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	6 - 10 ft	6 - 10 ft	6 - 10 ft	
Group	Compound	CAS	Fraction	Units																
Pest_PCBs	LINDANE	58-89-9	N	ug/L									< 0.026 UJ	< 0.026 UJ						
Pest_PCBs	METHOXYCHLOR	72-43-5	N	ug/L									< 0.26 UJ	< 0.26 UJ						
Pest_PCBs	POLYCHLORINATED BIPHENYLS (PCBS) (a)	1336-36-3	N	ug/L							< 0.26 U	< 0.24 U								
Pest_PCBs	TOTAL AROCLORS (b)	RATotAroclors	N	ug/L							< 0.26 U	< 0.24 U	< 0.26 U	< 0.26 U						
Pest_PCBs	TOTAL AROCLORS FULL DL	RATotAroFLDL	N	ug/L							< 2.34 U	< 2.16 U	< 2.34 U	< 2.34 U						
Pest_PCBs	TOXAPHENE	8001-35-2	N	ug/L									< 0.52 U	< 0.52 U						
Pest_PCBs	TRANS-CHLORDANE	5103-74-2	N	ug/L									< 0.026 UJ	< 0.026 UJ						
PFC	Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	N	ug/L		< 0.018 UJ	< 0.019 UJ	< 0.0031 U							< 0.018 UJ	0.0036 J		< 0.019 U	< 0.0030 U	< 0.0031 U
PFC	Perfluorooctanoic Acid (PFOA)	335-67-1	N	ug/L		< 0.0072 UJ	< 0.0074 UJ	< 0.0021 U							0.0099 J	0.012		< 0.0074 U	0.0013 J	0.018
SVOCs_EPH	1,1-BIPHENYL	92-52-4	N	ug/L	< 0.095 UJ	< 0.095 UJ	< 0.095 UJ	< 0.094 UJ		< 0.097 UJ	< 0.1 UJ			< 0.094 UJ	< 0.094 UJ	< 0.095 UJ	< 0.097 UJ	< 0.094 UJ	< 0.094 UJ
SVOCs_EPH	1,2,4,5-TETRACHLOROBENZENE	95-94-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	1,4-DIOXANE	123-91-1	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,2'-OXYBIS(1-CHLOROPROPANE)	108-60-1	N	ug/L	< 0.14 UJ	< 0.14 UJ	< 0.14 UJ	< 0.14 U		< 0.14 UJ	< 0.15 UJ			< 0.14 UJ	< 0.14 U	< 0.14 UJ	< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	2,3,4,6-TETRACHLOROPHENOL	58-90-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4,5-TRICHLOROPHENOL	95-95-4	N	ug/L	< 18 U	< 18 U	< 18 U	< 18 U		< 18 U	< 19 U			< 18 U	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U
SVOCs_EPH	2,4,6-TRICHLOROPHENOL	88-06-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 UJ	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DICHLOROPHENOL	120-83-2	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DIMETHYLPHENOL	105-67-9	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2,4-DINITROPHENOL	51-28-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2,4-DINITROTOLUENE	121-14-2	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2,6-DINITROTOLUENE	606-20-2	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2-CHLORONAPHTHALENE	91-58-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	2-CHLOROPHENOL	95-57-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 UJ	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	2-METHYLNAPHTHALENE	91-57-6	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	2-METHYLPHENOL	95-48-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 UJ		< 7.3 U	< 7.5 U			UR	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 UJ
SVOCs_EPH	2-NITROANILINE	88-74-4	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U		< 0.14 U	< 0.15 U			< 0.14 U	< 0.47 UJ	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U
SVOCs_EPH	2-NITROPHENOL	88-75-5	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 0.094 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	3- AND 4-METHYLPHENOL	108-39-4/106-44-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 7.1 UJ	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	3,3-DICHLOROBENZIDINE	91-94-1	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			UR	< 0.14 U	< 0.095 UJ	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	3-NITROANILINE	99-09-2	N	ug/L	< 18 U	< 0.095 U	< 0.095 U	< 0.094 U		< 18 U	< 19 U			< 0.094 U	< 7.1 U	< 18 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4,6-DINITRO-2-METHYLPHENOL	534-52-1	N	ug/L	< 0.71 U	< 0.71 U	< 0.71 U	< 0.71 U		< 0.73 U	< 0.75 U			< 0.71 U	< 0.47 UJ	< 0.71 UJ	< 0.73 U	< 0.71 U	< 0.71 U
SVOCs_EPH	4-BROMOPHENYL-PHENYLETHER	101-55-3	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 0.094 UJ	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLORO-3-METHYLPHENOL	59-50-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 0.094 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-CHLOROANILINE	106-47-8	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 UJ	< 0.71 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U
SVOCs_EPH	4-CHLOROPHENYL-PHENYLETHER	7005-72-3	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	4-NITROANILINE	100-01-6	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	4-NITROPHENOL	100-02-7	N	ug/L	< 18 U	< 18 U	< 18 U	< 18 U		< 18 U	< 19 U			< 18 UJ	< 18 U	< 18 UJ	< 18 U	< 18 U	< 18 U
SVOCs_EPH	ACENAPHTHENE	83-32-9	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 2 U	< 2 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACENAPHTHYLENE	208-96-8	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ACETOPHENONE	98-86-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 UJ	< 7.1 U
SVOCs_EPH	ANTHRACENE	120-12-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	ATRAZINE	1912-24-9	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZALDEHYDE	100-52-7	N	ug/L	< 7.1 UJ	< 7.1 UJ	< 7.1 UJ	< 7.1 U		< 7.3 UJ	< 7.5 UJ			< 7.1 UJ	< 7.1 U	< 7.1 U	< 7.3 UJ	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[A]ANTHRACENE	56-55-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[A]PYRENE	50-32-8	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 UJ	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[B]FLUORANTHENE	205-99-2	N	ug/L	< 0.19 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 UJ	< 0.1 UJ	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 UJ	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BENZO[G,H,I]PERYLENE	191-24-2	N	ug/L	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 0.095 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BENZO[K]FLUORANTHENE	207-08-9	N	ug/L	< 0.095 UJ	< 7.1 U	< 7.1 U	< 7.1 U		< 0.097 UJ	< 0.1 UJ	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 0.095 UJ	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHOXY)METHANE	111-91-1	N	ug/L	< 0.095 U	< 7.1 U	< 7.1 U	< 7.1 U		< 0.097 U	< 0.1 U			< 7.1 U	< 7.1 U	< 0.095 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	BIS(2-CHLOROETHYL)ETHER	111-44-4	N	ug/L	< 0.095 UJ	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 UJ	< 0.1 UJ			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	BIS(2-ETHYLHEXYL)PHTHALATE	117-81-7	N	ug/L	< 2 U	< 0.48 UJ	< 0.48 UJ	< 0.47 U		< 0.7 U	< 1.3 U			< 0.47 UJ	< 0.47 UJ	0.76 J	< 0.48 UJ	< 0.47 U	< 0.47 U
SVOCs_EPH	BUTYLBENZYLPHTHALATE	85-68-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CAPROLACTAM	105-60-2	N	ug/L	UR	UR	UR	< 7.1 UJ		UR	UR			UR	< 7.1 UJ	< 7.1 U	UR	< 7.1 U	< 7.1 UJ
SVOCs_EPH	CARBAZOLE	86-74-8	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	CHRYSENE	218-01-9	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZ[A,H]ANTHRACENE	53-70-3	N	ug/L	< 0.095 U	< 0.095 UJ	< 0.095 UJ	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 UJ	< 0.094 UJ	< 0.095 U	< 0.097 UJ	< 0.094 U	< 0.094 U
SVOCs_EPH	DIBENZOFURAN	132-64-9	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	DIETHYLPHTHALATE	84-66-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DIMETHYL PHTHALATE	131-11-3	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 UJ	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-BUTYLPHTHALATE	84-74-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	DI-N-OCTYLPHTHALATE	117-84-0	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORANTHENE	206-44-0	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	FLUORENE	86-73-7	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U	< 1.6 U	< 1.5 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	HEXACHLOROBENZENE	118-74-1	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROBUTADIENE	87-68-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROCYCLOPENTADIENE	77-47-4	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	HEXACHLOROETHANE	67-72-1	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	INDENO[1,2,3-CD]PYRENE	193-39-5	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 UJ	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	ISOPHORONE	78-59-1	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	NAPHTHALENE	91-20-3	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	NITROBENZENE	98-95-3	N	ug/L	< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 U		< 0.14 U	< 0.15 U			< 0.14 U	< 0.14 U	< 0.14 U	< 0.14 UJ	< 0.14 U	< 0.14 U
SVOCs_EPH	N-NITROSODINPROPYLAMINE	621-64-7	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U			< 0.094 U	< 0.094 UJ	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	N-NITROSODIPHENYLAMINE	86-30-6	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 UJ	< 7.1 U
SVOCs_EPH	PENTACHLOROPHENOL	87-86-5	N	ug/L	< 0.48 U	< 0.48 U	< 0.48 U	< 0.47 U		< 0.48 U	< 0.5 U			< 0.47 U	< 0.47 U	< 0.48 U	< 0.48 U	< 0.47 U	< 0.47 U

