STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Red Shield Acquisition, LLC
Penobscot County
Old Town, Maine
A-180-70-A-I

Departmental
Findings of Fact and Order
Part 70 Air Emission License

After review of the Initial Part 70 License application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section §344 and Section §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Red Shield Acquisition, LLC (Red Shield)
LICENSE NUMBER	A-180-70-A-I
LICENSE TYPE	Initial Part 70 License
NAICS CODES	322110 Wood Pulp Mfg 221119 Electric Power Generation
NATURE OF BUSINESS	Pulp and Paper Manufacturing
FACILITY LOCATION	Old Town, Maine
DATE OF LICENSE ISSUANCE	December 2, 2009
LICENSE EXPIRATION DATE	December 2, 2014

B. Emission Equipment

The following emission units are addressed by this Part 70 License:

EMISSION UNIT ID	UNIT CAPACITY	UNIT TYPE
#5 Power Boiler	249 MMBtu/hr	Fuel Burning, #6 fuel oil (0.5% sulfur), natural gas, #2 fuel oil for start-up
Biomass Boiler	265.2 MMBtu/hr with 16MW condensing turbine	Fuel Burning, biomass, construction and demolition wood, and supplemental natural gas
Riley Power Boiler	245 MMBtu/hr	Fuel Burning, transportation grade diesel (0.05% sulfur)
Gas Turbine	9.5 MW (115 MMBtu/hr)	Fuel Burning, natural gas

Table continued:

EMISSION UNIT ID	UNIT CAPACITY	UNIT TYPE
Chip Handling Operations	N/A	Process Equipment
Digester System – Impregnation vessel, blow tank, and condensers chip steaming vessel	Supporting pulp production for 2.57 MMlb/day black liquor solids (BLS)	Process Equipment
Brownstock Washer Line	Supporting pulp production for 2.57 MMlb/day BLS	Process Equipment
Zaremba Multiple Effect Evaporator	Supporting pulp production for 2.57 MMlb/day BLS	Process Equipment
Unitech Multiple Effect Evaporator	Supporting pulp production for 2.57 MMlb/day BLS	Process Equipment
#4 Recovery Boiler	2.57 MM lb/day black liquor solids, 375 MMBtu/hr firing #6 fuel oil, #2 fuel oil and/or diesel fuel	Fuel Burning
#4 Smelt Dissolving Tank	Supporting pulp production for 2.57 MMlb/day BLS	Process Equipment
Recausticizer Slaker System	N/A	Process Equipment
Lime Kiln System	64 MMBtu/hr kiln burner	Process Equipment
Two Fresh Lime Silos	N/A	Process Equipment
Reburned Lime Silo	N/A	Process Equipment
Salt Cake Storage Silo	N/A	Process Equipment
Bleach Plant System	N/A	Process Equipment
Chlorine Dioxide Plant	N/A	Process Equipment
Pulp Kraft Dryer	N/A	Process Equipment
#6 Fuel Oil Tank	30,000 gallons	Process Equipment
Misc. Liquor Tanks	N/A	Process Equipment
Wastewater Treatment	N/A	Process Equipment
Back-up Diesel Engine – Total Services Sump Pump	1.3 MMBtu/hr	Fuel Burning, diesel 0.05% sulfur
Back-up Diesel Engine – Boiler Building Fire Water Pump	1.45 MMBtu/hr	Fuel Burning, diesel 0.05% sulfur
Back-up Generator for #4 Turbine	1.2 MMBtu/hr	Fuel Burning, diesel 0.05% sulfur

Table continued:

EMISSION UNIT ID	UNIT CAPACITY	UNIT TYPE
Back-up Diesel fire pump for Power House	1.33 MMBtu/hr	Fuel Burning, diesel 0.05% sulfur
Generator for Screw Press	4.2 MMBtu/hr	Fuel Burning, #2 fuel/diesel 0.3% sulfur
Back-up generator for Biomass Boiler/Condensing Turbine	3.52 MMBtu/hr	Fuel Burning, diesel, 0.05% sulfur

Production capacities within the Findings of Fact of this license are referenced for the purpose of description only. Capacities that are determined to be a license limit are listed as such within the Order of this license.

The facility was previously licensed to operate tissue machines, but the equipment was removed from the site and is not included in this license.

Red Shield has additional insignificant activities which do not need to be listed in the emission equipment table above. The list of insignificant activities can be found in the Part 70 license application and in *Part 70 Air Emission License Regulations,* 06-096 CMR 140, Appendix B (last amended December 24, 2005). Solvent cleaners which were previously licensed have been replaced by biodegradable cleaners.

C. Application Classification

The application for Red Shield does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be an Initial Part 70 License issued under 06-096 CMR 140. All previous license amendments are incorporated into the Part 70 license, as appropriate.

D. Units of Measurements Referenced in this License

K	degree Kelvin
g/s	grams per second
gr/dscf	grains per dry standard cubic feet
km	kilometers
lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
lb/ton	pounds per ton
lb/ton BLS	pounds per ton of black liquor solids

m	meters
m/s	meters per second
mg/dscm	milligrams per dry standard cubic meters
MMBtu/hr	million British Thermal Units per hour
MW	megawatt
ng/dscm	nanograms per dry standard cubic meter
ppm	parts per million
tons/day	tons per day
tpy	tons per year
ug/m^3	micrograms per cubic meter

II. EMISSION UNIT DESCRIPTION

A. Process Description

Red Shield operates a pulp mill in Old Town, Maine. The first industrial activity on the site was an 1860 sawmill. The first pulping activity began in 1882 with the installation of a digester to process waste wood from the lumber operation. The Penobscot Fiber Company then purchased the facility in 1935 and operated it until it was sold to Diamond Occidental in 1965. In 1983, the facility was sold to James River Corporation. In 1997, James River Corporation combined with Fort Howard Corporation to become Fort James Corporation. Georgia-Pacific Corporation subsequently purchased the Fort James Operating Company (which owned the Old Town mill in 2000). Red Shield Environmental, LLC purchased the facility from Georgia Pacific in the fall of 2006. In the fall of 2008, the facility was bought by Red Shield Acquisition, LLC.

Pulp production at the Old Town mill begins with wood chips entering the facility. The wood chips are stored outside and then conveyed to, and 'cooked' in an impregnation vessel followed by a digester. In the impregnation vessel, the wood chips are soaked with chemical. The partially cooked wood then goes to the digester. In the digester, white liquor (a chemical solution of sodium and sulfur compounds) is used to dissolve the lignin from around the wood fibers. The pulp from the digester is then washed in the brownstock washer system to remove residual spent cooking liquor.

Following the brownstock washer system, the pulp is bleached to a target brightness. It is then dried as bleached pulp.

From the brownstock washers, the spent cooking liquor (black liquor) is sent to the multiple effect evaporator systems. In the evaporator system, the water is evaporated and the solids in the liquor are brought to a higher concentration. The concentrated black liquor is then burned in the recovery boiler. The pulping chemicals remaining after combustion are collected in the bottom of the recovery

boiler as molten smelt. The smelt flows to a smelt dissolving tank where it is mixed with weak wash (from the washing and dewatering of lime mud) to form green liquor.

The green liquor then goes to the causticizing/lime kiln area and is processed back into white liquor. Calcium oxide and green liquor react in the slaker and causticizers resulting in white liquor to be used at the beginning of the pulping process and calcium carbonate, which is precipitated out as lime mud. The lime mud is washed, filtered, and sent to the lime kiln where the calcium carbonate is reclaimed through water evaporation, mud preheating, and lime calcination. The lime is recycled back into the causticizing process.

Red Shield has the potential to produce energy and process steam through the recovery boiler, #5 Power Boiler, the Biomass Boiler, the Riley Boiler, and the Gas Turbine.

The mill also operates support facilities including the wastewater treatment plant, sludge press, pulp operation labs, environmental labs, and shipping and receiving operations.

B. BACT Review

An air emission license permitting operation of the facility was issued in the 1970's and was renewed several times. The latest renewal was issued as Air Emission License #1872 on June 11, 1980. Subsequent amendments were issued, including minor revisions and modifications. A few of the amendments are described below.

The #5 Power Boiler was licensed for construction and operation on December 14, 1994 (Amendment #A-180-71-M-A). The #5 Power Boiler replaced boiler #2. The #5 Power Boiler went through a BACT analysis and an ambient air impact analysis during the licensing process.

The Riley Boiler was removed from the air license through a RACT requirement, and then was reactivated in Amendment #A-180-71-Z-A (Nov. 12, 1999). To bring the Riley Boiler back into service, a BACT review and ambient air quality analysis was required with the 1999 amendment.

Issued April 29, 2002, Amendment #A-180-71-AF-A allowed the construction and operation of the 9.5 MW gas turbine. Both a BACT analysis and ambient air quality analysis were required as part of the licensing process.

The Biomass Boiler, associated 16 MW condensing turbine generator, and back-up diesel generator were licensed in Amendment #A-180-71-AI-A on April 26,

2004. The licensing process included a BACT analysis and ambient air quality analysis. Subsequently, the facility was licensed to fire non-condensable gases (NCGs) in the Biomass Boiler through Amendment #A-180-71-AJ-A (May 6, 2005) which included an ambient air quality analysis.

C. 06-096 CMR 138 and 134, NO_X and VOC Reasonable Available Control Technology (RACT)

The facility was issued a NO_X RACT amendment on August 6, 1997 (Amendment #A-180-71-Q-A), pursuant to *Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides,* 06-096 CMR 138 since over 100 tons/year of NO_X was emitted. The amendment addressed NO_X RACT requirements for the Riley Boiler, #4 Recovery Boiler, the Lime Kiln, the tissue machines, emergency engines, and the #5 Power Boiler. The NO_X RACT findings are incorporated into this license.

The facility was issued a VOC RACT amendment on December 8, 1995 (Amendment #A-180-71-R-M), pursuant to *Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds,* 06-096 CMR 134 since over 50 tons/year of VOC was emitted. The sources subject to VOC RACT included the bleach plant/ClO_2 generation, the wastewater treatment plant, the pulp stock washer systems and pulp liquor storage tanks, and the digester system, multiple effect evaporator system, smelt dissolving tank, and lime kiln. The VOC RACT findings are incorporated into this license. The power boilers, Recovery Boiler, woodyard, paper making area, and the converting area were exempt from VOC RACT.

D. Best Available Retrofit Technology (BART)

Red Shield was issued a BART determination in license amendment A-180-77-1-A (November 29, 2007). No additional license requirements were issued to Red Shield. The requirements of BART, including those found in 40 CFR Part 51, MRSA §582, sub §5-C and 38 MRSA §603-A, sub §8, were determined to be met through existing license conditions.

E. Maximum Achievable Control Technology (MACT)

Red Shield is subject to various Environmental Protection Agency (EPA) MACT standards. These MACT standards are found in 40 CFR, Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAPs) and 40 CFR, Part 63, NESHAPs for Source Categories. Red Shield is currently subject to the following MACTs:

- 40 CFR Part 63, Subpart S, NESHAPs for the Pulp and Paper Industry;

- 40 CFR Part 63, Subpart MM, NESHAPs for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand–Alone Semichemical Pulp Mills, and
- 40 CFR Part 63, Subpart YYYY, NESHAPs for Stationary Combustion Turbines.

Red Shield had been subjected to 40 CFR Part 63, Subpart DDDDD, NESHAPs for Industrial/Commercial/Institutional Boilers and Process Heaters, but the rule has been vacated.

1. 40 CFR Part 63, Subpart S (Pulp and Paper MACT)

   Red Shield is subject to Subpart S due to the facility's kraft pulping processes and the use of wood as a raw material.

   a. LVHC System (Low Volume High Concentration)
      In accordance with 40 CFR Part 63, Subpart S, §63.443 Red Shield captures and controls Hazardous Air Pollutant (HAP) emissions from the LVHC system, which includes the digester and the evaporator systems. The gases are incinerated in the lime kiln, the #5 Power Boiler, or the Biomass Boiler. The LVHC system was required to be in place by April 16, 2001.

   b. HVLC System (High Volume Low Concentration)
      In accordance with 40 CFR Part 63, Subpart S, Red Shield shall control HAP emissions from the HVLC system which will include the chip bin (if flash steam is used), the brown stock washers, and some liquor storage tank vents. The compliance date for equipment listed in 40 CFR, Part 63, Subpart S, §63.443(a)(1)(ii)-(v), which includes pulp washing systems, oxygen delignification systems and certain knotter, screen, and decker systems was April 17, 2006. However, the facility requested a one year extension to the compliance deadline pursuant to 40 CFR Part 63, §63.6(j) which was granted by the Department through a letter dated May 21, 2003, allowing compliance with the HVLC requirements by April 17, 2007. Subsequently, an EPA Administrative Order was issued to Red Shield on May 25, 2007 requiring compliance with 40 CFR Part 63, Subpart S and 06-096 CMR 124 by May 25, 2008.

      Red Shield shall control the HVLC system by routing the HAP emissions to the lime kiln for incineration. The HVLC system consists of tight fitting hoods on the brownstock washers, including filtration tank vents; closed pressure knotters; an HVLC gas cooler, and additional ancillary equipment (fans, ductwork, rupture disc, flame arrestor, moisture separators, etc).

c. Condensate Collection System
Red Shield has elected to demonstrate compliance with the pulping condensate collection option listed in 40 CFR Part 63, Subpart S, §63.446(c)(3), which requires collection of pulping process condensates that contain a total HAP mass rate of 11.1 lb/ton of oven-dry pulp.

Red Shield is treating certain portions of the pulping condensates by discharging the pulping process condensate below the liquid surface of a biological treatment system (40 CFR Part 63, Subpart S, §63.446(e)(2)) to meet the requirements of removing 10.2 lb of HAPs per ton of oven-dry pulp.

d. Alternatives
Red Shield adopted Georgia-Pacific's proposed alternatives to the monitoring requirements of 40 CFR Part 63, Subpart S, as allowed per 40 CFR Part 63, Subpart S, §63.453(m): use of fan differential pressure in lieu of gas scrubber vent gas inlet flow rate in the bleach plant (approved by EPA on August 14, 2002); and inspections of the mill's bleach plant, foul condensate collection, LVHC collection and HVLC collection systems to occur on a frequency of at least once each calendar month separated by at least 15 days in lieu of the monitoring occurring every 30 days or at least every 30 days (approved by EPA on December 23, 2003).

2. 40 CFR Part 63, Subpart MM (Chemical Recovery Combustion Sources)

Red Shield is subject to Subpart MM due to the operation of a chemical recovery system located at the kraft mill. The chemical recovery system is defined as including existing recovery furnaces, smelt dissolving tanks, and lime kilns.

The units subject to Subpart MM must meet the limits for particulate matter, as a surrogate for HAP metals, listed in 40 CFR Part 63, Subpart MM, §63.862 or an alternative limit, as allowed by the bubbling procedures in 40 CFR Part 63, Subpart MM, §63.862(a)(1)(ii)(A). Georgia-Pacific submitted an allowed alternative to the standards, which has been carried through by Red Shield, as follows:

Source		Alternative Standard	Subpart MM Standard	Control Method
Rec. Furnace	gr/dscf @ 8% O_2	0.028	0.044	ESP
Lime Kiln	gr/dscf @10% O_2	0.13	0.064	Variable throat wet venturi scrubber
Smelt Tank	lb/ton BLS	0.12	0.2	Wet Scrubber
Overall PM	Lb/ton BLS	0.92	1.13	

Red Shield may revise the alternative limits above using the methods in §63.865(a)(1) and (2).

3. 40 CFR Part 63, Subpart YYYY (Stationary Combustion Turbines)

Per 40 CFR Part 63, Subpart YYYY, §63.6090(b)(4) of Subpart YYYY, 'existing stationary combustion turbines in all subcategories do not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary for any existing stationary combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification.' Therefore Red Shield does not have any additional MACT requirements for the gas turbine.

F. 06-096 CMR 124, *Total Reduced Sulfur Control from Kraft Pulp Mills*

06-096 CMR 124 requires control of TRS compounds from various pulping processes and condensate systems at the facility. In some instances, these control requirements overlap with the control requirements for HAPs per 40 CFR Part 63, Subpart S.

06-096 CMR 124 requires the use of the current LVHC system to control TRS from the digester system, evaporator systems, and certain miscellaneous sources. The LVHC system is controlled by the Lime Kiln and #5 Power Boiler.