TABLE F-3
ANALYTICAL DATA SUMMARY TABLES - GROUNDWATER
FIRE TRAINING AREA, NCTAMS LANT DET CUTLER
CUTLER, MAINE

				Location ID	FTA-MW-208					FTA-MW-210						FTA-MW-218			FTA-DP-35
				Sample Date	11/29/2012	6/18/2014	6/18/2014	9/21/2015	11/2/2016	11/29/2012	11/29/2012	9/26/2013	9/26/2013	6/19/2014	9/21/2015	11/27/2012	6/18/2014	9/18/2015	9/21/2015
				Sample Type Code	N	N	FD	N	N	FD	N	FD	N	N	N	N	N	N	N
				Sample ID	FTA-MW-208-112912	FTA-MW-208-061814	FTA-MW-208-061814-D	FTA-MW-208-092115	MW208-N-110216	FTA-MW-210-112912-D	FTA-MW-210-112912	FTA-MW210-092613-D	FTA-MW210-092613	FTA-MW-210-061814	FTA-MW-210-092115	FTA-MW-218-112712	FTA-MW-218-061814	FTA-MW-218-091815	FTA-DP-35-092115
				Screen Interval	15 - 25 ft	15 - 25 ft	15 - 25 ft	15 - 25 ft		4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	4 - 9 ft	6 - 10 ft	6 - 10 ft	6 - 10 ft	
Group	Compound	CAS	Fraction	Units															
SVOCs_EPH	PHENANTHRENE	85-01-8	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
SVOCs_EPH	PHENOL	108-95-2	N	ug/L	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U		< 7.3 U	< 7.5 U			< 7.1 U	< 7.1 U	< 7.1 U	< 7.3 U	< 7.1 U	< 7.1 U
SVOCs_EPH	PYRENE	129-00-0	N	ug/L	< 0.095 U	< 0.095 U	< 0.095 U	< 0.094 U		< 0.097 U	< 0.1 U	< 1.6 U	< 1.5 U	< 0.094 U	< 0.094 U	< 0.095 U	< 0.097 U	< 0.094 U	< 0.094 U
TPH	TPH-C11-C22 AROMATICS	-267	N	ug/L	< 73 U	< 72 U	< 71 U	< 71 U		< 74 U	< 71 U	< 79 U	< 77 U	< 72 U	< 71 U	< 71 U	< 72 U	< 75 U	< 71 U
TPH	TPH-C11-C22 AROMATICS UNADJUSTED	-196	N	ug/L	< 73 U	< 72 U	< 71 U	< 75 U		< 74 U	< 71 U	< 79 U	< 77 U	< 72 U	< 75 U	< 71 U	< 72 U	< 75 U	< 75 U
TPH	TPH-C19-C36 ALIPHATICS UNADJUSTED	-1255	N	ug/L	< 73 U	< 72 U	< 71 U	< 75 U		< 74 U	< 71 U	< 79 U	< 77 U	< 72 U	< 75 U	< 71 U	< 72 U	< 75 U	< 75 U
TPH	TPH-C9-C18 ALIPHATICS UNADJUSTED	-1256	N	ug/L	< 73 U	< 72 U	< 71 U			< 74 U	< 71 U	< 79 U	< 77 U	< 72 U		< 71 U	< 72 U		
TPH	TPH-C5-C8 ALIPHATICS	-2755	N	ug/L	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U			< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C5-C8 ALIPHATICS UNADJUSTED	-193	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	< 75 U			< 75 U		< 75 U	< 75 U		
TPH	TPH-C9-C10 AROMATICS UNADJUSTED	-195	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	< 75 U			< 75 U		< 75 U	< 75 U		
TPH	TPH-C9-C12 ALIPHATICS	-266	N	ug/L	< 75 U	< 75 U	< 75 U	< 75 U		< 75 U	< 75 U			< 75 U	< 75 U	< 75 U	< 75 U	< 75 U	< 75 U
TPH	TPH-C9-C12 ALIPHATICS UNADJUSTED	-194	N	ug/L	< 75 U	< 75 U	< 75 U			< 75 U	< 75 U			< 75 U		< 75 U	< 75 U		
VOCs	1,1,1-TRICHLOROETHANE	71-55-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	1.4	1.5	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-TETRACHLOROETHANE	79-34-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-TRICHLOROETHANE	79-00-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHANE	75-34-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		0.78 J	0.82 J	1.5	1.4	1	1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-DICHLOROETHENE	75-35-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-TRICHLOROBENZENE	120-82-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROBENZENE	95-50-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHANE	107-06-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-DICHLOROETHENE, TOTAL	540-59-0	N	ug/L	< 0.5 U					< 0.5 U	< 0.5 U					< 0.5 U			
VOCs	1,3-DICHLOROBENZENE	541-73-1	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,4-DICHLOROBENZENE	106-46-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2-HEXANONE	591-78-6	N	ug/L	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 U		< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 UJ	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	ACETONE	67-64-1	N	ug/L	2.6 J	< 2.5 U	< 2.5 U	< 2.5 U		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	3.4 J	< 2.5 U	< 2.5 U	2.9 J	< 2.5 U
VOCs	BENZENE	71-43-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CARBON TETRACHLORIDE	56-23-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROBENZENE	108-90-7	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROETHANE	75-00-3	N	ug/L	< 1 U	< 1 UJ	< 1 UJ	< 1 U		< 1 U	< 1 U	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U	< 1 UJ	< 1 U	< 1 U
VOCs	CHLOROFORM	67-66-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CHLOROMETHANE	74-87-3	N	ug/L	< 1 U	< 1 U	< 1 U	0.49 J		< 1 U	< 1 U	< 1 UJ	< 1 UJ	< 1 U	0.42 J	< 1 U	< 1 U	< 1 U	0.4 J
VOCs	CIS-1,2-DICHLOROETHENE	156-59-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ETHYLBENZENE	100-41-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	ISOPROPYLBENZENE	98-82-8	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 UJ	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	M- AND P-XYLENE	108-38-3/106-42-3	N	ug/L	< 1 U	< 1 U	< 1 U	< 1 U		< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
VOCs	METHYL CYCLOHEXANE	108-87-2	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYL TERT-BUTYL ETHER	1634-04-4	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	METHYLENE CHLORIDE	75-09-2	N	ug/L	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U		< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U	< 2.5 U
VOCs	O-XYLENE	95-47-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	STYRENE	100-42-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TETRACHLOROETHENE	127-18-4	N	ug/L	< 0.025 U	< 0.025 U	< 0.025 U	< 0.5 U		0.014 J	0.019 J	< 0.025 U	< 0.025 U	0.011 J	< 0.5 U	< 0.025 U	< 0.025 U	< 0.5 U	< 0.5 U
VOCs	TOLUENE	108-88-3	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRANS-1,2-DICHLOROETHENE	156-60-5	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	TRICHLOROETHENE	79-01-6	N	ug/L	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	VINYL CHLORIDE	75-01-4	N	ug/L	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U		< 0.025 U	< 0.025 U	< 0.025 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.025 U	< 0.05 U	< 0.05 U	< 0.05 U
VOCs	XYLENES, TOTAL (a)	1330-20-7	N	ug/L	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U		< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U	< 1.5 U
VOCs	XYLENES, TOTAL CALC (b)	RA-1330-20-7	N	ug/L	< 1 U	< 1 U	< 1 U			< 1 U	< 1 U	< 1 U	< 1 U	< 1 U		< 1 U	< 1 U		