06-096 CMR 124 requires the use of an HVLC system to control TRS from the brownstock washer systems, oxygen delignification systems, any tertiary digester flash tanks, and certain miscellaneous sources. The Department issued Georgia-Pacific an extension to the brownstock washer control deadline in 06-096 CMR 124 to correspond to the extension given to the HVLC control deadline for 40 CFR Part 63, Subpart S (see amendment A-180-71-AG-A, May 22, 2003) until April 17, 2007 which was transferred to Red Shield. An EPA Administrative Order was issued to Red Shield on May 25, 2007 to obtain compliance with 40 CFR Part 63, Subpart S and 06-096 CMR 124 by May 25, 2008. Red Shield shall meet the requirements of 06-096 CMR 124 though tight fitting hoods on the brownstock washers and the incineration of the HVLC system gases in the lime kiln.

G. #5 Power Boiler

The #5 Power Boiler is an industrial package boiler manufactured by ABB with a maximum design heat input of 249 MMBtu/hr firing #6 fuel oil with 0.5% sulfur. The boiler was installed in 1996 and is subject to the New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart Db. The boiler is used for producing

process steam at a full range of load levels. Emissions exit through a 180 foot stack.

Red Shield may fire natural gas in the boiler in the future. The #5 Power Boiler is licensed to fire NCGs (non-condensable gases) from the LVHC (low volume, high concentration) system as a back-up incineration unit to the lime kiln.

The licensing of the #5 Power Boiler established BACT limits (Amendment #A-180-71-M-A) and these limits are now considered BPT. There was no NO_X RACT analysis required for the #5 Power Boiler since BACT is more stringent than RACT. The NO_X limit originally placed on the #5 Power Boiler was 0.3 lb/MMBtu for the first six months and 0.25 lb/MMBtu thereafter. However, Georgia-Pacific submitted an application to revise the NO_X limit. Based on the operational data and a new BACT analysis, the BACT limit was modified to 0.28 lb/MMBtu.

Control Equipment
Control equipment for the #5 Power Boiler consists of low NO_X burners and flue gas recirculation.

Streamlining
1. Opacity
   a. *Visible Emissions Regulations,* 06-096 CMR 101, Section 2(B)(1)(a)(i) contains an applicable opacity standard (30% opacity, except for no more than two six minute averages in a 3 hour period).
   b. 40 CFR Part 60, Subpart Db, Section 60.43b and BACT contain an applicable opacity standard (20% opacity except for no more than one six minute average in a 1 hour period of not more than 27%).

   Red Shield accepts streamlining for the opacity standard for the #5 Power Boiler, therefore only the more stringent BACT/Subpart Db opacity is included in this license.

2. Particulate Matter (PM)

   a. *Fuel Burning Equipment Particulate Standard*, 06-096 CMR 103, Section 2(B)(1)(b) and BACT contain an applicable PM emission limit (0.08 lb/MMBtu).
   b. 40 CFR Part 60, Subpart Db, Section 60.43b contains an applicable PM emission limit (0.10 lb/MMBtu).
   c. BACT established the applicable PM lb/hr emission limit (19.92 lb/hr). No streamlining is required for the PM lb/hr limit.

Red Shield accepts streamlining for the PM lb/MMBtu emission limit for the #5 Power Boiler, therefore only the more stringent 06-096 CMR 103/BACT 0.08 lb/MMBtu PM limit is included in this license.

3. PM_{10}
   BACT established the applicable PM_{10} lb/hr emission limit (19.92 lb/hr). No streamlining is required for the PM_{10} lb/hr limit.

4. Sulfur Dioxide (SO_2)
   a. *Low Sulfur Fuel,* 06-096 CMR 106, Section 2(A)(2) contains an applicable fuel sulfur content standard (2%).
   b. 40 CFR Part 60, Subpart Db, Section 60.42b and BACT contain an applicable fuel sulfur content standard (0.5%).
   c. BACT established the applicable SO_2 lb/hr emission limit (126.99 lb/hr when not incinerating non-condensable gases, 205.39 lb/hr when incinerating both NCGs and oil). No streamlining is required for the SO_2 lb/hr limit.

   Red Shield accepts streamlining for the fuel sulfur content standard for the #5 Power Boiler, therefore only the more stringent BACT/Subpart Db sulfur content of 0.5% is included in this license.

5. Nitrogen Oxides (NO_X)
   a. 40 CFR Part 60, Subpart Db, Section 60.44b contains an applicable NO_X emission limit (0.30 lb/MMBtu).
   b. BACT established an applicable NO_X lb/MMBtu emission limit (0.28 lb/MMBtu).
   c. BACT established the applicable NO_X lb/hr emission limit (69.72 lb/hr). No streamlining is required for the NO_X lb/hr limit.

   Red Shield accepts streamlining for the NO_X lb/MMBtu emission limit for the #5 Power Boiler, therefore only the more stringent BACT 0.28 lb/MMBtu limit is included in this license.

6. Carbon Monoxide (CO)
   BACT established the applicable CO lb/hr emission limit (27.39 lb/hr). No streamlining is required for the CO lb/hr limit.

7. Volatile Organic Compounds (VOC)
   BACT established the applicable VOC lb/hr emission limit (12.45 lb/hr). No streamlining is required for the VOC lb/hr limit.

Periodic Monitoring
Periodic monitoring shall consist of recordkeeping which includes records of fuel use through purchase receipts or other records from the supplier indicating amounts (gallons and/or scfm) and percent sulfur by weight. Red Shield shall monitor the duration of firing NCGs in the #5 Power Boiler.

Red Shield submitted a revision to the particulate stack testing requirement since the #5 Power Boiler only operates when there is a major problem with the Recovery Boiler or the Biomass Boiler. The Department granted a stack testing revision in amendment A-180-71-AT-M (December 28, 2007) to take into account the reduction in operation, which was again revised in amendment A-180-71-AY-M (June 1, 2009) to account for 38 M.R.S.A. §589, sub-section 2. If the #5 Power Boiler operates 1000 hours or greater over a five calendar year period, then Red Shield shall be required to perform a particulate matter stack test within 60 days of the end of the five years.

CEM and COM
Continuous emission monitors shall be required for NO_X, and O_2, and a continuous opacity monitor shall be required for opacity. The CEMs and COM shall be operated in accordance with the instrument monitoring and recordkeeping requirements in *Source Surveillance,* 06-096 CMR 117 and 40 CFR Part 60 with some exceptions for performing NO_X CGAs and RATAs as described in the Order section of this license.

H. Biomass Boiler and Condensing Turbine

The Biomass Boiler is a 1986 Babcock & Wilcox biomass boiler, rated at 265.2 MMBtu/hr, and equipped with a condensing turbine capable of generating 16 Megawatts (MW) of electrical energy. The unit was installed at the Old Town facility in 2004/2005.

The Biomass Boiler is a spreader stoker that burns bark, wood chips, non-condensable gases (NCGs) from the LVHC (low volume, high concentration) system as a back-up incineration unit to the lime kiln, and wood extracted from construction and demolition debris. Red Shield shall be limited to no more than 50% by weight of construction and demolition debris on an annual basis. Construction and demolition wood debris for the purpose of this license shall meet the requirements of 06-096 CMR 418, including chipped wood demolition debris that has minimal amounts of painted or chemically treated wood (pentachlorophenol, arsenic, or creosote). If the wood was originally mixed with non-wood related demolition products (ie. roofing, metallic debris, masonry, gypsum board, etc), those non-wood related products are to be removed such that the amount remaining is determined to be insignificant. Most of the wood is purchased from off-site suppliers and transported to the Mill in a processed,

burnable form. A portion of the wood stream also includes wood waste rejected from the pulp screening operations at the Mill.

Red Shield shall operate all available ESP fields while firing construction and demolition wood waste fuel. If, during operation when firing construction and demolition wood waste, one or more ESP fields fail or is otherwise not operated, Red Shield shall discontinue firing construction and demolition wood waste within 4 hours of the field failure. Alternative operating scenarios may be proposed based on future stack test results.

In addition to firing biomass fuel, the boiler was licensed to fire up to 90 MMBtu/hr of natural gas. When only natural gas is being fired, the electrostatic precipitator is not required to be operated. The low NO_X natural gas burners are used for start-up and supplemental firing (no more than approximately 25% of the time on an annual basis).

Bottom ash and ESP ash is collected and sent off-site for disposal.

The licensing of the Biomass Boiler at the Old Town facility established BACT limits (Amendments #A-180-71-AI-A, April 26, 2004, A-180-71-AJ-A, May 6, 2005, and A-180-71-AL-M, September 16, 2005) and these limits are now considered BPT. The Biomass Boiler was also addressed in A-180-71-AP-A (November 2, 2006), A-180-71-AQ-M (February 13, 2007), A-180-71-AR-M (March 29, 2007), A-180-71-AS-M (July 24, 2007), A-180-71-AX-A (January 13, 2009), and A-180-71-BA-A (September 21, 2009) and the appropriate requirements are included in this license.

Control Equipment

The Biomass Boiler has an upgraded overfire air system and a flue gas recirculation (FGR) system. The Biomass Boiler's exhaust is controlled with a multistage cyclone separator system, followed by an electrostatic precipitator (ESP).

Streamlining

1. Opacity
   a. 06-096 CMR 101, Section 2(B)(1)(a)(i) contains an applicable opacity standard (30% opacity, except for no more than two six minute averages in a 3 hr period).
   b. 40 CFR Part 60, Subpart Db, Section 60.43b and BACT contain an applicable opacity standard (20% opacity except for no more than one six minute average in a 1 hr period of not more than 27%).

Red Shield accepts streamlining for the opacity standard for the Biomass Boiler, therefore only the more stringent BACT/Part 60 Subpart Db opacity requirement is included in this license.

2. Particulate Matter (PM)
   a. 06-096 CMR 103, Section 2(B)(1)(c) contains an applicable PM limit (0.06 lb/MMBtu).
   b. 40 CFR Part 60, Subpart Db, Section 60.43b contains an applicable PM emission limit (0.10 lb/MMBtu).
   c. BACT established an applicable PM lb/MMBtu emission limit (0.03 lb/MMBtu).
   d. BACT established the applicable PM lb/hr emission limit (8 lb/hr). No streamlining is required for the PM lb/hr limit.

   Red Shield accepts streamlining for the PM lb/MMBtu emission limit for the Biomass Boiler, therefore only the more stringent BACT 0.03 lb/MMBtu PM limit is included in this license.

3. PM under 10 microns (PM_{10})
   BACT established the applicable PM_{10} lb/hr emission limit (8 lb/hr). No streamlining is required for the PM_{10} lb/hr limit.

4. Sulfur Dioxide (SO_2)
   a. BACT established the applicable lb/hr for SO_2 when not incinerating non-condensable gases (6.6 lb/hr, based on the AP-42 factor of 0.025 lb/MMBtu).
   b. BACT established the applicable lb/hr for SO_2 when incinerating non-condensable gases (85 lb/hr).

   No streamlining is required for the SO_2 limits.

5. Nitrogen Oxides (NO_X)
   a. 40 CFR Part 60, Subpart Db, Section 60.44b contains an applicable NO_X emission limit (0.30 lb/MMBtu).
   b. BACT established an applicable NO_X lb/MMBtu emission limit (0.25 lb/MMBtu).
   c. BACT established the applicable NO_X lb/hr emission limit (66.3 lb/hr). No streamlining is required for the NO_X lb/hr limit.

   Red Shield accepts streamlining for the NO_X lb/MMBtu emission limit for the Biomass Boiler, therefore only the more stringent BACT 0.25 lb/MMBtu limit is included in this license.

6. Carbon Monoxide (CO)
   BACT established the applicable CO lb/hr emission limits (interim limits of 0.9 lb/MMBtu and 306 lb/hr, and final limits of 0.35 lb/MMBtu and 119.3 lb/hr by October 1, 2010). No streamlining is required for the CO limits.

7. Volatile Organic Compounds (VOC)
   BACT established the applicable VOC lb/hr emission limit (4.5 lb/hr based on the AP-42 factor of 0.017 lb/MMBtu). No streamlining is required for VOC.

8. Lead (Pb)
   BACT established the applicable Pb lb/hr emission limit (0.106 lb/hr). No streamlining is required for lead.

Periodic Monitoring
Red Shield shall stack test particulate matter emissions from the Biomass Boiler once every other calendar year starting with the initial test required by 40 CFR Part 60 Subpart Db. ESP secondary current and secondary voltages shall be recorded once per day.

If the Biomass Boiler is firing up to 50% CDW on an annual basis, Red Shield shall stack test two times per calendar year for two years spaced approximately six months apart. If the usage drops to 10% to 25% CDW on an annual basis, stack testing shall be once per year for two years. If the CDW drops below 10% on an annual basis, no additional stack testing is needed. The stack tests shall include results for the following: acrolein, antimony, arsenic, cadmium, total chromium, copper, lead, mercury, nickel, selenium, vanadium, hydrogen chloride, and dioxin. The results of the stack tests will be used by the Department to determine future testing requirements.

Steam flow rate shall be recorded continuously. Steam production is limited to 170,000 lb/hr on a 24 hour block average (calculated to be below the heat input rate of 265.2 MMBtu/hr). Fuel use records shall be maintained on a monthly and 12 month rolling total basis. Red Shield shall monitor the duration of firing NCGs in the Biomass Boiler.

CEM and COM
Continuous emission monitors shall be required for NO_X, CO, and O_2, and a continuous opacity monitor shall be required for opacity. The CEMs and COM shall be operated in accordance with the instrument monitoring and recordkeeping requirements in 06-096 CMR 117 and 40 CFR Part 60.

I. Riley Boiler

The Riley Boiler is a front wall-fired boiler, originally manufactured in 1945 and it exhausts through a 149 foot stack. The boiler was shut down in May 1999 in accordance with the licensing of Boiler #5 and NO_X RACT provisions. Prior to the shut down, the Riley Boiler fired #6 fuel oil.

The Riley Boiler was reactivated in November 1999 for the purpose of facility cold starts and backup steam production in support of mill operations. BACT for the reactivation of the boiler was determined to be the use of transportation-grade diesel fuel with a sulfur content not to exceed 0.05%. The Riley Boiler is also restricted to a maximum short-term heat input capacity of 245 MMBtu/hr and limited to a capacity factor of 10% (equivalent to approximately 1.6 million gallons per year).

The licensing of the Riley Boiler reactivation established BACT limits (Amendment #A-180-71-Z-A) and these limits are now considered BPT. There was no NO_X RACT analysis required for the reactivation of the Riley Boiler since BACT is more stringent.

Streamlining

1. Opacity
   06-096 CMR 101, Section 2(B)(1)(b) and BACT contain the applicable opacity standard (20% opacity, except for no more than two six minute averages in a 3 hr period). No streamlining is required for the opacity limit.

2. Particulate Matter (PM)
   a. 06-096 CMR 103, Section 2(B)(1)(b) contains an applicable PM emission limit (0.08 lb/MMBtu).
   b. BACT established an applicable PM lb/MMBtu emission limit (0.03 lb/MMBtu)
   c. BACT established the applicable PM lb/hr emission limit (7.35 lb/hr). No streamlining is required for the PM lb/hr limit.

   Red Shield accepts streamlining for the PM lb/MMBtu emission limit for the Riley Boiler, therefore only the more stringent BACT PM limit is included in this license.

3. PM_{10}
   BACT established the applicable PM_{10} lb/hr emission limit (7.35 lb/hr). No streamlining is required for the PM_{10} lb/hr limit.

4. Sulfur Dioxide (SO_2)
   a. 06-096 CMR 106, Section 2(A)(2) contains an applicable fuel sulfur content standard (2%).
   b. BACT established an applicable sulfur fuel content standard (0.05% diesel fuel).
   c. BACT established the applicable SO_2 lb/hr emission limit (12.89 lb/hr). No streamlining is required for the SO_2 lb/hr limit.

   Red Shield accepts streamlining for the fuel sulfur content standard for the Riley Boiler, therefore only the more stringent BACT sulfur content is included in this license.

5. Nitrogen Oxides (NO_X)
   BACT established the applicable NO_X lb/hr and lb/MMBtu emission limits (0.2 lb/MMBtu and 49.0 lb/hr). No streamlining is required for the NO_X lb/hr and lb/MMBtu limits.

6. Carbon Monoxide (CO)
   BACT established the applicable CO lb/hr emission limit (9.07 lb/hr). No streamlining is required for the CO lb/hr limit.

7. Volatile Organic Compounds (VOC)
   BACT established the applicable VOC lb/hr emission limit (0.46 lb/hr). No streamlining is required for the VOC lb/hr limit.

Periodic Monitoring
Periodic monitoring shall consist of recordkeeping which includes records of fuel use through purchase receipts or other records from the supplier indicating amounts (gallons) and percent sulfur by weight.

COM and CEM
The Riley Boiler is limited by a federally enforceable license condition to a 10% annual capacity factor, therefore a continuous emission monitor is not required for NO_X and a continuous opacity monitor is not required for opacity per 06-096 CMR 117.

J. Gas Turbine

The natural gas turbine is a reconditioned 9.5MW (115 MMBtu/hr input) Solar combustion turbine, installed to assist in providing electrical energy to the mill and was also installed to replace the firing of natural gas in the tissue machine dryer hoods by using some of the exhaust gas from the turbine in the dryer hoods. The turbine does not fire oil. The turbine stack is 80 feet.

The gas turbine began operation in December 2002, however a few months after the unit started up, the company discontinued some converting operations and decreased tissue manufacturing at the facility. No tissue manufacturing occurs now and the gas turbine has not been restarted up to this point. The facility was previously limited to exhausting 100% of the exhaust gas directly to the atmosphere (without venting through the Tissue Machines' dryer hoods) for no more than 2628 hours/year on a 12 month rolling total basis and on an annual basis, exhausting no more than 50% of the Gas Turbine exhaust directly to the atmosphere through the turbine stack. Without the tissue machines, Red Shield shall be limited to 2628 hours of operation.

The gas turbine is subject to the applicable requirements of 40 CFR Part 60, Subpart GG. The licensing of the gas turbine established BACT limits (A-180-71-AF-A) and these limits are now considered BPT. NO_X and VOC RACT analyses were not required for the new turbine since BACT is more stringent than RACT.

The gas turbine is subject to 40 CFR Part 63, Subpart YYYY (Stationary Combustion Turbines). For the purposes of Subpart YYYY, the unit is considered existing since the construction was commenced prior to January 14, 2003. There are no additional requirements existing turbines must meet for MACT.

Streamlining

1. Opacity
   a. 06-096 CMR 101, Section (2)(B)(1)(f) contains an applicable opacity standard for fuel burning units not specifically listed in the regulation. This would apply to the gas turbine (30%, except for two six minute block averages in a 3-hour period).
   b. BACT established an opacity limit for the gas turbine (10%, except for one six minute average in a 3-hour period).

   Red Shield accepts streamlining for the opacity limit for the gas turbine, therefore only the more stringent BACT opacity limit is included in this license.

2. Particulate Matter (PM)
   a. 06-096 CMR 103, Section (2)(B)(1) contains an applicable PM lb/MMBtu emission standard (0.08 lb/MMBtu). No streamlining is required for the PM lb/MMBtu limit.
   b. BACT established an applicable lb/hr emission limit (0.76 lb/hr). No streamlining is required for the PM lb/hr limit.

3. PM_{10}
   BACT established the applicable PM_{10} lb/hr emission limit for the gas turbine (0.76 lb/hr). No streamlining is required for the PM_{10} lb/hr limit.

4. Sulfur Dioxide (SO_2)
   a. 40 CFR Part 60, Sections 60.333(a) and (b) contain applicable standards and fuel sulfur content (SO_2 in excess of 0.015% by volume at 15%O_2 dry and fuel sulfur content of 0.8%).
   b. BACT established an applicable SO_2 lb/hr emission limit for the gas turbine (0.39 lb/hr). This BACT lb/hr limit correlates to a lower limit than that listed in (a), and is therefore more stringent.

   Red Shield accepts streamlining for the SO_2 emission limits for the gas turbine, therefore only the more stringent BACT 0.39 lb/hr limit is included in this license.

5. Nitrogen Oxides (NO_X)
   a. 40 CFR Part 60, Section 60.332(a)(1) contains applicable NO_X requirements based on an equation, which inputs the manufacturer's rated load and the fuel-bound nitrogen.
   b. BACT established an applicable NO_X ppm emission limit (32 ppm). The ppm limit correlates to a more stringent limit than that listed in (a).
   c. BACT established an applicable NO_X lb/hr emission limit (15.9 lb/hr). No streamlining is required for the NO_X lb/hr limit.

   Red Shield accepts streamlining for the NO_X concentration emission limits for the gas turbine, therefore only the more stringent BACT 32 ppm limit is included in this license.

6. Carbon Monoxide (CO)
   a. BACT established an applicable CO ppm emission limit (32 ppm). No streamlining is required for the CO ppm limit.
   b. BACT established an applicable CO lb/hr emission limit (9.71 lb/hr). No streamlining is required for the CO lb/hr limit.

7. Volatile Organic Compounds (VOC)
   BACT established an applicable VOC lb/hr emission limit (4.32 lb/hr). No streamlining is required for the VOC lb/hr limit.

Periodic Monitoring
Periodic monitoring shall consist of recordkeeping which includes records of hours of operation and fuel use through purchase receipts or other records from the supplier indicating amounts (scfm) and percent sulfur by weight.

K. Chip Handling Operations

The chip handling operations include various equipment from chip unloading to the digester chip bin. The operation consists of two chip truck dumps, conveyance systems, chip storage piles, screening and resizing operations, and chip silos. The particulate matter emissions from chip handling operations are controlled by five cyclones.

Streamlining
Opacity
06-096 CMR 101, Section 2(B)(3)(d) contains an applicable opacity standard for the cyclones (20% opacity, except for no more than one six minute average in a 1 hr period). No streamlining is required for the opacity limit.

Periodic Monitoring
Periodic monitoring shall consist of recordkeeping which includes a cyclone maintenance log documenting information on cyclone failures and routine maintenance.

L. Digester System

The digester system consists of a 1965 Kamyr continuous digester, a blow tank, a chip steaming vessel (excluding gases passing through the chip feeding system), an impregnation vessel (modified 1975 Kamyr continuous digester), and two condensers. Emissions from the digester system include total reduced sulfur (TRS), VOCs and HAPs.

The digester system is subject to 06-096 CMR 124. The digester gases at Red Shield are controlled by a low volume high concentration (LVHC) non-condensable gas (NCG) collection system and the lime kiln is the primary incineration unit. The #5 Boiler and the biomass boiler are the back-up incineration units.

The digester system is subject to 40 CFR Part 63, Subpart S, 63.443(a)(1)(i) since it is part of a kraft pulping process.

VOC RACT for the digester system is controlling emissions as required in 06-096 CMR 124.

Streamlining
1. TRS
   06-096 CMR 124 contains applicable TRS emission standards. No streamlining is required for the TRS emissions.

2. VOC
   06-096 CMR 134 contains applicable VOC RACT requirements for the digester system (meeting 06-096 CMR 124 requirements). No streamlining is required for VOC emissions.

3. HAPS
   40 CFR Part 63, Subpart S contains applicable HAP standards. No streamlining is required for HAP emissions.

M. Brownstock Washer System

The brownstock washers separate the pulp from the black liquor. The brownstock washer system, manufactured in 1965, includes washers/screens, pressurized knotters, pulp storage and filtrate tanks. Emissions from the brownstock washer system include total reduced sulfur (TRS), VOCs and HAPs.

Red Shield submitted a minor revision discontinuing the collection of TRS gases from the #2 diffusion washer into the existing NCG system due to operational issues and safety concerns. The diffusion washer is not currently required to be collected by MACT requirements or by 06-096 CMR 124 (testing showed emissions under 3 ppm of TRS).

Per 06-096 CMR 124 and 40 CFR Part 63, Subpart S, emissions from the brownstock washers will be controlled through the HVLC system, consisting of tight fitting hoods with collection and then incineration in the lime kiln.

VOC RACT for the brownstock washer system is controlling emissions as required through 06-096 CMR 124.

Streamlining

1. TRS
   06-096 CMR 124 contains applicable TRS emission standards. No streamlining is required for the TRS emissions.

2. VOC
   06-096 CMR 134 contains applicable VOC RACT requirements for the digester systems (meeting 06-096 CMR 124 requirements). No streamlining is required for VOC emissions.

3. HAPS
   40 CFR Part 63, Subpart S contains applicable HAP standards. No streamlining is required for HAP emissions.

N. Evaporators

Red Shield operates two evaporator systems, which convert weak black liquor from the digesters to strong black liquor which is fired in the Recovery Boiler. The Zaremba system is a falling film, five effect system which was installed in 1952. The Unitech Multiple Effect Evaporator system, installed in 1970, is a rising film, six effect system.

The evaporators are controlled by the LVHC (low volume, high concentration) system. The non-condensable gases (TRS, VOCs, HAPs) are incinerated in either the Lime Kiln, the #5 Power Boiler, or the Biomass Boiler.

The evaporators are subject to 06-096 CMR 124 and 40 CFR Part 63, Subpart S. The requirements of 06-096 CMR 124 constitute VOC RACT for the evaporators.

Streamlining

1. TRS
   06-096 CMR 124 contains applicable TRS emission standards. No streamlining is required for the TRS emissions.

2. VOC
   06-096 CMR 134 contains applicable VOC RACT requirements for the digester systems (meeting 06-096 CMR 124 requirements). No streamlining is required for VOC emissions.

3. HAPS
   40 CFR Part 63, Subpart S contains applicable HAP standards. No streamlining is required for HAP emissions.

O. #4 Recovery Boiler

The #4 Recovery Boiler fires black liquor as part of the chemical recovery process. The #3 Recovery Boiler, manufactured by Babcock & Wilcox was installed in 1971. In June of 1987, a smelt bed explosion damaged the boiler. The repaired Recovery Boiler was designated #4 and resumed operation by December of 1987. In 1988, a Flakt dry bottom electrostatic precipitator (ESP) was installed to control particulate emissions. It was determined by EPA that the #4 Recovery Boiler was not subject to NSPS 40 CFR, Part 60, Subpart Db or BB due to the fact that the reconstruction costs were less than 50% of the cost for the installation of a similar new unit. Also, the repairs to the existing recovery boiler resulted in a decrease of emissions.

The #4 Recovery Boiler has the capability of firing black liquor, either alone or in combination with #6 fuel oil. The #4 Recovery Boiler is also licensed to fire #2

fuel oil and diesel fuel. The #4 Recovery Boiler is limited to firing 2.57 MMlbs of black liquor solids per day. Emissions are exhausted through an ESP and then exit out a 250 foot steel stack.

The #6 fuel oil, diesel fuel, and/or #2 fuel oil is used to start the combustion of black liquor, to stabilize black liquor firing, and to allow proper boiler shutdown. The fuel oil shall not exceed 0.5% sulfur. The #4 Recovery Boiler is limited 552 billion Btu/year from fuel oil.

The #4 Recovery Boiler was licensed with short term and annual limits when firing liquor, but only tons per year limits when firing oil. This license establishes lb/hr limits when firing oil, based on the existing tons per year limits.

The ESP has 2 fields. Red Shield has demonstrated compliance during stack tests with only one field operating and therefore may operate with one field operating.

NO_X RACT for Kraft recovery boilers, per 06-096 CMR 138, is 120 ppm by volume on a wet basis, corrected to 8% O_2 or 12% CO_2, on a 24 hour daily block arithmetic average basis. Compliance is through the use of a CEM. The CEM on the #4 Recovery Boiler is extractive and cannot measure NO_X on a wet basis, so the NO_X emission limit was converted to a dry basis. Using an average moisture content of 20%, the NO_X RACT emission limit is 150 ppm by volume on a dry basis, corrected to 8% O_2 or 12% CO_2, on a 24 hour daily block arithmetic average basis. Per 06-096 CMR 138, Section 3(O), periods of start-ups, shutdowns and malfunctions are not included in determining 24-hour averages. This limit applies when firing black liquor only.

The #4 Recovery Boiler is subject to 06-096 CMR 124 for TRS emissions. The #4 Recovery Boiler is also subject to 40 CFR Part 63, Subpart MM, NESHAPS from Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills.

Control Equipment
Control equipment for the #4 Recovery Boiler consists of an ESP for particulate emissions.

Streamlining
1. Opacity
   06-096 CMR 101, Section (2)(B)(2)(a)(ii) contains the applicable opacity standard (20% for 98 percent of all six minute averages on a quarterly basis and 99 percent of six minute averages on a four consecutive quarter basis). No streamlining is required for opacity.

2. Particulate Matter (PM)
   a. 06-096 CMR 103, Section (2)(A)(4) contains an applicable PM lb/MMBtu emission standard (0.3 lb/MMBtu).
   b. 40 CFR Part 63, Subpart MM contains an applicable PM gr/dscf limit (0.044 gr/dscf), however the rule also allows Red Shield to propose an alternative (0.028 gr/dscf, which takes into account facility emissions from the Lime Kiln and #4 Smelt Tank).
   c. BPT establishes an applicable lb/hr emission limit (34.3 lb/hr firing black liquor, 37.4 lb/hr firing oil). No streamlining required for the PM lb/hr limit.

   Red Shield accepts streamlining for the PM concentration emission limits for the #4 Recovery Boiler, therefore only the more stringent Subpart MM alternative gr/dscf limit is included in this license.

3. PM_{10}
   BPT establishes the applicable PM_{10} lb/hr emission limit for the #4 Recovery Boiler (34.3 lb/hr firing black liquor, 37.4 lb/hr firing oil). No streamlining is required for the PM_{10} lb/hr limit.

4. Sulfur Dioxide (SO_2)
   a. 06-096 CMR 106, Section 2(A)(2) contains an applicable fuel sulfur content standard (2%).
   b. Air Emission License amendment A-180-71-Z-A established a fuel sulfur content standard (0.5%).
   c. BPT establishes the applicable SO_2 ppm and lb/hr emission limits (100 ppm, 143 lb/hr firing black liquor, 196.5 lb/hr firing oil). No streamlining is required for the SO_2 ppm and lb/hr limits.

   Red Shield accepts streamlining for the fuel sulfur content standard for the #4 Recovery Boiler, therefore only the more stringent BPT sulfur content is included in this license.

5. Nitrogen Oxides (NO_X)
   a. 06-096 CMR 138 contains the applicable NO_X ppm limit (150 ppm). No streamlining is required for the NO_X ppm limit.
   b. BPT establishes an applicable NO_X lb/hr emission limit (154.4 lb/hr firing black liquor, 188.2 lb/hr firing oil). No streamlining is required for the NO_X lb/hr limit.

6. Carbon Monoxide (CO)
   a. BPT establishes an applicable CO ppm emission limit (500 ppm). No streamlining is required for the CO ppm limit.

b. BPT establishes an applicable CO lb/hr emission limit (312.7 lb/hr firing black liquor, 312.7 lb/hr firing oil). No streamlining is required for the CO lb/hr limit.

7. Volatile Organic Compounds (VOC)
BPT establishes an applicable VOC lb/hr emission limit (17.9 lb/hr firing black liquor, 19.4 lb/hr firing oil). No streamlining is required for the VOC lb/hr limit. (The previous 50 ppm VOC limit is not being carried forward since there are no continuous emission monitoring systems for VOC. The lb/hr limit meets the BPT requirement for VOC emissions.)

8. Total Reduced Sulfur (TRS)
06-096 CMR 124 contains an applicable TRS ppm emission limit (5 ppm). No streamlining is required for the TRS ppm limit.

Periodic Monitoring
Periodic monitoring for the recovery boiler shall consist of recordkeeping which includes: records of monthly and 12 month rolling total Btu fuel use by the quantity (gallons), type of fuel consumed, and the heat content of the fuel(s); fuel percent sulfur by weight; and black liquor solids fired. Red Shield shall stack testing for particulate matter every other calendar year in accordance with 40 CFR Part 60, Appendix A, Method 5.

CEM and COM
Continuous emission monitors shall be required for SO_2 ppm, NO_X ppm, and O_2 ppm, CO ppm and TRS ppm; and a continuous opacity monitor shall be required for opacity. The CEMs and COM shall be operated in accordance with the instrument monitoring and recordkeeping requirements in 06-096 CMR 117. The COM shall also be operated in accordance with 40 CFR Part 63, Subpart MM.