Notes:
< - Result not detected above laboratory reporting limit.
CAS - Chemical Abstracts Service.
F - Filtered sample.
FD - Field duplicate.
ft - feet.
J - Estimated value.
HPAH - High molecular weight PAH.
LPAH - Low molecular weight PAH.
N - Normal sample.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.
SVOC - Semivolatile organic compound.
TPH - Total Petroleum Hydrocarbon.
ug/L - microgram per liter.
U - Not detected.
UJ - The analyte was not detected; and the reporting limit is approximate.
UR - Unreported/rejected.
VOC - Volatile organic compound.
VPH - Volatile Petroleum Hydrocarbons.
(a) Lab calculated value; only used when individual compound data not available.
(b) Total concentrations for use in the risk assessment were calculated per sample by summing only the detected individual compounds (i.e., Aroclor/PAH/xylene) concentrations. For samples without any detections of individual compounds (i.e., Aroclor/PAH/xylene), the maximum reporting detection limit within the sample is presented as a non-detect value. Calculated totals have a CAS number beginning with "RA-".

ATTACHMENT A

DATA VALIDATION REPORTS

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Data Validation Report

Project:	Cutler FTA	
Laboratory:	Katahdin Laboratories	
Service Request:	Navy Clean	
Analyses/Method:	Lead by Inductively Coupled Plasma (ICP)/SW-846 6010C; MA-EPH; MA-VPH; PCBs SW8082; Volatiles by SW8260; Semivolatiles by SW8270 SIM	
Validation Level:	Limited	
AECOM Project Number:	60285299	
Prepared by:	Devon Chicoine/AECOM Technical Services, Inc.	Completed on: November 5, 2015
Reviewed by:		File Name: CutlerWE31-3_memo

SUMMARY

The samples listed as follows were collected by AECOM Technical Services, Inc. (AECOM) from Cutler, Maine (Cutler) Fire Training Area in September 2015.

Table of Samples Analyzed

SDG	Sample ID	Lab Sample ID	Matrix/Sample Type
S15145	FTA-TB-091515	SI7223-1	Trip Blank
S15145	FTA-MW-9-091515	SI7223-2	Ground Water
S15145	FTA-MW-1-091815	SI7375-001	Ground Water
S15145	FTA-MW-5-091815	SI7375-004	Ground Water
S15145	FTA-MW-218-091815	SI7375-006	Ground Water
S15145	FTA-MW-206-091815	SI7375-008	Ground Water
S15145	FTA-MW-206-091815-D	SI7375-010	Ground Water (Field Duplicate)
S15145	FTA-MW-210-092115	SI7420-002	Ground Water and MS/MSD
S15145	FTA-MW-12-092115	SI7420-004	Ground Water
S15145	FTA-MW-14-092115	SI7420-006	Ground Water
S15145	FTA-MW-10-092115	SI7420-008	Ground Water
S15145	FTA-MW-208-092115	SI7420-010	Ground Water
S15145	FTA-DP-35-092115	SI7420-012	Ground Water
S15145	FTA-MW-11-092115	SI7420-014	Ground Water
S15145	FTA-MW-14-092115-D	SI7420-016	Ground Water (Field Duplicate)
S15145	FTA-TB-092115	SI7420-1	Trip Blank

Notes:
ID – identification
SDG – sample delivery group

Quality control (QC) validation criteria were derived from the Tier I Sampling And Analysis Plan (SAP) Naval Computer and Telecommunications Area Master Station Atlantic Detachment Cutler, Maine, AECOM, Revision 0, June 2015; the *DoD Quality Systems Manual for Environmental Laboratories, Version 5.0* (July 2013); and USEPA publication: *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW846*, (Final Update III, December 1996), specifically SW-846 methods 6010C and 7470 for mercury and SW-846 Methods 5035A/8000B. Validation actions were derived primarily from *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (June 2008) and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010* and AECOM professional judgment were also considered.

REVIEW ELEMENTS

The data were evaluated based on the following parameters (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC)/sample integrity
- ✓ Holding times and sample preservation
- ✓ Instrument tuning
- ✓ Initial calibration/continuing calibration verification (specific to methods 8330A
- ✓ Laboratory blanks/trip blanks (VOCs)/equipment blanks
- ✓ Surrogate spike recoveries (specific to methods 8330A)
- ✓ ICP Interference Check Sample (ICSA/ICSAB) (specific to method 6010C)
- ✓ Matrix spike (MS/matrix spike duplicate (MSD) results
- ✓ Laboratory duplicate results (specific to method 6010C)
- ✓ Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- ✓ Serial Dilution (specific to method 6010C)
- ✓ Field duplicates
- ✓ Internal Standards
- ✓ Sample results/reporting issues

Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

Based on the scope of the validation, the data are valid as reported and may be used for decision making purposes. Selected data points were estimated and/or negated due to nonconformances of certain QC criteria (see discussion below). No data were rejected as a result of data validation.

ORGANICS RESULTS

1.0 VOLATILES

1.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

1.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 14-day holding time for the preserved samples. The QC acceptance criteria were met.

1.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

1.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

Trace results for the following samples were blank-qualified as estimated and non-detected (UJ) at the reported concentrations due to sample results less than ten-times the concentrations reported in the associated method blanks: no analytes were detected in trip blanks or method blanks.

1.5 Surrogate Spike Recoveries

Sample FTA-MW-5-091815, FTA-MW-1-091815, and FTA-MW-14-092115-D had high recoveries of the surrogate dibromofluoromethane (SW8260 SIM) which exceeded the acceptance limit of 130%. Since a high recovery which indicated a high bias and there were no target analytes detected above the MDL, no qualification is necessary.

FTA-MW-14-092115, FTA-MW-10-092115, FTA-MW-208-092115, FTA-MW-12-092115, and FTA-DP-35-092115 had high recoveries of the surrogates 1,2-dichloroethane-d4 and dibromofluoromethane (SW8260) which exceeded the acceptance limit of 130%. Since a high recovery which indicated a high bias and there were no target analytes detected above the MDL, no qualification is necessary.

1.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria. MS and MSD %Rs were not applicable for samples when native concentrations exceeded 4x the spiked amount. Organic MS/MSD %Rs must both be outside of QC limits in order for organic results to be qualified based on matrix. If organic matrix effect was not confirmed (either MS or MSD was compliant), data did not require qualification. MS/MSD %Rs

from non-project samples were considered, but were not utilized to qualify project samples since matrix similarity to project samples could not be guaranteed.

Sample FTA-MW-210-092115 had high MS/MSD recoveries in isopropylbenzene; however, the LCS was acceptable. No qualification is necessary.

1.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met except for tetrachloroethene in samples FTA-MW-11-092115 and FTA-MW-14-092115-D. Samples were flagged J.

1.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

1.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

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SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-14-092115 (S17420-6)	FTA-MW-14-092115-D (S17420-16)	Qualifier	RPD Limit
WE31-3	8260	UG_L	Acetone	5	—	ND	2.3	UJ/J	35
WE31-3	8260	UG_L	Toluene	1	—	0.3	ND	UJ/J	35
SDG	**Method**	**Unit**	**Analyte**	**LOQ**	**RPD**	**FTA-MW-206-091815 (S17375-8)**	**FTA-MW-206-091815-D (S17375-10)**	**Qualifier**	**RPD Limit**
WE31-3	8260	UG_L	Cis-1,2-Dichloroethene	1	9.5	22	20	none	35
WE31-3	8260	UG_L	Trichloroethene	1	15	11	9.4	None	35
WE31-3	8260_SIM	UG_L	Vinyl chloride	0.1	—	0.056	ND	J/UJ	35

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2.0 MA VPH

2.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

2.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 28-day holding time for the preserved samples. The QC acceptance criteria were met.