P. #4 Smelt Dissolving Tank

The #4 Smelt Dissolving Tank is a Babcock & Wilcox, installed in 1970. The raw materials coming into the smelt tank are weak wash and smelt from the Recovery Boiler. The material leaving the tank is green liquor.

The #4 Smelt Dissolving Tank is subject to 06-096 CMR 124. The emission limit found in 06-096 CMR 124 and the scrubber control constitutes VOC RACT for the smelt tank.

The #4 Smelt Dissolving Tank is also subject to 40 CFR Part 63, Subpart MM, NESHAPS from Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills.

Control Equipment
Control equipment for the #4 Smelt Dissolving Tank consists of a Ducon scrubber for particulate matter and TRS. The #4 Smelt Tank exhausts through a steel 250 foot stack.

Streamlining
1. Particulate Matter (PM)
   a. 06-096 CMR 105, Section (2) contains an applicable PM lb/air dried ton of pulp emission standard.
   b. 40 CFR Part 63, Subpart MM contains an applicable PM lb/tons black liquor solids limit (0.2 lb/tons BLS as fired), however the rule also allows Red Shield to propose an alternative (0.12 lb/tons BLS as fired, which takes into account facility emissions from the Lime Kiln and #4 Recovery Boiler).
   c. BPT establishes an applicable lb/hr emission limit (7.55 lb/hr). No streamlining required for the PM lb/hr limit.

   Red Shield accepts streamlining for the PM concentration emission limits for the #4 Smelt Dissolving Tank, therefore only the more stringent Subpart MM alternative lb/ton of BLS limit is included in this license.

2. PM_{10}
   BPT establishes the applicable lb/hr emission limit for the #4 Smelt Dissolving Tank (7.55 lb/hr). No streamlining is required for the PM_{10} lb/hr limit.

3. Sulfur Dioxide (SO_2)
   BPT establishes the applicable SO_2 lb/hr emission limit (3.33 lb/hr). No streamlining is required for the SO_2 lb/hr limit.

4. Nitrogen Oxides (NO_X)
   BPT establishes the applicable NO_X lb/hr emission limit (0.06 lb/hr). No streamlining is required for the NO_X lb/hr limit.

5. Carbon Monoxide (CO)
   BPT establishes the applicable CO lb/hr emission limit (0.06 lb/hr). No streamlining is required for the CO lb/hr limit.

6. Volatile Organic Compounds (VOC)
   BPT establishes the applicable VOC lb/hr emission limit (0.06 lb/hr). No streamlining is required for the VOC lb/hr limit.

7. Total Reduced Sulfur (TRS)
   a. 06-096 CMR 124 contains an applicable TRS lb/ton of BLS emission limit (0.033 lb/ton of BLS as fired as H_2S).
   b. BPT establishes an applicable TRS lb/ton of BLS emission limit (0.0168 lb/ton of BLS as fired as H_2S).
   c. BPT establishes an applicable TRS lb/hr emission limit (1.06 lb/hr). No streamlining is required for the lb/hr limit.

   Red Shield accepts streamlining for the TRS lb/ton of BLS emission limit for the #4 Smelt Dissolving Tank, therefore only the more stringent BPT lb/ton of BLS limit is included in this license.

Periodic Monitoring
Periodic monitoring shall include stack testing for particulate matter and TRS every other year. Pursuant to 40 CFR Part 63, Subpart MM, §63.864(e), a continuous parameter monitoring system shall be used to record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15 minute period.

Q. Recausticizing Slaker System

The slaker system is made up of production components associated with the recausticizing system including the slaker, causticizers, liquor clarifiers, storage tanks, and dregs washer. Green liquor and calcium oxide (CaO - lime) are slaked to create lime mud and white liquor.

A Goselin water induced slaker was installed in 2002. The water induction system allows for direct adsorption and condensing of emissions from the process and is a jet venturi fume scrubber water induction system. The slaker is not required to have an additional scrubber or stack since there is no emission point.

The original slaker is still used as back-up to the Goselin water induced slaker.

Control Equipment
Control equipment for the original slaker consists of a scrubber.

Streamlining
Opacity
06-096 CMR 101, Section (2)(B)(3)(d) contains the applicable opacity standard for the original slaker (20% on a 6 minute average, except for no more than 1 six minute block average in 1 hr). No streamlining is required for opacity.

Periodic Monitoring
Periodic monitoring for the original slaker shall consist of recording scrubber media flow once per shift.

R. Lime Kiln System

The Lime Kiln, lime mud clarifier, storage tanks, precoat filter, and scrubber are all part of the Lime Kiln System. Lime mud ($CaCO_3$) from the recausticizing slaker system is processed back into lime (CaO) through the lime kiln system. The Lime Kiln was installed in 1974 and is controlled with a venturi scrubber and exhausts through a 163 foot stack. The Lime Kiln burner has a rating of 64 MMBtu/hr (previously a 72 MMBtu/hr burner) and may fire #6 fuel oil with 2% sulfur, waste oil, or natural gas. Propane is used only for the pilot flame.

The LVHC gases are also fired in the Lime Kiln. The lime mud is an effective medium to scrub SO_2 emissions generated from the incineration of the TRS compounds. The Lime Kiln is the primary incineration unit of the LVHC gases, with the #5 Power Boiler and Biomass Boiler as the back-up.

NO_X RACT for the Lime Kiln is 120 ppm by volume on a wet basis, corrected to 10% O_2 on a one hour average, per 06-096 CMR 138. Red Shield has converted the limit to a dry basis (170 ppm). Red Shield performed NO_X emission stack testing on the Lime Kiln and demonstrated compliance with the NO_X RACT limit during two consecutive annual tests. Red Shield was then issued an amendment (A-180-71-T-M) which included a reduction of the frequency of NO_X stack testing on the Lime Kiln to once every five years.

The Lime Kiln is subject to 06-096 CMR 124 and 40 CFR Part 63, Subpart MM, NESHAPS from Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills.

The emission limit of 06-096 CMR 124 and the scrubber control constitutes VOC RACT for the lime kiln.

Control Equipment
Control equipment on the Lime Kiln consists of a venturi scrubber system.

Streamlining
1. Particulate Matter (PM)
   a. 06-096 CMR 105, Section (2) contains an applicable PM lb/air dried ton of pulp emission standard.
   b. 40 CFR Part 63, Subpart MM contains an applicable PM gr/dscf emission limit (0.064 gr/dscf), however the rule also allows Red Shield to propose

an alternative (0.13 gr/dscf, which takes into account facility emissions from the #4 Recovery Boiler and #4 Smelt Tank).

c. BPT establishes an applicable lb/hr emission limit (32.9 lb/hr). No streamlining required for the lb/hr limit.

Red Shield accepts streamlining for the PM concentration emission limits for the Lime Kiln, therefore only the Subpart MM alternative gr/dscf limit is included in this license.

2 PM_{10}

BPT establishes the applicable PM_{10} lb/hr emission limits for the Lime Kiln (32.9 lb/hr). No streamlining is required for the lb/hr limits.

3 Sulfur Dioxide (SO_2)

BPT establishes the applicable lb/hr emission limit (7.1 lb/hr). No streamlining is required for the lb/hr limit.

4 Nitrogen Oxides (NO_X)

a. 06-096 CMR 138 contains the applicable NO_X ppm limit (170 ppm on a dry basis). No streamlining is required for the ppm limit.

b. BPT establishes an applicable NO_X lb/hr emission limit (36.0 lb/hr). No streamlining is required for the lb/hr limit.

5 Carbon Monoxide (CO)

BPT establishes an applicable CO lb/hr emission limit (81.7 lb/hr). No streamlining is required for the lb/hr limit.

6 Volatile Organic Compounds (VOC)

BPT establishes an applicable VOC lb/hr emission limit (1.2 lb/hr). No streamlining is required for the lb/hr limit.

7 Total Reduced Sulfur (TRS)

a. 06-096 CMR 124 contains an applicable TRS ppm emission limit (20 ppm). No streamlining is required for the TRS ppm limit.

b. BPT establishes an applicable TRS lb/hr emission limit (5.3 lb/hr). No streamlining is required for the TRS lb/hr limit.

Periodic Monitoring

Periodic monitoring for the Lime Kiln shall include recording NCG incineration time. Red Shield shall also stack test for particulate matter by September 21, 2010 firing natural gas then every other year thereafter on the current fuel in accordance with 40 CFR Part 60, Appendix A, Method 5 and stack test for NO_X by September 21, 2010 firing natural gas then every five years thereafter on the current fuel. Pursuant to 40 CFR, Part 63, Subpart MM, §63.864(e), a continuous

parameter monitoring system shall be used to record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15 minute period.

CEM
Continuous emission monitors for the lime kiln shall be required for TRS ppm and O_2 ppm. The CEMs shall be operated in accordance with the instrument monitoring and recordkeeping requirements in 06-096 CMR 117.

S. Lime Storage Silos

Red Shield has three lime silos. The silos and conveyance systems were installed in 1974.

Control Equipment
Fabric filter baghouses for the lime kiln silos function as control and process equipment.

Streamlining
Opacity
06-096 CMR 101, Section (2)(B)(3)(c) contains the applicable opacity standard from the baghouses (10%, except one 6 minute block average in 1 hour). No streamlining is required for opacity.

Periodic Monitoring
Periodic monitoring for the lime storage silos shall consist of keeping a maintenance log recording the date and location of all bag failures as well as all routine maintenance.

T. Saltcake Storage Silo

The saltcake silo stores the saltcake used in the production process. Particulate matter is controlled through a fabric filter baghouse.

Control Equipment
Fabric filter baghouses for the saltcake storage silo functions as control and process equipment.

Streamlining
Opacity
06-096 CMR 101, Section (2)(B)(3)(c) contains the applicable opacity standard from the baghouses (10%, except one 6 minute block average in 1 hour). No streamlining is required for opacity.

Periodic Monitoring
Periodic monitoring for the salt cake storage silo shall consist of keeping a maintenance log recording the date and location of all bag failures as well as all routine maintenance.

U. Bleach Plant Operations

The bleaching operations include a chlorine dioxide generator system and the bleach plant system: washers, bleach towers, and storage chests (storage chests are not included in the definition of bleach plant in 06-096 CMR 122). The bleaching operations were originally installed in 1965. The two Ducon packed bed scrubbers for the control of chlorine, chlorine dioxide, and VOCs were installed in 1992.

In 1999, Georgia-Pacific incorporated elemental chlorine free bleaching into its process, increasing ClO_2 use and eliminating elemental chlorine. The chlorine dioxide (ClO_2) generating plant uses the SVP-HP generating process which has oxygen as a by-product. The raw materials used to produce the ClO_2 include sodium chlorate, hydrogen peroxide, and sulfuric acid. Emissions from the generator and the storage tank are controlled by the chlorine dioxide generating plant scrubbers.

The bleach plant is subject to the requirements of 06-096 CMR 122 and 40 CFR Part 63, Subpart S. The bleach plant monitoring requirements in 40 CFR Part 63, Subpart S, §63.453 require the following to be monitored: ph or oxidation/reduction potential of the gas scrubber effluent, the gas scrubber vent gas inlet flow rate, and the gas scrubber liquid influent flow rate. In a letter dated March 14, 2001, Georgia-Pacific received approval from EPA to use an alternative monitoring parameter – fan amperage in lieu of monitoring vent gas inlet flow rate. Subsequently, in a letter dated August 14, 2002, Georgia-Pacific received approval from EPA to use differential pressure in lieu of the monitoring vent gas inlet flow rate. In addition, in a letter dated March 29, 2001, Georgia-Pacific received approval from EPA for another alternative monitoring parameter: scrubber influent pH or ORP in lieu of monitoring scrubber effluent pH or ORP. In a letter from the Department dated January 7, 2002, Georgia-Pacific was approved for an alternate continuous monitoring system (CMS), per 40 CFR Part 63, §63.453(m), of minimum scrubber media flow, media pH, and scrubber fan differential pressure.

VOC RACT for the bleach plant system and chlorine dioxide generator system includes operating the scrubbers and the discontinued use of sodium hypochlorite as a primary bleaching agent, per 06-096 CMR 134.

Control Equipment
Control equipment for the bleach plant operations consists of the scrubber system.

Streamlining
1. Cl_2 and ClO_2
   06-096 CMR 122, Section (3) contains the applicable Cl_2 and ClO_2 lb/hr emission limits (3 lb/hr). No streamlining is required for the Cl_2 and ClO_2 lb/hr emission limits.

2. Volatile Organic Compounds (VOC)
   06-096 CMR 134 contains the requirement to be evaluated for VOC RACT. No streamlining is required for VOC emissions.

3. Hazardous Air Pollutants (HAPs)
   40 CFR Part 63, Subpart S, section 63.445(c) contains applicable compliance options for chlorinated HAP emissions. No streamlining is required for HAP emissions.

Periodic Monitoring
Periodic monitoring for the bleach plant operations includes monitoring the scrubbers' recycle flow and pressure drop. Red Shield shall stack test the scrubbers every five years for Cl_2 and ClO_2, as revised in amendment A-180-71-AY-M (June 1, 2009).

CMS
Red Shield shall operate and maintain a continuous monitoring system (CMS) on the bleach plant scrubber system as required by 40 CFR Part 63, Subpart S, §63.453 or alternatives approved by EPA and/or the Department as appropriate.

V. Pulp Kraft Dryer

The #1 Kraft dryer is a Flakt dryer, installed in 1965. It is used to dry the slush pulp into market pulp. The majority of emissions from the pulp dryer is water vapor.

W. #6 Fuel Oil Tank

The #6 fuel oil tank, located east of the #5 Boiler building is a 30,000 gallon above ground, fixed roof, steel tank. It was installed in 1995 and has a maximum annual throughput of 15,000,000 gallons.

The #6 fuel oil tank not subject to 40 CFR Part 60, Subpart Kb.

X. Miscellaneous Liquor Tanks

Red Shield has various tanks used to store white liquor, green liquor, and black liquor. The tanks include weak black liquor tanks, strong black liquor tank, black liquor flash storage tank, black liquor flash tank, blow tank, black liquor filtrate tanks, salt cake mix tank, green liquor storage tanks, precipitator ash tank, green liquor clarifier tanks, and other miscellaneous liquor tanks.

Based on the emission levels from the tanks, some of the liquor tanks (emitting 5 ppm or 0.75 lb/hr TRS) are subject to 06-096 CMR 124. The facility submitted a BPT analysis on December 19, 2003 as required by 06-096 CMR 124. The submittal included the following: continue to collect and treat the emissions from the salt cake mix tanks with the smelt dissolving tank scrubber, minimize the emissions from the 53% and 68% black liquor tanks through reviewing and possibly changing the inlet piping and tank overflow designs and reducing liquor temperature. The emissions will then periodically be retested and reassessed to determine if the sources still continue to be considered miscellaneous. Red Shield shall follow what was proposed in the BPT submittal to meet 06-096 CMR 124.

Y. Wastewater Treatment Plant

The wastewater treatment plant includes primary and secondary treatment. The emissions from the wastewater treatment plant include fugitive VOC and HAPs.

To meet the requirements of 40 CFR Part 63, Subpart S, Red Shield has opted to use the wastewater treatment plant to control the pulping process condensates.

Maintenance of a valid NPDES and/or state waste water discharge permit was previously determined to meet the requirements of VOC RACT.

Per 06-096 CMR 124, the facility submitted a BPT analysis for control of TRS from the wastewater treatment system to the Department on December 19, 2003 which concluded that compliance with MACT condensate control requirements and proper operation in compliance with the NPDES permit meets the requirements of BPT.

Z. Back-up Stationary Internal Combustion Engines

Red Shield operates a number of back-up stationary internal combustion engines. Some of the units at the facility are considered insignificant activities since the capacities are below 3 MMBtu/hr and the sulfur content of the fuel fired (including gasoline) is less than 0.05%. However, the following units are not considered insignificant due to the potential to emit, without operational limits, greater than the 10 ton/year NO_X RACT exemption in 06-096 CMR 138:

1. Total Services Sump Pump – back-up diesel engine – 1991 Detroit diesel engine rated at 1.3 MMBtu/hr, firing 0.05% sulfur oil.
2. Boiler Building Fire Water Pump – 1965 Cummins back-up diesel engine rated at 1.45 MMBtu/hr, firing 0.05% sulfur oil.
3. Power House Fire Pump – back-up diesel engine – rated at 1.33 MMBtu/hr, firing 0.05% sulfur oil.
4. #4 Turbine Back-Up Generator – 1977 Detroit diesel engine rated at 1.2 MMBtu/hr, firing 0.05% sulfur oil.
5. Back-up Generator - Biomass Boiler/Condensing Turbine Area – 1987 diesel engine rated at 3.52 MMBtu/hr firing 0.05% sulfur oil.