2.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

2.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation

was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

2.5 Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

2.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria.

2.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

2.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for soil matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

2.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

ORGANICS RESULTS

3.0 SEMIVOLATILES

3.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

3.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 40-day holding time for the preserved samples. The QC acceptance criteria were met.

3.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

3.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and

above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

3.5 Surrogate Spike Recoveries

Samples FTA-MW-1-091815, FTA-MW-218-091815 had recoveries for two or more surrogates that were outside the acceptance criteria. The samples were re-extracted within hold time, analyzed, and had similar surrogate deviations. The first set of data was used.

3.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria except for 2-METHYLPHENOL and CAPROLACTAM (method SW8270) and 1,1'-BIPHENYL, 2-CHLOROPHENOL, 3,3'-DICHLOROBENZIDINE, BIS(2-ETHYLHEXYL) PHTHALATE, CRESOLS, M & P, DIBENZO(A,H)ANTHRACENE, INDENO(1,2,3-CD)PYRENE, and N-NITROSO-DI-N-PROPYLAMINE in sample FTA-MW-210-092115. These analytes were qualified J.

3.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met except for 2-methylphenol and caprolactam (method SW8270) in samples FTA-DP-35-092115, FTA-MW-10-092115, FTA-MW-1-091815, FTA-MW-12-092115, FTA-MW-14-092115, FTA-MW-14-092115-D, FTA-MW-206-091815, FTA-MW-206-091815-D, and FTA-MW-218-091815. All QC acceptance criteria were met except for 1,1'-biphenyl (method SW8270_SIM) in samples FTA-DP-35-092115, FTA-MW-10-092115, FTA-MW-1-091815, FTA-MW-12-092115, FTA-MW-14-092115, FTA-MW-14-092115-D, FTA-MW-206-091815, FTA-MW-206-091815-D, FTA-MW-218-091815, FTA-MW-5-091815, and FTA-MW-9-091515. Samples were flagged J.

3.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were

not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

3.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

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SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-206-091815 (S17375-8)	FTA-MW-206-091815-D (S17375-10)	Qualifier	RPD Limit
WE31-3	8270_SIM	UG_L	2-methylnaphthalene	0.19	—	ND	0.098	UJ/J	35
WE31-3	8270_SIM	UG_L	Hexachlorocyclopentadiene	0.19	—	0.089	ND	J/UJ	35

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4.0 MA EPH

4.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

4.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 40-day holding time for the preserved samples. The QC acceptance criteria were met.

4.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

4.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation

was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

4.5 Surrogate Spike Recoveries

Sample FTA-MW-14-092115, FTA-MW-14-092115-D, and FTA-DP-35-092115 had low recoveries for the extraction surrogate 5-alpha androstane. The samples were re-extracted within hold time with similar deviations confirming a matrix effect. The first set of data was used.

4.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria.

4.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

4.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

4.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance

with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

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5.0 POLYCHLORINATED BIPHENYLS

5.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

5.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria. All the samples were analyzed within the 40-day holding time for the preserved samples. The QC acceptance criteria were met.

5.3 Initial Calibration/Continuing Calibration Verification

Calibration data were reviewed for conformance with the QC acceptance criteria to ensure that:

- the initial calibration (ICAL) percent relative standard deviation (%RSD), correlation coefficient (r)/coefficient of determination (r^2), and/or response factor method acceptance criteria were met;
- the appropriate number of standards were included in the ICAL;
- the initial calibration verification (ICV) percent recovery (%R) criteria were met;
- the continuing calibration verification standard (CCV) method percent difference or percent drift (%Ds) and RF acceptance criteria were met;
- ICAL, ICV and CCVs were analyzed at the appropriate concentration and frequency; and
- The retention time method acceptance criteria were met.

The QC acceptance criteria were met.

5.4 Laboratory Blanks/Equipment Blanks/Trip Blanks

Laboratory method blanks were analyzed at the appropriate frequency of 1 per 20 samples and at least 1 per preparatory batch. Laboratory method blanks, equipment rinsate and trip blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). For common laboratory contaminants (acetone, 2-butanone and methylene chloride) evaluation

was based on analytes detected above the RL, consistent with the Quality control (QC) validation criteria specified in the project SAP.

Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method, equipment rinsate, and trip blank results were reviewed for conformance with the QC acceptance criteria. Target analytes detected in blanks are not discussed in this data validation report if the associated results were non-detect or if qualification of sample results was not required.

5.5 Surrogate Spike Recoveries

The surrogate recoveries (%Rs) were reviewed for conformance with the QC acceptance criteria.

5.6 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within laboratory control sample acceptance criteria.

5.7 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

5.8 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for ground water matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted. Field duplicate and native sample concentrations that were both undetected are not reflected as follows since RPDs are not applicable.

5.9 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

INORGANIC RESULTS

6.0 METALS (6010C)

6.1 Data Completeness

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

6.2 Holding Times/Sample Preservation

Sample preservation and preparation/analysis holding times were reviewed for conformance with the QC acceptance criteria. The samples were received at the laboratory within the $\leq$6°C temperature criteria, preserved with HNO3 to pH <2. All the samples were analyzed within the 180-day holding time (28 days for Hg) for the preserved samples. The QC acceptance criteria were met.

6.3 ICP Performance Checks

The data were reviewed to ensure that the Inductively Coupled Plasma (ICP) tune was performed at the correct frequency and that the method acceptance criteria were met. The Percent Relative Standard Deviation (%RSD) of the absolute signal for all 6010C analytes in the tuning solution were < 5%. The QC acceptance criteria were met.

6.4 Laboratory Blanks/Equipment Blanks

Laboratory method blanks and equipment rinsate blanks were evaluated as to whether there were contaminants detected above 1/2 the reporting limit (RL) and above 1/10 the amount measured in any sample or 1/10 the regulatory limit (whichever is greater). Data validation qualifications for individual samples are based on the maximum contaminant concentration detected in all associated blanks.

Method and equipment rinsate results were reviewed for conformance with the QC acceptance criteria. Detected results in blanks are not discussed in this data validation report if the associated results were or if qualification of sample results was not required.

6.5 Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

The MS/MSD %Rs and relative percent differences (RPDs) were reviewed for conformance with the QC acceptance criteria. Project specific MS/MSD %Rs for target analytes were within SAP specified

QC limits of 80-120% for metal analytes, or MS/MSD data met the following requirements, except calcium (FTA-MW-210-ground water092115); flagged J+.

6.6 Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs)

The LCS/LCSD %Rs and/or RPDs were reviewed for conformance with the QC acceptance criteria. An LCS was included in each analytical batch. Recoveries were within QC acceptance criteria specified by DoD QSM v 5.0. All QC acceptance criteria were met. Data qualification was not required.

6.7 Field Duplicate Results

Field duplicate RPDs were reviewed for conformance with a QC acceptance criterion of $\leq$35% for groundwater matrices. Field duplicate RPDs were within data validation QC limits, or RPDs were not applicable due to results that were within $\pm$ the reporting limit or were undetected in both samples, except as noted.

6.8 Sample Results/Reporting Issues

Non-detect results were reported at the LOD. All compounds detected at concentrations less than the LOQ but greater than the DL were qualified by the laboratory as estimated (J). This J qualifier was retained during data validation.

Any sample that was analyzed at a dilution due to high concentrations of target or non-targets was checked to ensure that the results and/or sample specific LOQs were adjusted accordingly by the laboratory. Reported detection limits are achievable by the quoted methods, and are in compliance with the project requirements. Some samples required dilution due to high concentrations of target analytes or interference. The reporting limits for diluted results were raised appropriately.

The post-digestion spiked sample recovery of lead in sample FTA-MW-210-092115 was not within control limits. The sample was flagged J+.

SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-14-092115 (S17420-6)	FTA-MW-14-092115-D (S17420-16)	Qualifier	RPD Limit
WE31-3	6010C	UG/L	Calcium, total	100	1.1	8810	8710	none	35
WE31-3	6010C	UG/L	Copper, total	3	111	6	1.7	J	35
WE31-3	6010C	UG/L	Iron, total	100	0.8	1230	1240	none	35
WE31-3	6010C	UG/L	Magnesium, total	100	0.3	2910	2900	none	35
WE31-3	6010C	UG/L	Manganese, total	5	2.3	86.5	88.5	none	35
WE31-3	6010C	UG/L	Potassium, total	1000	7.0	1050	979	none	35
WE31-3	6010C	UG/L	Sodium, total	100	4.1	7420	7120	none	35
WE31-3	6010C	UG/L	Calcium, dissolved	100	0.1	8910	8900	none	35
WE31-3	6010C	UG/L	Iron, dissolved	100	2.0	1490	1460	none	35
WE31-3	6010C	UG/L	Magnesium, dissolved	100	0.67	2980	2960	none	35
WE31-3	6010C	UG/L	Manganese, dissolved	5	5.4	81.0	85.5	none	35
WE31-3	6010C	UG/L	Nickel, dissolved	2	59	2.02	1.1	J	35
WE31-3	6010C	UG/L	Potassium, dissolved	1000	9.0	960	1050	none	35
WE31-3	6010C	UG/L	Sodium, total	100	1.3	7550	7450	none	35
SDG	**Method**	**Unit**	**Analyte**	**LOQ**	**RPD**	**FTA-MW-206-091815 (S17375-8)**	**FTA-MW-206-091815-D (S17375-10)**	**Qualifier**	**RPD Limit**
WE31-3	6010C	UG/L	Aluminum, total	300	—	ND	37	J/UJ	35
WE31-3	6010C	UG/L	Barium, total	5	40	9.35	6.24	J	35
WE31-3	6010C	UG/L	Calcium, total	100	3.3	44400	45900	none	35
WE31-3	6010C	UG/L	Magnesium, total	100	3.2	8640	8920	none	35
WE31-3	6010C	UG/L	Manganese, total	5	4.4	176	184	none	35
WE31-3	6010C	UG/L	Potassium, total	1000	5.2	1680	1770	none	35
WE31-3	6010C	UG/L	Sodium, total	100	2.8	8660	8910	none	35
WE31-3	6010C	UG/L	Barium, dissolved	5	4.0	6.32	6.58	none	35

SDG	Method	Unit	Analyte	LOQ	RPD	FTA-MW-206-091815 (S17375-8)	FTA-MW-206-091815-D (S17375-10)	Qualifier	RPD Limit
WE31-3	6010C	UG/L	CALCIUM, DISSOLVED	100	3.5	46800	45200	none	35
WE31-3	6010C	UG/L	IRON, DISSOLVED	100	—	ND	6.4	UJ/J	35
WE31-3	6010C	UG/L	MAGNESIUM, DISSOLVED	100	2.0	9130	8950	none	35
WE31-3	6010C	UG/L	MANGANESE, DISSOLVED	5	1.6	185	188	none	35
WE31-3	6010C	UG/L	POTASSIUM, DISSOLVED	1000	0.54	1860	1850	none	35
WE31-3	6010C	UG/L	SODIUM, TOTAL	100	3.1	9160	8880	none	35
WE31-3	6010C	UG/L	VANADIUM, TOTAL	5	—	0.95	ND	J/UJ	35

7.0 PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT

7.1 Precision

Precision is the measure of variability between individual sample measurements. Field precision was determined by comparison of field duplicate sample results (where applicable). Laboratory precision was determined by examination of laboratory duplicate results. MS/MSD pairs measure both field and laboratory precision. Evaluation of duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. RPD limits referenced SAP published QC limits. Data that required qualification based calculated field duplicate RPDs, are discussed in **Section 1.0**. Overall field and laboratory precision is acceptable since majority of the data is unqualified and no data is rejected based on these measurements.

7.2 Accuracy

Field accuracy, a measure of the sampling bias, was determined by reviewing field blank and trip blank results for evidence of sample contamination stemming from sampling activities and/or sample transport/bottle contamination. Laboratory accuracy is a measure of the system bias, and was measured by evaluating laboratory control sample/laboratory control sample duplicate (LCS/LCSD), matrix spike/matrix spike duplicate (MS/MSD), and organic system monitoring compounds (surrogate) percent recoveries (%Rs). LCS/LCSD %Rs, which demonstrated the overall performance of the analytical procedure, were compared to published or recommended SAP QC limits. MS/MSD %Rs, which provided information on sample matrix interferences were compared to SAP published QC limits or laboratory control charted limits. System monitoring compound or surrogate recoveries, which measured system performance and efficiency during organic analysis, were compared to SAP published QC limits. Data that required qualification based on surrogate, matrix spike, or other outliers are discussed in **Section 1.0**. Overall field and laboratory accuracy is acceptable since majority of the data is unqualified and no data is rejected based on these measurements.

7.3 Compliance

For this sample set, method compliance was determined by evaluating sample integrity, preservation, holding time, laboratory blanks and calibration against method specified requirements, while applying EPA data validation guidelines. No data require qualification based on method compliance measurements and overall method compliance is acceptable based on the data reported.

7.4 Completeness

Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Completeness goals are set at 90-100%. Determination of completeness included a review of chain of custody records, laboratory analytical methods and detection limits,

laboratory case narratives and project requirements. Completeness also included 100% review of the laboratory sample data results and electronic data deliverables (EDDs).

All reported data was usable with qualification and the completeness of the data set was calculated to be within the set goal of 90% -100% and determined to be acceptable.

Qualifier Codes and Explanations

Qualifier	Explanation
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

APPENDIX G

HEXAVALENT CHROMIUM WHITE PAPER

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TABLE OF CONTENTS

FIGURES

TABLES

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WHITE PAPER: EVALUATION OF CHROMIUM IN SOIL AND SEDIMENT AT NCTAMS LANT DET CUTLER

The following is a discussion regarding the presence or absence of hexavalent chromium in surface soil and sediment at the Fire Training Area (FTA) and soil at the Salvage Yard Area (SYA) at the Naval Computer and Telecommunications Area Master Station Atlantic Detachment (NCTAMS LANT Det) Cutler (Cutler) facility in Maine.

In November 2016, the following samples were collected at the installation and analyzed for trivalent chromium and hexavalent chromium. Trivalent chromium (Cr^{3+}) calculations were also provided and the analytical data is provided in Attachment A.

- FTA - 10 soil samples, 1 sediment sample
- SYA - 10 soil samples
- Very Low Frequency (VLF) Peninsula - 10 soil samples

While hexavalent chromium was not detected in any of soil samples from the FTA or SYA, the limits of detection (LOD) were elevated due to matrix interference, and the analytical data could not be used to eliminate hexavalent chromium as a chemical of potential concern.

Because the analytical results are inconclusive in determining whether chromium is present in its hexavalent state above the risk-based screen level (RSL) of 0.3 milligrams per kilogram (mg/kg), multiple lines of reasoning are used to support the weight-of-evidence conclusion that hexavalent chromium is not an anthropogenic site-related contaminant at the FTA or SYA:

- Site History
- Background Concentrations of Metals in Soils
- Soil Characteristics
- Analytical Method
  - Matrix Interference
  - Moisture Content
- Quality Control Samples

The discussion also includes data from the VLF Peninsula where hexavalent chromium was detected at concentrations above the LOD and exceeded the RSL.

This white paper evaluates the site background, site conditions, and analytical processes to determine if conditions exist for chromium to be present in the hexavalent state.

1.0 SITE HISTORY

There are no reported uses of chromium at the FTA and SYA either in a manufacturing process or primary waste storage or disposal. The FTA is an abandoned gravel pit that was historically used for fire-training exercises by NCTAMS LANT Det Cutler personnel from the 1960s through the 1980s. FTA includes the Drum Disposal Area (DDA). A total of 76 drums were removed from the DDA site and residual PCB contamination was identified. Additionally, there are no known sources from usage of chromium containing materials. The SYA was used as a temporary repository and storage area for materials awaiting offsite transport. Wastes gathered at the SYA included lube oils, electronic equipment, batteries, asbestos, paint cans, and drums of waste lube oil and other petroleum products. Several removal actions were performed between 1999 and 2003 and included the removal of buried debris including: remnants of an offsite trailer, rusty metal scrap, PCB contaminated and petroleum contaminated soil and sand blast grit.

2.0 BACKGROUND CONCENTRATIONS OF METALS IN SOIL

Chromium exists in two common oxidation states: trivalent chromium (chromium-3, Cr[III], or Cr^{3+}) and hexavalent chromium (chromium-6, Cr[VI], or Cr^{6+}). Cr^{3+} compounds are hardly soluble in water, while most Cr^{6+}compounds are readily soluble in water (USEPA, 1995). Cr^{3+} is the dominant form occurring in the soil in the State of Maine, and is therefore expected to be present at these sites. Cr^{6+} can also be naturally occurring in soil; however, as described below, chromium in this state is unstable given the geologic conditions and is not expected to exist at concentrations that exceed the RSL.

Table 1 summarizes the 2016 total chromium results for the FTA, SYA and VLF Peninsula along with two sources of background data: 1) for the State of Maine, and 2) for the NCTAMS LANT Det Cutler facility. The background study for Cutler includes two soil Groups: Group "A" where 12 soil samples were collected from an area of approximately 14,300 acres, and Group "C" where 10 soil samples were collected from an area of approximately 4,600 acres. Group "A" covers the adjacent peninsula, located east of the NCTAMS LANT Det Installation and includes the Towns of Little Machias and Cutler, and extends west to the border of the Cutler Coast Public Reserved Land. The Group "C" area encompasses the FTA and SYA sites along its southern extent north to include the High Frequency Area. No background soil samples were collected on the property of the VLF Peninsula, but the background report says that VLF Peninsula soil is likely a mixture of Group "A" and Group "C" soil types.

Table 1: Total Chromium in Site and Background Soil

Study	Reference	Minimum (mg/kg)	Maximum (mg/kg)	Mean (mg/kg)
FTA 2016 Soil Sampling	[a]	19.5	32.9	24.7
FTA 2016 Sediment Sampling	[a]	17.2	17.2	—

Table 1: Total Chromium in Site and Background Soil				
Study	**Reference**	**Minimum (mg/kg)**	**Maximum (mg/kg)**	**Mean (mg/kg)**
SYA 2016 Soil Sampling	[a]	7.1	45	27.2
VLF 2016 Soil Sampling	[a]	22	172	66.8
Background Maine	[b]	7	98	51
Background Site, Group "A"	[c]	—	32	16.3
Background Site, Group "C"	[c]	—	49.2	26.9
Background Site, Groups "A and C"	[c]	—	49.2	21.6

Notes:

— = not applicable/no data

a Resolution Consultant sampling in November 2016.

b Summary Report for Evaluation of Concentrations of Polycyclic Aromatic Hydrocarbons (PAHs) and Metals in Background soils in Maine, November 2012.

c Installation Restoration Sites at NCTAMSLANT Det Cutler, Maine, March 2005.

As shown above, the levels of total chromium detected in surface soil samples from the two sites are consistent with the levels expected in Maine and, more specifically, from samples collect on the installation. **Figures 1** and **2** present the total chromium result from the 2016 sampling for the FTA and the SYA sites, respectively. Additionally, the pattern of chromium detections appears to be random across each of these sites with no distinct areas with higher chromium levels that would indicate a release location.

3.0 SOIL CHARACTERISTICS

The soil characteristics at the sites play an important role in the fate and transport of chromium. The overburden materials encountered at the FTA consist generally of medium to coarse sand with lesser amounts of gravel and silt overlying a confining layer of silty clay. A peat layer is exposed at the surface in the northern portion of the site. The surface geology at the SYA is similar with what appears to be a sand/gravel deposit location in the central portion of the site.

The predominant soil type underlying both the FTA and SYA sites is the *Pits, sand and gravel* (U.S. Department of Agriculture Soil Conservation Service, 2016). This soil consists of sediments deposited mainly as glaciofluvial sands and gravels with some glacial till. Soil pH measured for the FTA site indicates that the *Pits* is an acidic soil. The pH measurements from 19 surface soils collected at the FTA range from 4.5 to 7.1 with the most frequent pH value being 5.4. Both sites are bordered to the north by the *Bucksport and Wonsqueak mucks* (peat layers) and to the south by the *Colton gravelly sandy loam*. The *Bucksport and Wonsqueak* consists of swamp deposits with highly decomposed organic material which are strongly acid with pH ranging from 3.6 to 5.5. The *Colton gravelly sandy loam* has a soil pH ranging from 3.6 to 6.0 (U.S. Department of Agriculture Soil Conservation Services, 2016).

The acidic soil conditions present at the FTA and SYA sites are not conducive to the presence of chromium in its hexavalent state. Hexavalent chromium is a strong oxidant and is reduced in the presence of electron donors. Electron donors commonly found in soils include ferrous iron minerals, reduced sulfur, and soil organic matter. Organic matter is present at both sites in the form of peat layers and organic silts and high iron levels have been measured in soil as is discussed in Part 4.1. The reduction reaction from Cr^{6+} to Cr^{3+} is very fast on the time scale for most environmental concerns, with a complete reaction in less than 5 minutes even in the presence of dissolved oxygen in the soil moisture (Eary and Rai, 1988). This rapid reaction was observed during the preparation of quality control samples as part of the analysis for hexavalent chromium as discussed in Part 5.

4.0 ANALYTICAL METHOD

A discussion of the analytical methods used to prepare and analyze the soil and sediment samples is useful because of what can be learned about the soil conditions. Method 3060A is an alkaline extraction which raises the sample pH and fixes the concentrations and thereby the ratio of Cr^{3+}/Cr^{6+} and prevents conversion of valence state in either direction. Soil samples must be digested prior to analysis to solubilize the hexavalent chromium without oxidizing the existing trivalent chromium or reducing any hexavalent chromium present. Method 7196A uses an aliquot of the extraction and mixes it with the indicator chemical diphenylcarbazide in acid solution. A spectrophotometer (turned to a frequency of 540 nanometers) is then used to analyze the sample. As required by the method, quality control samples are used to evaluate the samples for matrix interferences. As discussed below there were significant matrix interferences for the FTA and SYA sites, which suggest that when Cr^{6+} was added to the samples to create the matrix spikes, the Cr^{6+} was converted to Cr^{3+} within minutes and before the laboratory could fix the sample through the extraction process.

4.1 Matrix Interference

Several metals can cause interference with Method 7196A which is the colorimetric method used to analyze the November 2016 soil samples for hexavalent chromium. Metals causing interference include: iron, vanadium, and mercury. The iron concentrations at the sites are high enough to cause the analytical interference (see **Table 2**).

Table 2: Metals at FTA, SYA, and VLF Peninsula

Site	Metal	Matrix	Concentration (a)		Notes
			Minimum (mg/kg)	Maximum (mg/kg)	
FTA	Total Chromium	Soil	17.2	32.9	—
	Iron	Soil	17,200	27,300	>1 mg/L may produce a yellow or rust color
	Vanadium	Soil	—	100	Does not exceed 10 times the level of chromium
	Mercury	Soil	—	0.30	Up to 200 mg/L is tolerated
SYA	Total Chromium	Soil	7.1	45	—
	Iron	Soil	10,800	37,700	>1 mg/L may produce a yellow or rust color
	Vanadium	Soil	22	55.9	Does not exceed 10 times the level of chromium
	Mercury	Soil	—	0.23	Up to 200 mg/L is tolerated
VLF	Total Chromium	Soil	22	172	—
	Iron	Sediment*	11,400	92,700	>1 mg/L may produce a yellow or rust color
	Vanadium	Sediment*	16.6	48.7	Does not exceed 10 times the level of chromium
	Mercury	Sediment*	0.02	0.16	Up to 200 mg/L is tolerated

Notes:
— = not applicable/no data
mg/L = milligrams per liter
mg/kg = milligrams per kilogram
* = freshwater sediments samples from 2004
(a) Range of concentrations as presented in the respective Remedial Investigation Reports.