Emissions for these units were calculated using AP-42 factors (Table 3.3-1, revised 10/96) and 0.05% sulfur.

Red Shield shall limit the use of the back-up engines to 500 hours/year each, on a 12 month rolling total. This operating restriction meets the NO_X RACT threshold for emissions from each unit to be under 10 tons/year.

Back-up generators are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Back-up generators are not to be used for prime power when reliable offsite power is available.

Streamlining

1. Opacity
   06-096 CMR 101, Section 2(B)(1)(f) contains an applicable opacity standard (30% opacity, except for no more than two six minute averages in a 3 hr period). No streamlining is required for opacity.

2. Particulate Matter (PM)
   BACT establishes the applicable PM lb/hr emission limits. No streamlining is required for the PM lb/hr limits.

3. PM_{10}
   BACT establishes the applicable PM_{10} lb/hr emission limits. No streamlining is required for the PM_{10} lb/hr limits.

4. Sulfur Dioxide (SO_2)
   a. 06-096 CMR 106, Section 2(A)(2) contains an applicable fuel sulfur content standard (2%).
   b. BACT establishes an applicable fuel sulfur content standard (0.05%).
   c. BACT establishes the applicable SO_2 lb/hr emission limits. No streamlining is required for the SO_2 lb/hr limits.

Red Shield accepts streamlining for the fuel sulfur content standard for the back-up generators, therefore only the more stringent BPT sulfur content is included in this license.

5. Nitrogen Oxides (NO_X)
   BACT establishes the applicable NO_X lb/hr emission limits. No streamlining is required for the NO_X lb/hr limits.

6. Carbon Monoxide (CO)
   BACT establishes the applicable CO lb/hr emission limit. No streamlining is required for the CO lb/hr limit.

7. Volatile Organic Compounds (VOC)
   BACT establishes the applicable VOC lb/hr emission limits. No streamlining is required for the VOC lb/hr limits.

Periodic Monitoring
Periodic monitoring for the back-up generators consists of recordkeeping which includes fuel receipts indicating sulfur content of the fuel and the hours of operation of each unit determined from hour meters on each unit.

AA. Screw Press Steam Generator

The steam generator for the screw press is a 4.2 MMBtu/hr Clayton generator. The unit was installed in 1996 (manufactured in 1988) and fires #2 fuel oil with a sulfur content of 0.3%. Emissions for this unit were calculated using AP-42 factors (Table 3.3-1, revised 10/96).

Streamlining
1. Opacity
   06-096 CMR 101, Section 2(B)(1)(f) contains an applicable opacity standard (30% opacity, except for no more than two six minute averages in a 3 hr period). No streamlining is required for opacity.

2. Particulate Matter (PM)
   BPT establishes the applicable PM lb/hr emission limit. No streamlining is required for the PM lb/hr limit.

3. PM_{10}
   BPT establishes the applicable PM_{10} lb/hr emission limit. No streamlining is required for the PM_{10} lb/hr limit.

4. Sulfur Dioxide (SO_2)
   a. 06-096 CMR 106, Section 2(A)(2) contains an applicable fuel sulfur content standard (2%).
   b. BPT establishes an applicable fuel sulfur content standard (0.3%).
   c. BPT establishes the applicable SO_2 lb/hr emission limit. No streamlining is required for the SO_2 lb/hr limit.

   Red Shield accepts streamlining for the fuel sulfur content standard for the screw press generator, therefore only the more stringent BPT sulfur content is included in this license.

5. Nitrogen Oxides (NO_X)
   BPT establishes the applicable NO_X lb/hr emission limit. No streamlining is required for the NO_X lb/hr limit.

6. Carbon Monoxide (CO)
   BPT establishes the applicable CO lb/hr emission limit. No streamlining is required for the CO lb/hr limit.

7. Volatile Organic Compounds (VOC)
   BPT establishes the applicable VOC lb/hr emission limit. No streamlining is required for the VOC lb/hr limit.

Periodic Monitoring
Periodic monitoring for the screw press generator consists of recordkeeping which includes fuel receipts indicating sulfur content of the fuel.

AB. Facility Emissions

Total Licensed Annual Emissions (Tons/year) –
(used to calculate the annual license fee)

Equipment	PM	PM_{10}	SO_2	NO_X	CO	VOC
Boiler #5	87	87	556.2	306	120	55
Biomass Boiler	35.0	35.0	29.0	290.3	406.6	19.7
(Firing NCGs in either #5 or biomass boiler)			343.4			
Riley Power Boiler	3.22	3.22	5.64	21.46	3.97	0.2
Gas Turbine	1.1	1.1	0.5	20.9	12.8	5.7
#4 Recovery Boiler	177.2	177.2	768.3	812.3	1396.6	92.4
#4 Smelt Tank	33.07	33.07	14.61	0.28	0.28	0.28
Lime Kiln	144.1	144.1	31.1	157.7	357.8	5.3
Total Services Backup Sump Pump	0.1	0.1	0.02	1.4	0.3	0.1

Table continued:

Equipment	PM	PM_{10}	SO_2	NO_X	CO	VOC
Boiler Bdg Fire Water Backup Pump	0.1	0.1	0.02	1.6	0.3	0.1
Power House Fire Backup Pump	0.1	0.1	0.02	1.5	0.3	0.1
#4 Turbine Backup Gen.	0.09	0.09	0.02	1.3	0.3	0.1
Back-up gen. for biomass boiler	0.1	0.1	0.14	5.1	1.4	0.3
Screw Press Steam Generator	2.2	2.2	5.5	81.1	17.5	6.6
TOTALS	**483.4**	**483.4**	**1754.5**	**1700.9**	**2318.2**	**185.9**

Notes:

- The gas turbine tpy emissions were calculated with the operating hour restriction.
- The #4 Recovery Boiler tpy emissions were based on adding the tpy from firing oil only to the tpy from firing black liquor only.
- PM_{10} and CO are not used in calculating the annual fee, but are noted for completeness. CO tpy emissions are based on the final emission limit (0.35 lb/MMBtu).
- The table above does not include process emission units or insignificant activities which have no licensed emission units.

III. AIR QUALITY ANALYSIS

The facility previously submitted a refined ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. The most recent analysis was approved on May 6, 2005 in air emission license amendment A-180-71-AJ-A. An additional ambient air quality analysis is not required for this Initial Part 70 License.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this sources:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants the Part 70 License A-180-70-A-I pursuant to 06-096 CMR 140 and the preconstruction permitting requirements of 06-096 CMR 115 and subject to the standard and special conditions below.

All federally enforceable and State-only enforceable conditions in existing air licenses previously issued to the facility pursuant to the Department's preconstruction permitting requirements in 06-096 CMR 108 or 115 have been incorporated into this Part 70 license, except for such conditions that MEDEP has determined are obsolete, extraneous or otherwise environmentally insignificant, as explained in the findings of fact accompanying this permit. As such the conditions in this license supercede all previously issued air license conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 CMR 115 for making such changes and pursuant to the applicable requirements in 06-096 CMR 140.

For each standard and special condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD STATEMENTS

(1) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both; [06-096 CMR 140]

(2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege; [06-096 CMR 140]

(3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable. [06-096 CMR 140]

(4) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license; [06-096 CMR 140]

(5) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for

the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 140]

(6) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:

A. Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or

B. The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or effect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to Section 114 of the CAA.

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in an application dated October, 1997 or via comments since the application submittal.

	SOURCE	CITATION	DESCRIPTION	BASIS FOR DETERMINATION
i.	#5 Boiler	06-096 CMR 124	TRS	Temperature monitor not required because the boiler is greater then 50 MMBtu/hr.
ii.	#4 Recovery Boiler	40 CFR Part 60, Subpart E and 06-096 CMR 104	Standards of Performance for Incinerators	The unit is not an incinerator.

[06-096 CMR 140]

(7) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:

A. Additional Applicable requirements under the CAA become applicable to a Part 70 major source with a remaining Part 70 license term of 3 or more years.

However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to 06-096 CMR 140;

B. Additional requirements (including excess emissions requirements) become applicable to a Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;

C. The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Part 70 license; or

D. The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.

The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.
[06-096 CMR 140]

(8) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading and other similar programs or processes for changes that are provided for in the Part 70 license. [06-096 CMR 140]

STANDARD CONDITIONS

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions and this license (38 M.R.S.A. §347-C);

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in 06-096 CMR 140; [06-096 CMR 140]

(3) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive

dust, and shall submit a description of the program to the Department upon request; [06-096 CMR 140]
Enforceable by State-only

(4) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S.A. §353.

(5) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions; [06-096 CMR 140]
Enforceable by State-only

(6) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license; [06-096 CMR 140]

(7) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, the filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license. [06-096 CMR 140]

(8) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

A. perform stack testing under circumstances representative of the facility's normal process and operating conditions:

1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions;

2. to demonstrate compliance with the applicable emission standards; or

3. pursuant to any other requirement of this license to perform stack testing.

B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 140]
Enforceable by State-only

(9) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates emissions in excess of the applicable standards, then:

A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 140]
Enforceable by State-only

(10) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license.

A. The licensee shall notify the Commissioner within 48 hours of a violation of any emission standard and/or a malfunction or breakdown in any component part that causes a violation of any emission standard, and shall report the

probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;

B. The licensee shall submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component part causes a violation of any emission standard, together with any exemption requests.

Pursuant to 38 M.R.S.A. § 349(9), the Commissioner may exempt from civil penalty an air emission in excess of license limitations if the emission occurs during start-up or shutdown or results exclusively from an unavoidable malfunction entirely beyond the control of the licensee and the licensee has taken all reasonable steps to minimize or prevent any emission and takes corrective action as soon as possible. There may be no exemption if the malfunction is caused, entirely or in part, by poor maintenance, careless operation, poor design or any other reasonably preventable condition or preventable equipment breakdown. The burden of proof is on the licensee seeking the exemption under this subsection.

C. All other deviations shall be reported to the Department in the facility's semiannual report.

[06-096 CMR 140]

(11) Upon the written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 140]

(12) The licensee shall submit semiannual reports of any required periodic monitoring. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. [06-096 CMR 140]

(13) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequently if specified in the applicable requirement or by the Department. The compliance certification shall include the following:

(a) The identification of each term or condition of the Part 70 license that is the basis of the certification;

(b) The compliance status;

(c) Whether compliance was continuous or intermittent;

(d) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(e) Such other facts as the Department may require to determine the compliance status of the source;

[06-096 CMR 140]

Special Conditions

(14) **#5 Power Boiler**

A. Red Shield is licensed to operate the #5 Boiler which shall not exceed a heat input capacity of 249 MMBtu/hr (24 hour average). Compliance with the heat input capacity shall be documented through fuel flow meter records and the Btu value of the fuel. [06-096 CMR 140, BPT and BACT, license A-180-71-M-A, 1994]

B. Red Shield is licensed to fire #6 fuel oil with a sulfur content not to exceed 0.5% in the #5 Boiler. Red Shield may also fire natural gas in the #5 Boiler. Red Shield shall maintain records of monthly and 12 month rolling total fuel use indicating the quantity of fuel consumed (gallons or scfm) and the percent sulfur content of the fuel oil, demonstrated by purchase records from the supplier. [40 CFR Part 60, Subpart Db; 06-096 CMR 140, BPT, and BACT, license A-180-71-M-A, 1994].

C. Red Shield is licensed to fire non-condensable gases (NCGs) in the #5 Boiler as back-up to the Lime Kiln. [06-096 CMR 140, BPT and BACT, license A-180-71-M-A, 1994]

D. Red Shield shall follow all applicable reporting, recordkeeping, and monitoring requirements set forth in 40 CFR Part 60, Subpart Db. [40 CFR Part 60, Subpart Db]

E. Emissions from #5 Boiler shall not exceed the following limits:

Pollutant	lb/MMBtu	Ave Time	Compliance Method
PM	0.08	-	Stack Test (every other calendar year)
NO_X	0.28	30 day rolling average as described in 40 CFR Part 60, Subpart Db	CEM data

Pollutant	lb/hr	Ave Time	Compliance Method
PM	19.92	-	Stack Test (every other calendar year)
PM_{10}	19.92	-	Stack Test (upon request)
SO_2	126.99*	-	Fuel sulfur content receipts
NO_X	69.72	24 hr Block	CEM data in conjunction with fuel (F) factor
CO	27.39	-	Stack Test (upon request)
VOC	12.45	-	Stack Test (upon request)

* The SO_2 lb/hr limit shall be 205.39 lb/hr when incinerating NCGs and oil.
[BACT, license A-180-71-M-A, 1994 and 06-096 CMR 140, BPT]

F. Red Shield shall operate the #5 Boiler such that the visible emissions from the stack do not exceed 20% opacity on a six (6) minute block average basis, except for no more than one 6 minute block average per hour of not more than 27% opacity. [40 CFR Part 60, Subpart Db]

G. Red Shield shall operate and maintain NO_X and O_2 CEMs on the #5 Boiler when the boiler is on-line in accordance with 06-096 CMR 117 and 40 CFR Part 60, Appendix B. The CGA and RATA requirements shall be the following:

1. Red Shield shall conduct a Cylinder Gas Audit (CGA) every calendar quarter that a RAA or RATA is not conducted (while the #5 Boiler is in operation). If during a calendar quarter, the boiler has not operated for 168 unit operating hours, than the CGA may be postponed until a quarter that exceeds 168 unit operating hours. After four successive calendar quarters have elapsed without a CGA then Red Shield has a period of 168 unit operating hours in which to perform a successful audit or the data from the CEMS will be invalid from that point until a successful RATA, RAA, or CGA can be conducted.
2. RATAs must be conducted at least every fourth successive calendar quarter. If the #5 Boiler has not had 168 unit operating hours in a quarter, then that quarter shall be excluded in determining the deadline for the next RATA. If the RATA has not been completed by the end of the eighth calendar quarter since the quarter of the last RATA, then the RATA must be completed within a 720 unit operating hour period following the end of the eighth successive elapsed calendar quarter, or the data from the CEMS will be invalid from that point until a successful RATA can be conducted. If the #5 Boiler is shutdown during a quarter in which a RATA is due before the RATA can be completed, then there is a period of 30 operating days before the data from the CEMS will be considered invalid.

[40 CFR Part 60, Appendix B, 06-096 CMR 117, and A-180-71-AT-M, 2007]

H. Red Shield shall operate and maintain a continuous opacity monitor (Specification 1) on the #5 Boiler in accordance with 06-096 CMR 117 and 40 CFR Part 60, Appendix B. [40 CFR Part 60, Appendix B and 06-096 CMR 117]

I. Red Shield shall continue to maintain the flue gas recirculation system on the #5 Boiler. The FGR system shall be operated when necessary to meet the established emission limits. [06-096 CMR 140, BPT and BACT, license A-180-71-AB-M, 2000]

J. Red Shield shall demonstrate compliance with the lb/MMBtu and lb/hr particulate matter limit by stack testing if the #5 Power Boiler is operated 1000 hours or greater over a five calendar year period. The particulate matter stack test shall be performed within 60 days of the end of the five year period in accordance with 40 CFR Part 60, Appendix A, Method 5. [06-096 CMR 140, BPT and licenses A-180-71-AT-M, 2007 and A-180-71-AY-M, 2009]

K. Red Shield shall operate the periodic monitors to record the following for the #5 Boiler:

	Record
Fuel Flow	Continuously
Firing duration of NCGs	Continuously

[06-096 CMR 140, BPT and BACT, license A-180-71-M-A, 1994]

(15) **Biomass Boiler and Turbine**

A. Capacity/Steam Rate
Red Shield may operate the Biomass Boiler (265.2 MMBtu/hr) and the condensing turbine generator (16 MW). The Biomass Boiler steam production shall be limited to 170,000 lb/hr on a 24- hour block average (equivalent heat input rate of 265.2 MMBtu/hr of wood fuel). Red Shield shall monitor and record steam flow rate continuously for the Biomass Boiler. [06-096 CMR, BPT and BACT, license A-180-71-AI-A, 2004 and license A-180-71-AQ-M, 2007]

B. New Source Performance Standards
1. The Biomass Boiler is subject to 40 CFR Part 60, Subparts A and Db and Red Shield shall provide notifications, maintain records, and submit reports as required by the Subparts.
2. 40 CFR Part 60 Subpart Db requires maintaining records of the amount of fuels combusted each day and calculation of annual capacity factor for

each calendar quarter. This requirement was directed toward multi-fuel boilers to determine the annual capacity firing fossil fuel. EPA Region I determined this requirement is not meant to apply to 100% wood fired systems. However, Red Shield shall maintain monthly fuel use records and determine an annual capacity factor on a 12 month rolling average basis with the new annual capacity calculated at the end of each month and submitted annually.