The presence of iron at high concentrations in soil creates reducing conditions that prohibit the existence of chromium in its hexavalent oxidation state. All three sites: FTA, SYA, and VLF Peninsula have iron concentrations in soil above 10,000 mg/kg. This equates to a minimum of approximately 133 mg/L of iron in the liquid portion extracted from the soil samples. A concentration of 1 mg/L of iron is enough to produce a yellow to rust color after the addition of the indicator chemical diphenylcarbazide in acid solution. In accordance with the requirements of EPA Method 3060A, the color change observed by the laboratory necessitated the dilution of the prepared liquid natal by a factor of 20 times. The result was that the lowest LOD achievable for hexavalent chromium was between <0.29 and <0.33 mg/L, which is near the RSL of 0.3 mg/L. However, moisture content is also a factor in determining the LOD.

4.2 Moisture Content

The in-situ moisture content of individual soil and sediment samples affects the calculation of LOD for hexavalent chromium. The LODs reported by the laboratory are typically between 0.29 and 0.33 mg/kg for the hexavalent chromium for soil samples where the moisture is 12 percent or less. For moisture contents greater than 12 percent, the LOD generally increases in step with the increasing moisture content. As shown

in **Table 3** below, samples from the FTA and the SYA had high moisture content. This is particularly noticeable in the FTA sediment sample (88.7% moisture, 10 mg/kg LOD). Interestingly, that sample had one of the lowest total chromium concentrations (17.2 mg/kg).

Table 3: Soil Moisture and LOD

Samples from the FTA			Samples from the SYA			Samples from the VLF		
Moisture (%)	Cr^{6+} LOD (mg/kg)	Cr^{6+} Concentration (mg/kg)	Moisture (%)	Cr^{6+} LOD (mg/kg)	Cr^{6+} Concentration (mg/kg)	Moisture (%)	Cr^{6+} LOD (mg/kg)	Cr^{6+} Concentration (mg/kg)
9.8	0.32	ND	3.4	0.29	ND	12.4	0.47	ND
9.9	0.32	ND	8.3	0.63	ND	13.8	0.47	1.4
10.2	0.31	ND	13.9	0.69	ND	14.4	0.46	1.2
10.6	0.32	ND	15.5	0.72	ND	16.3	0.49	ND
10.9	0.32	ND	20.3	0.77	ND	17.6	0.72	1.2
12.2	0.33	ND	16.1	1.4	ND	25.3	0.84	0.45
14.4	0.69	ND	22.6	1.5	ND	28.2	0.39	2.2
16.8	0.72	ND	28.4	1.6	ND	32.7	1.7	ND
20.3	0.74	ND	55.0	2.8	ND	39.2	0.99	2.8
21.7	0.77	ND	24.8	3.3	ND	56.5	2.7	4.3
21.9	0.38	ND	25.6	3.3	ND	62.9	1.7	ND
24.9	1.6	ND						
88.7*	10*	ND						

Notes:
Shading indicates concentrations near the RSL of 0.3 mg/L.
* Asterisk indicates a sediment sample.
ND = not detected

5.0 QUALITY CONTROL SAMPLES

A matrix spike/matrix spike duplicate sample was analyzed for each group of soil samples for sites FTA, SYA, and VLF Peninsula. Analytical Method 7196A requires that pre-digestion soil samples be spiked with two forms of hexavalent chromium: insoluble (lead chromate) and a soluble (potassium dichromate). The samples then go through the same digestion process as described above (Method 3060A), see Part 4. A color indicator is added to the samples and then analyzed by a spectrophotometer. No hexavalent chromium was detected in the samples spiked with potassium dichromate for all three sites. This means that in the time between spiking the samples with the soluble form of Cr^{6+} and the pre-digestion of the soil sample spike, all of the Cr^{6+} was converted to Cr^{3+}. These tests were repeated using the samples spiked with lead chromate. The lead chromate spiked samples from the FTA and SYA reported recoveries of 33% and 0%, respectively, which is well below the acceptable limit of 75%.

The laboratory report states that "most of the pre-digested matrix spike recoveries are outside of the method acceptable limits, indicating the presence of a reducing condition in the samples that is inimical [antagonistic] to the presence of chromium in the hexavalent oxidation state." The exception was for the VLF Peninsula site where the in-soluble matrix spike was within the require limits which suggests that while in-situ soil conditions at the FTA and SYA are unfavorable to Cr^{6+}, the conditions are less hostile at the VLF Peninsula site. Despite the failure of the pre-digestion of the soil sample spikes at sites FTA and SYA, the sample results are considered to be valid because "the post-digestion matrix recoveries are within the method acceptance limits, indicating that the alkaline digestate are hospitable to the presence of hexavalent chromium." The successful Cr^{6+} matrix spike recovery measured in the post digestion samples strongly indicates that the in-situ acidic soil condition present at these sites was the cause of the poor pre-digestion spike recoveries.

6.0 SUMMARY

The site history of Cutler is fairly well understood and documented. The industrial activities that are known to have occurred do not include the use of chromium in any process or waste stream. This is confirmed by the concentrations and distribution of total chromium data in soil at FTA and SYA; no singular release point is indicated as shown on **Figures 1** and **2**. Total chromium concentrations values are similar to both site-specific and Maine background levels. At the VLF Peninsula, somewhat higher chromium concentrations in soil appear to be related to the stripped paint chips that accumulated on the ground surface around the towers. Prior to the 1980s, many paints of the reds, yellows, oranges and derivatives of these colors, such as some greens, had high lead-chromate content. In the 1980s, due to OSHA regulations, many of the colored paints, as listed above, were reformulated to exclude lead and chromate ingredients (PCRC website).

For the SYA, regardless of the matrix interference (from naturally occurring iron and normal moisture content of the soil), measured total chromium concentrations are within background; and whether the chromium is Cr^{3+} (most likely) or conservatively assumed to be Cr^{6+}, the conclusion remains unchanged, that a release of chromium has not occurred at this site.

The conservative assumption is unwarranted as shown by the laboratory QC procedure of creating and analyzing matrix spike samples using site soil and known quantities of soluble and insoluble Cr^{6+}. In these samples, Cr^{6+} was not detected because it converted to Cr^{3+} even before the extraction could be performed. Additionally, the low soil pH in samples from the *Pits, sand and gravel* further support that chromium will not be present in its hexavalent state.

For risk assessment purposes, the LOD for non-detected Cr^{6+} results are sometime conservatively compared to the human health RSL. For the reasons presented above, LODs in some samples (especially at the SYA) were elevated above the RSL. Thus, this type of comparison has limited value as it is purely speculative, and unsubstantiated by other site data that indicates any chromium present is in the much less toxic Cr^{3+} form.

The one sediment sample collected at the FTA had a particularly elevated LOD due to both matrix interference and high moisture content. As sediment is typically a reflection of the surrounding soil from which it originates, a similar conclusion drawn for soil applies to this medium: no release is indicated, the elevated LOD is an artifact of the sediment matrix and requirements of the analytical method, and any chromium will be present in the trivalent state.

7.0 REFERENCES

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FIGURES

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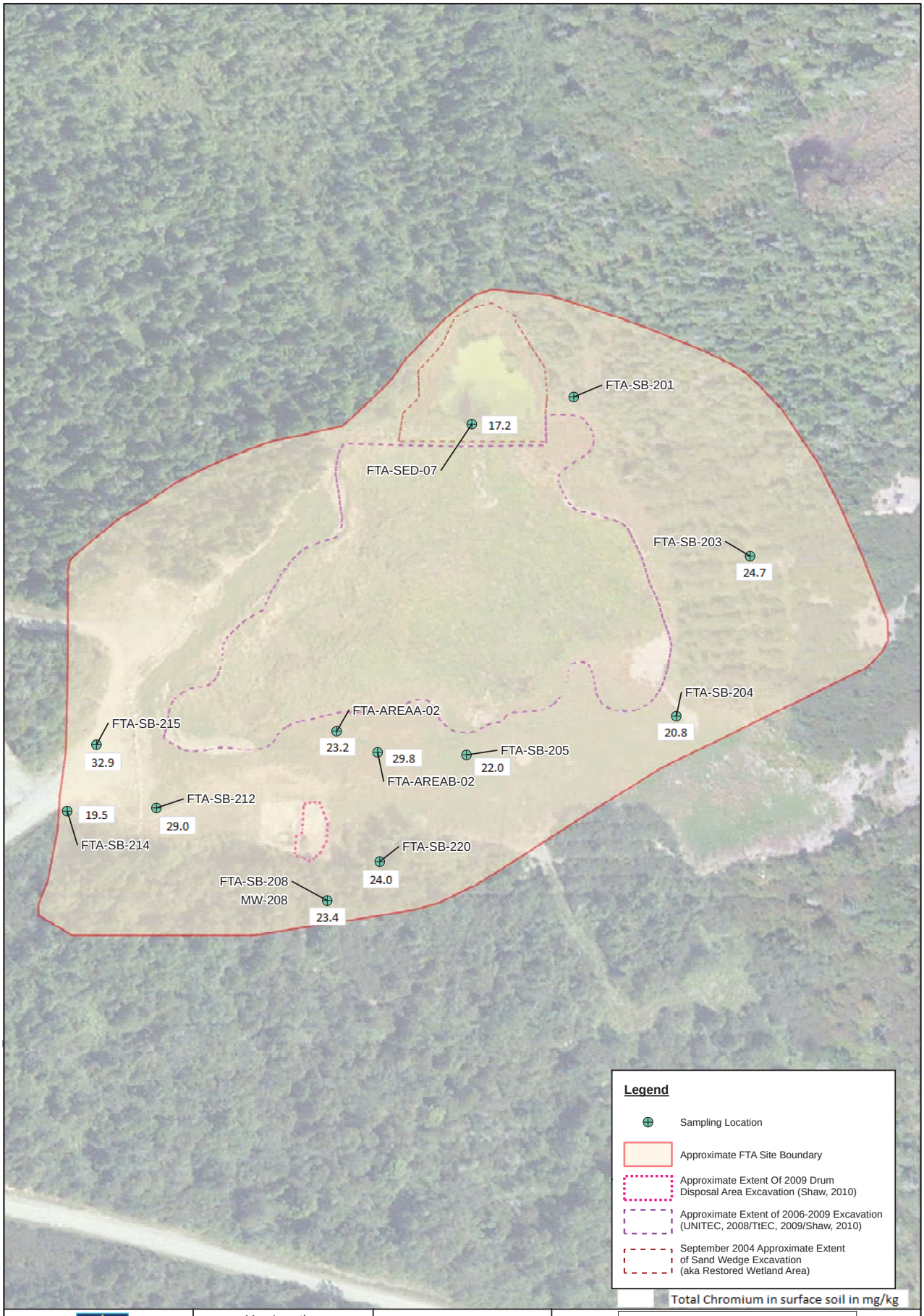

NAVFAC

Drawn:	AC	07/17/2017
Approved:	TC	07/17/2017
Project #:	60285299	

Map Location

N

0 50 100

Feet

FIGURE 1
Total Chromium in Surface Soil
Fire Training Area
NCTAMS LANT DET
Cutler, Maine

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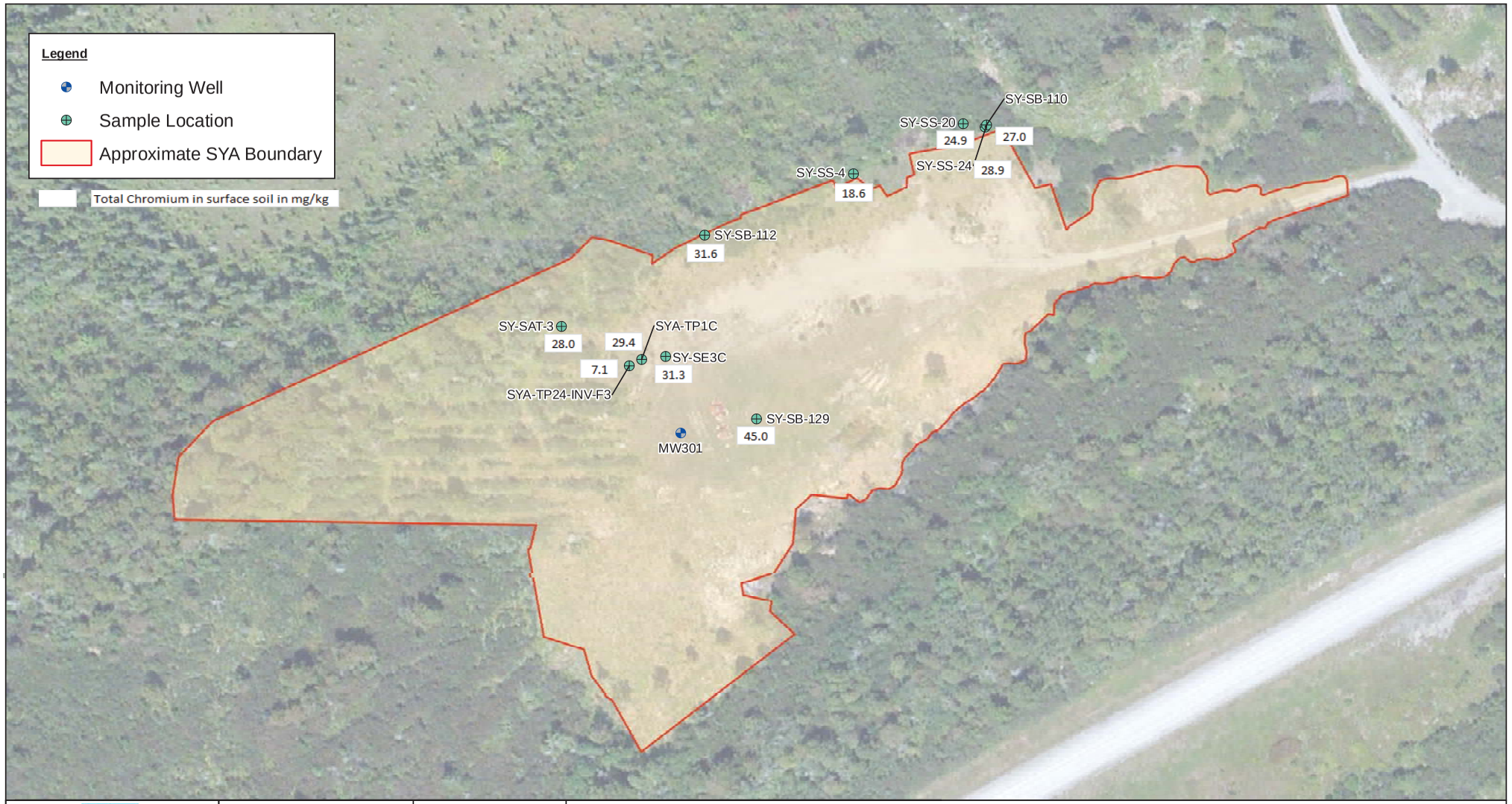

Drawn:	AC 0717/2017
Approved:	TC 07/1/2017
Project #:	60282029

Map Location

N

0 50 100 Feet

1 in = 100 ft

FIGURE 2
Total Chromium in Surface Soil
Salvage Yard Area
NCTAMS LANT DET
Cutler, Maine

L:\GIS\GIS_Data\60332662_Cutler\GIS\Projects\Arlington_Office_Figures\MXDs\SAP Data Gap Sampling 20161018\Figure_3_Data_Gap_Sampling_SYA.mxd

APPENDIX G

HEXAVALENT CHROMIUM WHITE PAPER

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