[40 CFR, Part 60, Subparts A and Db]

C. Biomass Fuel

1. Red Shield may fire wood, wood chips, bark, waste paper, and wood extracted from construction and demolition wood (CDW) in the Biomass Boiler. Except as stated below in paragraph (C)(2), Red Shield shall not burn treated wood (ie. wood treated with pentachlorophenol, arsenic, or creosote), metallic debris, masonry, or gypsum board in the Biomass Boiler. Monthly fuel use records shall be maintained demonstrating compliance with the fuel types fired, including fuel supplier receipts.

2. Red Shield shall be restricted to firing, on an annual fuel use basis, no more than fifty (50%) percent by weight of construction and demolition wood. Construction and demolition wood for the purpose of this license shall be chipped wood demolition debris that has minimal amounts of painted or chemically treated wood. If the wood was originally mixed with non-wood related demolition products (ie. roofing, etc.), those non-wood related products shall be removed such that the amount remaining is determined to be insignificant. Records shall be kept showing compliance with the construction and demolition wood debris requirements.

[06-096 CMR 140, BPT and BACT, license A-180-71-AI-A, 2004]

D. Natural Gas Fuel

Red Shield may fire natural gas as supplemental fuel (up to 90 MMBtu/hr of natural gas) in the Biomass Boiler. Natural gas use shall be limited to 2190 hr/year of operations, or the equivalent of 197,100 MMBtu/year, based on a 12 month rolling total. Monthly and 12 month rolling total records shall be maintained documenting compliance. [06-096 CMR 140, BPT and BACT, license A-180-71-AI-A, 2004]

E. Waste Oil Fuel/Oily Debris

1. Red Shield shall not exceed 5,000 gallons per year of waste oil in the Biomass Boiler, based on a 12 month rolling total. Only waste oil meeting the criteria "specification" or "off-specification" waste oil (as defined in the Department's Waste Oil Management Rules) shall be burned in the Biomass Boiler.

2. Oil pads may be processed and burned in the Biomass Boiler. Quantities will be less than 2,500 pounds per year.
3. A log shall be maintained recording the quantities of specification and off-specification waste oil and oily debris burned in the Biomass Boiler and shall be made available to the Department upon request.

[06-096 CMR 140, BPT and BACT, license A-180-71-AI-A, 2004]

F. Non-condensable Gases

Red Shield may incinerate NCGs in the Biomass Boiler as a back-up control option to the lime kiln. [06-096 CMR 140, BPT and BACT, license A-180-71-AJ-A, 2005]

G. Particulate Matter Control

1. Particulate matter emissions from the Biomass Boiler shall be controlled by the operation and maintenance of a multicyclone separator followed by a dry electrostatic precipitator (ESP). Red Shield shall operate both ESP fields during normal operations of the boiler. During periods of firing natural gas only, the ESP is not required to be operated. ESP secondary current and secondary voltage shall be recorded once per day while the facility is in operation.

   Upon written notification to the Department, and in accordance with the Bureau of Air Quality's Air Emission Compliance Test Protocol, Red Shield may perform additional particulate emission testing to demonstrate compliance with alternative operating scenarios for the ESP and upon such successful demonstration, operate in accordance with the alternative operating scenarios. Under no circumstances shall Red Shield be relieved of its obligation to meet its licensed emission limits.

   [06-096 CMR 140, BPT and BACT, license A-180-71-AI-A, 2004]

2. Red Shield shall operate all ESP fields while firing CDW fuel. If during operation, when firing CDW, one or more ESP fields fail or is otherwise not operated, Red Shield shall discontinue firing CDW within 4 hours of the field failure. Alternative operating scenarios may be proposed based on future stack test results. [A-180-71-AP-A, 2006]

H. Emission Limits

Emissions from the Biomass Boiler shall not exceed the following:

Pollutant	lb/MMBtu	Averaging Time	Compliance Method
PM	0.03	-	40 CFR Part 60, Appendix A
PM_{10}	0.03	-	40 CFR Part 60, Appendix A; 40 CFR Part 51, Appendix M
NO_X	0.25	24 hr block ave	CEM
CO	0.35 (firing wood mixture)	30 day rolling ave	CEM
	0.9 (firing green wood only. Valid until October 1, 2020)	30 day rolling ave	CEM

Pollutant	lb/hr	Compliance Method
PM	8.0	40 CFR Part 60, Appendix A
PM_{10}	8.0	40 CFR Part 60, Appendix A; 40 CFR Part 51, Appendix M
SO_2	6.6 when not incinerating NCGs	Fuel Use Recordkeeping or 40 CFR Part 60, Appendix A
	85 when incinerating NCGs	
NO_X	66.3	40 CFR Part 60, Appendix A
CO	119.3 (firing wood mixture)	40 CFR Part 60, Appendix A
	306.0 (firing green wood only. Valid until October 1, 2010	40 CFR Part 60, Appendix A
VOC	4.5	40 CFR Part 60, Appendix A Method 25 or 25A
Lead	0.106	40 CFR Part 60, Appendix A

[06-096 CMR 140, BPT and BACT, licenses A-180-71-AI-A, 2004, A-180-71-AJ-A, 2005, A-180-71-AL-M, 2005, A-180-71-AX-A, 2009, and A-180-71-BA-A (September 21, 2009)]

I. Opacity Limit/Cold Startups

Visible emissions from the biomass boiler shall not exceed 20% opacity on a 6 (six)-minute average except for one 6-minute period per hour of not more than 27% opacity. This opacity standard shall apply at all times, except during periods of cold startups as defined below. [40 CFR Part 60, Subpart Db]

Cold Startups

Visible emissions from the biomass boiler shall be deemed in compliance with the visible emission requirements of this license if the Department has determined that the period of time identified by Red Shield is a cold startup of the biomass boiler.

1. Cold startup of the Biomass Boiler shall be when the beginning saturation metal temperature of the Biomass Boiler, measured at the probe box on the steam drum, is less than or equal to 100°F.

2. For each cold startup period, Red Shield shall:
   a. Maintain records of opacities which are greater than 20% on a six minute average; and
   b. Report each of these periods in the quarterly report. These periods shall not be reported in the excess emissions section of the quarterly report.

3. Red Shield shall monitor and record the steam drum temperature upon startup. This surrogate parameter value shall be indicative of a cold startup.

4. The period of opacity allowance for a cold startup of the Biomass Boiler:
   a. shall begin once fire has been put into Biomass Boiler;
   b. shall not exceed a maximum period of 10 hours, providing the startup is as expeditious as practicable, and shall not include periods of time which are determined by the Department to be unavoidable malfunctions to 38 M.R.S.A., Section 349 Subsection 9; and
   c. shall be implemented in the following manner:
      Upon initiating the fire in the Biomass Boiler, the 10 hour period shall begin, and shall continue regardless if the fire is removed from the boiler. If during the 10 hour period, Red Shield experiences periods of time (fire in the boiler or not) which are determined by the Department to be unavoidable malfunctions pursuant to 38 M.R.S.A., Section 349 Subsection 9, those periods of time shall not be counted as part of the 10 hour period.

[06-096 CMR 140, BPT and BACT, license A-180-71-AI-A, 2004]

J. CDW Stack Testing

When firing CDW fuel, Red Shield shall stack test for acrolein, antimony, arsenic, cadmium, total chromium, copper, lead, mercury, nickel, selenium, vanadium, hydrogen chloride, and dioxin at the following frequency:

1. two times per calendar year for two years if firing between 25% to 50% CDW on an annual basis,

2. one time per year for two years if usage drops to between 10%-25% on an annual basis, and
3. no additional stack testing if usage goes below 10% on an annual basis.

The Department shall review the stack test results to determine if additional future stack testing is required.
[A-180-71-AP-A, 2006]
Enforceable by State-only

K. Emission Limit Compliance Demonstration

1. Red Shield shall conduct PM emission testing to demonstrate compliance at least once every two calendar years on the Biomass Boiler.
2. Compliance with the NO_X lb/MMBtu emission limit shall be on a 24-hour block average basis and demonstrated by means of a NO_X CEMs operated in accordance with the applicable requirements in 06-096 CMR 117 and 40 CFR Part 60. The NO_X lb/hr limit shall be demonstrated in accordance with an approved 40 CFR Part 60 Appendix A method(s) upon request.
3. Compliance with CO lb/MMBtu emission limit shall be on a 30-day rolling average and demonstrated by means of CO CEMs operated in accordance with MEDEP approved procedures. The CO lb/hr limit shall be demonstrated in accordance with an approved 40 CFR Part 60 Appendix A method(s) upon request.
4. Compliance with the SO_2 lb/hr limits shall be demonstrated by either recordkeeping documenting the sulfur content of the fuels in conjunction with firing rates, or in accordance with an approved 40 CFR Part 60, Appendix A method(s) or other approved method(s).
5. Compliance with the VOC lb/hr limits shall be demonstrated by testing in accordance with 40 CFR Part 60, Appendix A, method 25 or 25A upon request thereafter.
6. Compliance with the opacity limit shall be demonstrated by means of a continuous opacity monitoring system (COM) operated in accordance with 06-096 CMR 117 and 40 CFR Part 60. Red Shield shall meet the monitoring requirements of 40 CFR Part 60.13 with regard to the sampling frequency of the COM.
7. Compliance with the lead lb/hr limits shall be demonstrated by testing in accordance with 40 CFR Part 60, Appendix A methods or other approved method(s).

[06-096 CMR 140, BPT and BACT, license A-180-71-AL-A, 2005]

L. Stack

Emissions from the Biomass Boiler shall exhaust through a stack which shall be at least 135 feet above ground level. [06-096 CMR 140, BPT and BACT, license A-180-71-AI-A, 2004]

(16) **Riley Power Boiler**

A. Red Shield is licensed to operate the Riley Boiler which shall not exceed a heat input capacity of 245 MMBtu/hr. Compliance with the heat input capacity shall be documented through fuel flow meter records and the oil Btu value. [06-096 CMR 140, BPT and BACT, license A-180-71-Z-A, 1999]

B. Red Shield is licensed to fire transportation grade diesel with a sulfur content not to exceed 0.05% in the Riley Boiler. Red Shield shall not exceed a total fuel use of 1,600,000 gallons of diesel fuel oil for the Riley Boiler (equates to annual capacity factor of 10%) on a 12 month rolling basis. Red Shield shall maintain records of monthly and 12 month rolling total fuel use indicating the quantity of fuel consumed (gallons) and the percent sulfur content of the fuel oil, demonstrated by purchase records from the supplier. [06-096 CMR 140, BPT and BACT, license A-180-71-Z-A, 1999].

C. Emissions from the Riley Boiler shall not exceed the following limits:

Pollutant	Lb/MMBtu	Compliance Method
PM	0.03	Stack Test (upon request)
NO_X	0.2	Stack Test (upon request)

Pollutant	lb/hr	Compliance Method
PM	7.35	Stack Test (upon request)
PM_{10}	7.35	Stack Test (upon request)
SO_2	12.89	Fuel sulfur content receipts
NO_X	49.0	Stack Test (upon request)
CO	9.07	Stack Test (upon request)
VOC	0.46	Stack Test (upon request)

[BACT, license A-180-71-Z-A, 1999 and 06-096 CMR 140, BPT]

D. Red Shield shall operate the Riley Boiler such that the visible emissions from the stack do not exceed 20% opacity on a six (6) minute block average basis, except for no more than one 6 minute block average in a three hour period. [06-096 CMR 101]

E. Red Shield shall operate the periodic monitor to record the following for the Riley Boiler:

	Record
Fuel Oil Flow	Continuously

[06-096 CMR 140, BPT and BACT, license A-180-71-Z-A, 1999]

(17) **Gas Turbine**

A. Red Shield is licensed to operate the 9.5 MW natural gas fired turbine. Exhaust from the Gas Turbine shall vent through an 80 foot stack. [06-096 CMR 140, BPT and BACT, license A-180-71-AF-A, 2002]

B. Turbine Operation
Red Shield shall operate the gas turbine for no more than 2628 hours/year on a 12 month rolling total basis (based on modeling the gas turbine exhaust out its dedicated stack rather than through the now non-existent tissue machines). Compliance shall be documented through operating records.
[06-096 CMR 140, BPT and BACT, license A-180-71-AF-A, 2002]

C. Red Shield shall meet the following requirements for the 9.5 MW natural gas-fired turbine generator.

Pollutant	lb/MMBtu	Compliance Method
PM	0.08	Stack Test (upon request)

Pollutant	ppmv	Compliance Method
NO_X	32 dry basis 15% O_2	Stack Test (upon request)
CO	32 dry basis 15% O_2	Stack Test (upon request)

Pollutant	lb/hr	Compliance Method
PM	0.76	Stack Test (upon request)
PM_{10}	0.76	Stack Test (upon request)
SO_2	0.39	Fuel Sulfur Content Recordkeeping
NO_X	15.9	Stack Test (upon request)
CO	9.71	Stack Test (upon request)
VOC	4.32	Stack Test (upon request)

[BACT, license A-180-71-AF-A, 2002, 06-096 CMR 103, and 06-096 CMR 140, BPT]

D. Visible emissions from the Gas Turbine stack shall not exceed 10% on a 6-minute block average basis except for no more than one six-minute block average basis in a 3-hour period. [06-096 CMR 101]

E. Additional NO_X requirements

1. A follow-up to the initial NO_X emission stack test shall be performed by the end of the year in which it next operates for production purposes. After the second successful stack test for NO_X and upon approval from the Department, additional NO_X testing shall be required only when requested by the Department.
2. Red Shield shall develop parameter monitoring indicative of NO_X emissions to be approved by the Department. The parameter monitoring shall be submitted within 12 months after the Gas Turbine's return to service.
3. Red Shield shall reevaluate the NO_X emission limit within 18 months of the Gas Turbine's return to service and submit an analysis of the NO_X data to the Department. Upon review of the submittal, the Department may require a more stringent NO_X emission limit.

[06-096 CMR 140, BPT and BACT, license A-180-71-AF-A, 2002]

F. Red Shield shall comply with the requirements for the Gas Turbine in 40 CFR Part 60, Subpart GG, New Source Performance Standards for Stationary Gas Turbines, as appropriate, including the following:

1. The Department has waived the requirement in 40 CFR, Part 60, Subpart GG, §60.334(b)(2) to sample and record the nitrogen content of the fuel.

2. The Department approves the following alternative fuel sampling to the requirement in 40 CFR, Part 60, Subpart GG, §60.334(b)(2) regarding the sulfur content of the fuel.

   (a) The facility submitted, on Aug. 29, 2003, natural gas sulfur content analyses from Maritimes and Northeast Pipeline's Baileyville facility documenting that the sulfur fuel content test results for the first six months were less than 50% of the sulfur limit (as expressed in 40 CFR 60 Subpart GG), therefore Red Shield was able to reduce the monitoring frequency to one measurement per quarter, instead of twice monthly, for at least six quarters. Red Shield did monitor four quarters, not six, due to the gas turbine being taken off-line. None of the sulfur fuel content test results mentioned above showed sulfur content greater than 50% of the sulfur limit in 40 CFR 60 Subpart GG.

   (b) The facility submitted a letter to EPA on December 7, 2004 and stated that the conditions of paragraph (a) above were met, except for monitoring only four quarters, not six. The sulfur dioxide emissions (calculated using the sulfur fuel content of the past four quarters) represent compliance with the sulfur dioxide emission limits in 40 CFR, Part 60, Subpart GG, §60.333, and the facility requested to

reduce sulfur fuel content monitoring frequency to twice per year, during the first and third calendar quarters. This was granted since the testing schedule coincides with that of the supplier thus reducing testing costs for a source that is not currently operating.

(c) Should any measurement taken under paragraphs (a) or (b) above indicate non-compliance with 40 CFR 60 Subpart GG, Red Shield, upon learning of said non-compliance, shall immediately begin monitoring fuel content weekly. The facility shall, within 14 days of learning of said non-compliance, notify the Department, such that the custom fuel monitoring schedule can be reexamined.

(d) Within 14 days of learning of any change in fuel supply or significant change in fuel quality, the facility shall notify the Department of the fuel supply change, such that the custom fuel monitoring schedule can be reexamined. From the time of said notification, until a determination regarding the custom fuel monitoring schedule is made by the Department, fuel shall be monitored weekly.

(e) For the purposes of paragraphs (a) - (d), gas samples may be collected at a place in the gas transmission line either upstream or downstream of the site where the turbine is located provided no new gas enters the line between the offsite sampling location and the turbine. In addition, Red Shield may use the results of sampling provided by a third party, for example, its natural gas supplier or the pipeline operator, if the sampling has been performed in accordance with an EPA-approved method and otherwise meets the requirements of this paragraph.

3. Red Shield shall submit semi-annual excess emission reports to the Department and EPA, even if there are no excess emissions to report for the preceding six-month period. The reporting time is initiated based on the date of initial start-up. [40 CFR 60.7(c) and 40 CFR, Part 60, Subpart GG, §60.334(c)]

G. VOC Records
Within 6 months of the Gas Turbine's return to service, Red Shield shall develop and submit a plan for Department approval which describes the documentation to be used to show that VOC emissions from this unit shall remain in compliance with the 35.63 tpy net emissions increase, on a 12 month rolling total. [06-096 CMR 140, BPT and BACT, license A-180-71-AF-A, 2002]

H. Red Shield shall operate the periodic monitor to record the following for the Gas Turbine:

	Record
Natural Gas Flow	Continuously

[06-096 CMR 140, BPT and BACT, license A-180-71-AF-A, 2002]

(18) **Wood Chip Handling and Fugitive Emissions**

A. Red Shield shall control the chip handling operations (silos and associated conveyors with cyclones). The opacity from the cyclones shall not exceed 20% on a six minute block average basis, except for no more than one (1) six minute block average in a 1-hour period. [06-096 CMR 101]

B. Red Shield shall keep a maintenance log recording the date and location of all cyclone failures as well as all routine maintenance. [06-096 CMR 140, BPT]

C. Visible emissions from fugitive sources, including wood chips, shall not exceed 20% opacity, except for no more than five (5) minutes in any 1 hour period. Compliance shall be determined by an aggregate of the individual fifteen (15) second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101, license A-180-71-AI-A]

(19) **Digester Systems**

The digester systems shall vent into the LVHC collection and control system as specified in 06-096 CMR 124 and 40 CFR Part 63, Subpart S. Red Shield shall comply with the applicable recordkeeping and reporting requirements of 06-096 CMR 124 and 40 CFR Part 63, Subpart S for the digesters and LVHC system. [06-096 CMR 124 and 40 CFR Part 63, Subpart S]

(20) **Brownstock Washer Systems**

The HVLC brownstock washer collection and control system for TRS emissions from the brownstock washers shall consist of tight fitting hoods on the #1 digester brown stock washers, an HVLC collection system, and incineration of the collected gases in the lime kiln. The HVLC brownstock washer collection and control system shall meet the applicable requirements of 06-096 CMR 124 and 40 CFR Part 63, Subpart S. [06-096 CMR 124 and 40 CFR Part 63, Subpart S]

(21) **Evaporators**

The evaporators shall vent into the LVHC collection and control system as specified in 06-096 CMR 124 and 40 CFR Part 63, Subpart S. Red Shield shall comply with the applicable recordkeeping and reporting requirements of 06-096

CMR 124 and 40 CFR Part 63, Subpart S for the evaporators and LVHC system. [06-096 CMR 124 and 40 CFR Part 63, Subpart S]

(22) **#4 Recovery Boiler**

A. Red Shield is licensed to operate #4 Recovery Boiler and may fire black liquor, #6 fuel oil, diesel fuel, and/or #2 fuel oil. The #4 Recovery Boiler shall be limited to firing 2.57 MMlb/day of black liquor solids (on a 24 hour average) as fired. Compliance with the lb/day black liquor solids limit shall be documented through fuel flow meter records. [06-096 CMR 140, BPT]

Enforceable by State-only

B. #6 or #2 fuel oil may be fired alone in the #4 Recovery Boiler to generate steam for a total heat input not to exceed 375 MMBtu/hr, demonstrated by fuel flow meter records and heat contents of the fuel oil(s). The sulfur content of the #6 fuel oil, diesel fuel, or #2 fuel oil shall not exceed 0.5% by weight. Records shall be maintained from the fuel supplier documenting sulfur content. The #4 Recovery Boiler shall be limited to firing up to 551,868,945,768 Btu/year from fuel oil based on a 12 month rolling total basis in addition to black liquor. Red Shield shall maintain records of monthly and 12 month rolling total Btu use by the quantity (gallons), type of fuel oil consumed, and the heat content of the fuel (s). [06-096 CMR 140, BPT and A-180-71-AV-M, 2008].

Enforceable by State-only

C. Emissions from the #4 Recovery Boiler shall not exceed the following limits, based on firing 2.57 MMlb/black liquor solids per day as fired, when firing black liquor:

Pollutant	gr/DSCF	ppm	Ave Time	Compliance Method	Origin and Authority
PM	0.028 corrected to 8% O_2	-	-	Stack Test (every other calendar year)	40 CFR Part 63, Subpart MM alternative
SO_2	-	100.0 *** dry basis 8% O_2	24 Hr Block Average	CEM data	06-096 CMR 140,BPT
NO_X	-	150.0 * dry basis 8% O_2	24 Hr Block Average	CEM data	06-096 CMR 138, NO_X RACT

Table continued:

Pollutant	gr/DSCF	ppm	Ave Time	Compliance Method	Origin and Authority
CO	-	500.0 *** dry basis 8% O_2	24 Hr Block Average	CEM data	06-096 CMR 140,BPT
TRS	-	5.0 ** dry basis, corrected to 8% O_2	12 Hr Block Average	CEM data	06-096 CMR 124, TRS

* Per 06-096 CMR 138, Section 3(O), periods of start-up, shutdown, malfunction, and fuel switching are not included in determining 24-hour block averages.

** Per 06-096 CMR 124, Section 5(C)(3)(a), the first two 12-hour block averages in a quarter which exceed the 5.0 ppm TRS limit are not considered violations of 06-096 CMR 124.

*** **Enforceable by State-only**

Pollutant	lb/hr	Compliance Method
PM	34.3	Stack Test (upon request)
PM_{10}	34.3	Stack Test (upon request)
SO_2	143.0	Stack Test (upon request)
NO_X	154.4	Stack Test (upon request)
CO	312.7	Stack Test (upon request)
VOC	17.9	Stack Test (upon request)
TRS	5.4	Stack Test (upon request)

[06-096 CMR 140, BPT]

lb/hr limits **Enforceable by State-only**

D. Emissions from the #4 Recovery Boiler shall not exceed the following limits when firing #6 fuel oil:

Pollutant	lb/hr	Compliance Method
PM	37.4	Stack Test (upon request)
PM_{10}	37.4	Stack Test (upon request)
SO_2	196.5	Stack Test (upon request)
NO_X	188.2	Stack Test (upon request)
CO	312.7	Stack Test (upon request)
VOC	19.4	Stack Test (upon request)

[06-096 CMR 140, BPT] **Enforceable by State-only**

E. Opacity

1. Red Shield shall operate the #4 Recovery Boiler such that the visible emissions from the stack do not exceed 20% opacity on a 6 minute block average basis for 98 percent of all 6 minute block averages on a quarterly basis and 99 percent of all 6 minute block averages on a four consecutive quarter basis. Periods of start-up, shutdown, and malfunctions are included for the purpose of calculating 6 minute block averages over 20%.

2. Red Shield shall implement corrective action, as specified in the start-up, shutdown, and malfunction plan prepared for the #4 Recovery Boiler under 40 CFR Part 63, Subpart MM, §63.866(a) when the average of 10 consecutive 6 minute block averages results in a measurement greater than 20% opacity.

[06-096 CMR 101]

F. Red Shield shall continue to operate the electrostatic precipitator (ESP) on emissions from the #4 Recovery Boiler. [06-096 CMR 140, BPT]

G. Red Shield shall operate, at a minimum, the number of ESP fields for which compliance with its licensed particulate matter limits has been demonstrated. Upon written notification to the Department, and in accordance with the Bureau of Air Quality Air Emission Compliance Test Protocol, Red Shield may perform additional particulate emission testing to determine compliance with alternative operating scenarios, but under no circumstances shall Red Shield be relived of its obligation to meet its licensed emission limits. [06-096 CMR 140, BPT]

H. Red Shield shall operate and maintain SO_2 (ppm), NO_X (ppm) and O_2 (ppm), CO (ppm), and TRS (ppm) CEMs and a continuous opacity monitor on the #4 Recovery Boiler in accordance with 06-096 CMR 117 and 40 CFR, Part 63, Subpart MM, §63.864(d). [06-096 CMR 117]

I. Red Shield shall operate the periodic monitor to record the following for the #4 Recovery Boiler:

	Record
Black Liquor Solids Fired	Continuously

[06-096 CMR 140, BPT] **Enforceable by State-only**

J. Red Shield is subject to and shall comply with the applicable requirements of 40 CFR Part 63, Subpart A and Subpart MM for the #4 Recovery Boiler. [40 CFR Part 63, Subpart MM]

(23) **#4 Smelt Dissolving Tank**

A. Emissions from the #4 Smelt Dissolving Tank shall be limited to the following:

Pollutant	lb/ton black liquor solids	lb/hr	Compliance Method	Origin and Authority
PM	0.12	-	Stack Test (in 2010 and every other calendar year thereafter)	40 CFR Part 63, Subpart MM alternative
	-	7.55*	Stack Test (in 2010 and every other calendar year thereafter)	06-096 CMR 140
PM_{10}	-	7.55*	Stack Test (upon request)	06-096 CMR 140
SO_2	-	3.33*	Stack Test (upon request)	06-096 CMR 140
NO_X	-	0.06*	Stack Test (upon request)	06-096 CMR 140
CO	-	0.06*	Stack Test (upon request)	06-096 CMR 140
VOC	-	0.06*	Stack Test (upon request)	06-096 CMR 140
TRS	0.0168	1.06*	Stack Test (in 2010 and every other calendar year thereafter)	06-096 CMR 124

* **Enforceable by State-only**

B. Under normal operations, the #4 smelt dissolving tank shall exhaust through the scrubber. All periods of scrubber by-pass shall be recorded and reported to the Department as specified in Standard Condition (10), with reasons for the by-pass events. [06-096 CMR 140, BPT]

C. Red Shield may utilize weak wash or a caustic/water solution as the smelt tank scrubber media. [06-096 CMR 140, BPT] **Enforceable by State-only**

D. Red Shield shall calibrate, maintain, and operate a continuous periodic monitoring system to record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period pursuant to 40 CFR Part 63, Subpart MM, §63.864(e)(10).
[40 CFR Part 63, Subpart MM]

E. Red Shield is subject to and shall comply with the applicable requirements of 40 CFR Part 63, Subpart A and Subpart MM for the #4 smelt tank. [40 CFR Part 63, Subpart MM]

(24) **Recausticizing Slaker System**

A. Red Shield shall operate a Goslin slaker unit that includes a Croll-Reynolds jet venturi fume scrubber water induction system as the main slaker unit. [06-096 CMR 140, BPT and A-180-71-AE-M, 2002]

B. Red Shield may operate the original slaker as back-up to the Goslin water induced slaker.
   1. The original slaker shall be equipped with a scrubber. [06-096 CMR 140, BPT]
   2. Opacity from the original slaker shall be limited to 20% on a 6 minute block average, except for no more than 1 six minute block average in a 1 hour period. [06-096 CMR 101]
   3. Red Shield shall operate the periodic monitor to record the following for the original slaker unit: [06-096 CMR 140, BPT]

	Record
Media flow	Once per shift

(25) **Lime Kiln**

A. Red Shield is licensed to operate the Lime Kiln and may fire propane as a pilot flame, #6 fuel oil, specification waste oil, and natural gas.
   1. The lime kiln is limited to a maximum oil firing rate of 480 gallons per hour of #6 fuel oil. When specification waste oil is fired, Red Shield shall be limited to 526 gallons/hr with a sulfur content not to exceed 1%. **Enforceable by State-only**
   2. The sulfur content of the oil fired in the Lime Kiln shall not exceed 2.0% by weight. Red Shield shall maintain records of monthly and 12 month rolling total fuel use indicating the quantity of #6 fuel oil consumed (gallons) and the percent sulfur content of the fuel oil, demonstrated by purchase records from the supplier.
   3. Red Shield shall maintain records of monthly and 12 month rolling total fuel use indicating the quantity of specification waste oil consumed (gallons). The analytical results from a representative sample of waste oil shall be kept on site, demonstrating that the waste oil meets 'specification' requirements set forth in 06-096 CMR 860, and the sulfur content limit.

[06-096 CMR 140, BPT, and license A-180-71-AA-M]

B. Emissions from the Lime Kiln shall not exceed the following limits:

Pollutant	gr/DSCF	ppm	Ave Time	Compliance Method	Origin and Authority
PM	0.13 corrected to 10% O_2	-	-	Stack Test (By September 21, 2010 firing natural gas and every other year thereafter on the current fuel)	40 CFR Part 63, Subpart MM alternative, A-180-71-BB-A (Sept. 21, 2009)
NO_X	-	170 dry basis, corrected to 10% O_2	1 Hr Average	Stack Test (By September 21, 2010 firing natural gas and once every five years thereafter on the current fuel)	06-096 CMR 138, NO_X RACT, A-180-71-BB-A (Sept. 21, 2009)
TRS	-	20 * dry basis corrected to 10% O_2	12 Hr Block Average	CEM data	06-096 CMR 124, TRS

* Per 06-096 CMR 124, Section 5(C)(3)(b), the first four 12-hour block averages in a quarter which exceed the 20.0 ppm TRS limit are not considered violations of 06-096 CMR 124.

Pollutant	lb/hr	Compliance Method
PM	32.9	Stack Test (every other calendar year)
PM_{10}	32.9	Stack Test (upon request)
SO_2	7.1	Stack Test (upon request)
NO_X	36.0	Stack Test (upon request)
CO	81.7	Stack Test (upon request)
VOC	1.2	Stack Test (upon request)
TRS	5.3	Stack Test (upon request)

[06-096 CMR 140, BPT]

C. The Lime Kiln shall be the primary incinerator for the LVHC gases (NCGs) generated by the pulp mill, with #5 Power Boiler and the Biomass Boiler as back-up. Primary shall be defined as greater than 80% of the total incineration time on an annual basis. If a kiln failure occurs, Red Shield shall incinerate the LVHC gases in #5 Power Boiler or the Biomass Boiler.

Records shall be maintained to document compliance with the 80% LVHC gas incineration time in the Lime Kiln. [06-096 CMR 124, TRS]

D. Red Shield shall operate the venturi scrubber on the Lime Kiln. Red Shield shall maintain a minimum of 17 inches in pressure drop with a 450 GPM recycle on the lime kiln scrubber. [06-096 CMR 140, BPT]

E. Red Shield shall operate and maintain TRS (ppm) and O_2 (ppm) CEMs in accordance with 06-096 CMR 117. [06-096 CMR 117]

F. Red Shield shall operate a periodic monitor continuously to record the NCG incineration time in the Lime Kiln and total NCG incineration time. [06-096 CMR 140, BPT]

G. Red Shield shall calibrate, maintain, and operate a continuous periodic monitoring system to record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period pursuant to 40 CFR Part 63, Subpart MM, Section 63.864(e)(10). [40 CFR Part 63, Subpart MM]

H. Red Shield is subject to and shall comply with the applicable requirements of 40 CFR Part 63, Subpart A and Subpart MM for the lime kiln. Per Subpart MM, §63.862(a)(1)(ii)(D), this includes re-establishing the alternative particulate emission limit if either the air pollution control system is modified or the unit is shut down for more than 60 consecutive days. [40 CFR Part 63, Subpart MM]

(26) **Lime Storage Silos**

A. Red Shield shall control the three lime silos and associated pneumatic conveyors with baghouses. The opacity from each baghouse shall not exceed 10% on a six minute block average basis, except for no more than one(1) six minute block average in a 1-hour period. Red Shield shall investigate, and if necessary, take corrective action if visible emissions from the baghouse exceeds 5% opacity. [06-096 CMR 101]

B. Red Shield shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. [06-096 CMR 140, BPT]

(27) **Saltcake Storage Silo**

A. Red Shield shall control the saltcake storage silo and associated pneumatic conveyors with a baghouse. The opacity from the baghouse shall not exceed 10% on a six minute block average basis, except for no more than one(1) six

minute block average in a 1-hour period. Red Shield shall investigate, and if necessary, take corrective action if visible emissions from the baghouse exceeds 5% opacity. [06-096 CMR 101]

B. Red Shield shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. [06-096 CMR 140, BPT]

(28) **Bleach Plant Operations (bleaching and ClO_2 generation)**

A. Total chlorine (Cl_2) emissions from the Red Shield bleach plant operations shall not exceed 3.0 lb/hr. [06-096 CMR 122] **Enforceable by State-only**

B. Total chlorine dioxide (ClO_2) emissions from the Red Shield bleach plant operations shall not exceed 3.0 lb/hr. [06-096 CMR 122] **Enforceable by State-only**

C. Red Shield shall not utilize sodium hypochlorite as a primary bleaching agent in the bleach plant system. [06-096 CMR 134, VOC RACT and 40 CFR Part 63, Subpart S§63.445]

D. Red Shield shall operate the bleach plant scrubber system when the bleach plant and ClO2 generation plant are in operation, in accordance with the requirements of 40 CFR Part 63, Subpart S, §63.445. [40 CFR Part 63, Subpart S, §63.445 and 06-096 CMR 122]

E. Red Shield shall operate and maintain a continuous monitoring system (CMS) on the bleach plant scrubber as required by 40 CFR Part 63, Subpart S, §63.453 and approved by the Department and/or EPA as appropriate. [40 CFR Part 63, Subpart S, §63.453]

F. Red Shield shall operate the periodic monitors and record the following for the ClO_2 generation and bleach plant scrubbers:

	Record
Recycle flow	Once per shift
Pressure Drop	Once per shift

[06-096 CMR 122]

G. For the purposes of 06-096 CMR 122, 'operate' the periodic monitors is defined as to have calibrated and in use for at least 90% of the time during each quarter. Red Shield shall maintain records to demonstrate compliance with the 90% uptime. [06-096 CMR 122]

H. Red Shield shall test the ClO_2 and Cl_2 emissions from the bleach plant scrubber system once every five calendar years. [38 M.R.S.A. §598, cub-section 2 and A-180-71-AY-M, 2009] **Enforceable by State-only**

I. If at any time, Red Shield chooses to use an alternative scrubbing media other than white liquor in either scrubber tower, Red Shield shall notify the DEP prior to utilization and shall conduct compliance tests within 60 days to demonstrate that the emission limits specified in this license are met. This alternative media must comply with 06-096 CMR 122. [06-096 CMR 122] **Enforceable by State-only**

J. Red Shield shall satisfy all applicable monitoring, recordkeeping, and reporting requirements found in 40 CFR Part 63, Subpart S, §63.453, 63.455, and 63.457. [40 CFR Part 63, Subpart S, §63.453, 63.455, and 63.457]

(29) **Miscellaneous TRS Sources**

Red Shield shall continue to implement the Best Practical Treatment proposal for the control of TRS from miscellaneous sources. The BPT included the following: continue to collect and treat the emissions from the salt cake mix tanks with the smelt dissolving tank scrubber, minimize the emissions from the 53% and 68% black liquor tanks through reviewing and possibly changing the inlet piping and tank overflow designs and reducing liquor temperature. The emissions shall be periodically retested and reassessed to determine if the sources still continue to be considered miscellaneous.
[06-096 CMR 124, TRS] **Enforceable by State-only**

(30) **Parts Washers**

Red Shield shall be subject to the applicable requirements in *Solvent Cleaners*, 06-096 CMR 130 (last amended June 28, 2004) if the solvent material used at the facility is replaced with one that meets the applicability of 06-096 CMR 130 (note: the current parts washers are exempt due to solvents containing less than or equal to 5% VOC by weight). [06-096 CMR 130]

(31) **Wastewater Treatment Plant**

A. Red Shield shall satisfy all applicable monitoring requirements for the waste water treatment plant as a HAP control option found in 40 CFR Part 63, Subpart S, §63.453(j). [40 CFR Part 63, Subpart S, §63.453]

B. To meet the requirements of 06-096 CMR 124, Red Shield shall comply with the NPDES permit and shall meet the requirements stated in condition (31)(A) above. [06-096 CMR 124, TRS BPT] **Enforceable by State-only**

(32) **Back-up Generators**

A. The back-up generators shall not exceed the following emission rates:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_X (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Total Services Sump	0.4	0.4	0.07	5.7	1.2	0.5
Boiler Bldg. Pump	0.4	0.4	0.07	6.4	1.4	0.5
Power House Pump	0.4	0.4	0.07	5.9	1.3	0.5
#4 Turbine Gen.	0.4	0.4	0.06	5.3	1.1	0.4
Biomass Gen.	0.42 lb/hr 0.12 MMBtu/hr	0.42	0.54	20.42	5.46	1.13

Compliance shall be determined by stack tests upon request of the Department.
[06-096 CMR 140, BPT] **Enforceable by State-only**

B. Opacity from each of the generators shall not exceed 30% on a 6 minute block average, except for no more than two (2) six minute averages in a 3 hr block period. [06-096 CMR 101]

C. The back-up generators shall each not exceed 500 hours of operation per year, based on a 12 month rolling total. Records shall be maintained documenting usage for each generator on a monthly and 12 month rolling total. [06-096 CMR 140, BPT]

D. Sulfur content of the fuel used in the back-up generators shall not exceed 0.05%. Fuel receipts shall be maintained documenting sulfur content. [06-096 CMR 140, BPT] **Enforceable by State-only**

(33) **Screw Press Steam Generator**

A. The screw press steam generator shall not exceed the following emission rates:

	lb/MMBtu	**lb/hr**	**Compliance Method**
PM	0.12*	0.5	Stack Test (upon request)
PM_{10}	--	0.5	Stack Test (upon request)
SO_2	--	1.26	Stack Test (upon request)
NO_X	--	18.5	Stack Test (upon request)
CO	--	4.0	Stack Test (upon request)
VOC	--	1.5	Stack Test (upon request)

* PM lb/MMBtu limit based on 06-096 CMR 103
[06-096 CMR 140, BPT] **Enforceable by State-only**

B. Opacity from the screw press steam generator shall not exceed 30% on a 6 minute block average, except for no more than two (2) six minute averages in a 3 hr block period. [06-096 CMR 101]

C. Sulfur content of the #2 fuel used in the screw press steam generator shall not exceed 0.3%. Fuel receipts shall be maintained documenting sulfur content. [06-096 CMR 140, BPT]

(34) **Low Volume, High Concentration Collection and Control System**

A. Each digester and evaporator system shall be vented to the LVHC system when the units are in use as specified in 40 CFR Part 63, Subpart S and 06-096 CMR 124, with the Lime Kiln as the primary incineration unit and the #5 Power Boiler as the back-up incineration unit. [40 CFR Part 63, Subpart S and 06-096 CMR 124]

B. Red Shield shall operate the LVHC system as required by 06-096 CMR 124, including but not limited to, no venting of TRS from the LVHC or associated equipment that is required to be controlled which exceeds 40 minutes in duration or contributes to an aggregate TRS venting of more than 1% of quarterly operating time.
[06-096 CMR 124]

C. Red Shield shall operate the LVHC system as required by 40 CFR Part 63, Subpart S, including but not limited to, the following:

1. The LVHC system shall be enclosed and vented into a closed-vent system per 40 CFR Part 63, Subpart S, §63.443 and 63.450.

2. Periods of excess emissions reported under 40 CFR Part 63, Subpart S, §63.455 shall not be a violation of §63.443 (c) and (d) provided that the time of excess emissions (excluding startup, shutdown, or malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed the following levels: 1% for control devices used to reduce the total HAP emissions from the LVHC system and 4% for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

[40 CFR Part 63, Subpart S]

D. Red Shield shall comply with the applicable LVHC system recordkeeping and reporting requirements of 40 CFR Part 63, Subpart S and 06-096 CMR. [40 CFR Part 63, Subpart S and 06-096 CMR 124]

(35) **High Volume Low Concentration Collection and Control System**

A. Red Shield shall operate an HVLC control and collection system to meet the requirements as specified in 06-096 CMR 124 and 40 CFR Part 63, Subpart S. This shall include the atmospheric knotters/washers going to the pressure knotters/screens closed system, tight fitting hoods on the digester brownstock washers, and operation of an HVLC system to incinerate the gases in the lime kiln.

B. The HVLC collection system shall maintain a 96% collection and control uptime based on quarterly brownstock washer system operating time on a total mass weighted basis.

C. Red Shield shall comply with the applicable HVLC system recordkeeping and reporting requirements of 40 CFR Part 63, Subpart S and 06-096 CMR 124.

[40 CFR Part 63, Subpart S and 06-096 CMR 124]

(36) **Closed Collection and Vent System Monitoring**

A. For equipment required to be inspected per 40 CFR Part 63, Subpart S, §63.453(k) and (l), Red Shield shall exempt any closed vent system, fixed roof cover, or enclosure from 30-day and annual inspection, monitoring and repair requirements if it is determined that personnel performing the inspection or repair would be exposed to an imminent or potential danger, or the equipment could not be inspected without elevating the inspection personnel more than 6 feet above a supported surface. The site-specific monitoring plan must identify exempted equipment and describe how the equipment will be inspected and/or repaired during periods determined safe which must be at least once during each license term. [40 CFR Part 63, Subpart S, §63.453]

B. Red Shield shall perform inspections in accordance with 40 CFR Part 63, Subpart S, §63.453(k) and (l) once during each calendar month with at least 15 days elapsed time between inspections. [40 CFR Part 63, Subpart S, §63.453]

(37) **Condensate Collection System**

A. Red Shield shall collect pulping process condensates from the digester systems, evaporator system, HVLC collection system, and LVHC collection system that contain a total HAP mass of 11.1 lbs methanol per ton of oven-dried pulp or greater on a 30 day rolling average. Specific streams that shall be routinely collected to demonstrate compliance include the #1 digester relief condenser, the #2 digester relief condenser, the Zaremba evaporators' 5th

effect, the Zaremba evaporators' condenser, the Zaremba evaporators' seal tank, the Unitech evaporators' 5th effect, and the Unitech evaporators' 6th effect per 40 CFR Part 63, Subpart S, §63.336(b). [40 CFR Part 63, Subpart S, §63.446]

B. Red Shield shall discharge the pulping process condensates below the liquid surface of a biological treatment system and treat the pulping process condensates to remove 10.2 lb HAP per ton of oven-dried pulp. [40 CFR Part 63, Subpart S, §63.446]

C. Red Shield shall operate and maintain a continuous monitoring system (CMS) on the condensate collection system, including monitoring collection flows and monitoring the biological treatment, as required by 40 CFR Part 63 Subpart S, §63.453 and approved by the Department. [40 CFR Part 63, Subpart S, §63.453]

(38) **Startup, Shutdown, Malfunction Plan (SSM plan)**

Red Shield shall develop and maintain on-site a startup, shutdown, and malfunction plan that complies with the requirements of 40 CFR Part 63 Subpart A, §63.6(e)(3). Emission units at the facility subject to NESHAPS which reference the SSM plan requirement shall be included. [40 CFR Part 63]

(39) **CEM and COM Requirements**

A. All CEMS and COMS required by this license shall meet the sampling and performance criteria specified in 40 CFR Part 51 Appendix P, and shall be operated in accordance with the appropriate requirements of 40 CFR Part 60 Appendix F, and 06-096 CMR 117, including.
   1. Conducting Relative Accuracy Testing (RATA) and/or Performance Audits in accordance with 06-096 CMR 117, and
   2. Developing and maintaining an updated quality assurance plan for all CEMS and COMS in accordance with 40 CFR Part 60, Appendix F and 06-096 CMR 117.

   [06-096 CMR 117 and 40 CFR Part 60]

B. For all of the continuous emission monitors (CEMS) and continuous opacity monitors (COMS) required by this license, the licensee shall maintain records of the most current six year period and the records shall include:
   1. Documentation which shows monitor operational status during all source operating time, including specifics for calibration and audits; [06-096 CMR 117]
   2. Documentation that all CEMS and COMS are continuously accurate, reliable and operated in accordance with 06-096 CMR 117, 40 CFR Part

51, Appendix P, and 40 CFR Part 60, Appendices B and F; [06-096 CMR 117 and 40 CFR Part 60]

3. Records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS and COMS as required by 40 CFR Part 51 Appendix P. [06-096 CMR 117 and 40 CFR Part 51]

(40) **Quarterly Reporting**

Red Shield shall submit a Quarterly Report to the Bureau of Air Quality within 30 days after the end of each calendar quarter, detailing the following for the control equipment, parameter monitors, Continuous Emission Monitoring Systems (CEMS) and/or Continuous Opacity Monitoring Systems (COMS) required by this license:

A. All control equipment downtimes and malfunctions;
B. All CEMS or COMS downtimes and malfunctions;
C. All parameter monitor downtimes and malfunctions;
D. All events of excess emissions and operational limitations set by this Order, Statute, state or federal regulations, as appropriate. The following information shall be reported for each excess emissions event;
   1. Standard exceeded;
   2. Date, time, and duration of excess emissions event;
   3. Amount of air contaminant emitted in excess of the applicable emission standard expressed in the units of the standard;
   4. A description of what caused the excess emissions event;
   5. The strategy employed to minimize the excess emissions event; and
   6. The strategy employed to prevent reoccurrence.
E. A report certifying there were no excess emissions, if that is the case.

[06-096 CMR 117]

(41) **Semiannual Reporting**

Red Shield shall submit semiannual reports every six months to the Bureau of Air Quality. The semiannual reports are due on July 30th and Jan 30th of each year with the initial semiannual report due July 30, 2010 (this initial semiannual report shall include any remaining dates in 2009 from the date of license issuance). The semiannual report shall be considered on-time if the postmark of the submittal is before the due date or if the report is received by the DEP within seven calendar days of the due date.

A. Each semiannual report shall include a summary of the periodic monitoring required by this license.
B. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

[06-096 CMR 140]

(42) **Annual Compliance Certification**

Red Shield shall submit an annual compliance certification to the Department in accordance with Standard Condition (13) of this license. The initial annual compliance certification is due January 30 of each year with the initial annual certification due January 30, 2011 (this initial annual report shall include any remaining dates in 2009 from date of license issuance). The annual compliance certification shall be considered on-time if the postmark of the submittal is before the due date or if the report is received by the DEP within seven calendar days of the due date.

Certification of compliance is to be based on the stack testing or monitoring data required by this license. Where the license does not require such data, or the license requires such data upon request of the Department and the Department has not requested the testing or monitoring, compliance may be certified based upon other reasonably available information such as the design of the equipment or applicable emission factors. [06-096 CMR 140]

(43) **Annual Emission Statement**

In accordance with 06-096 CMR 137, Red Shield shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

A. A computer program and accompanying instructions supplied by the Department; or
B. A written emission statement containing the information required in 06-096 CMR 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017 Phone: (207) 287-2437

[06-096 CMR 137]

(44) **Air Toxics Emission Statement**

In accordance with 06-096 CMR 137, Red Shield shall report in a timeframe designated to the Department, the information necessary to accurately update the State's toxic air pollutants emission inventory by means of a written emission statement containing the information required in 06-096 CMR 137.

Reports and questions on the Air Toxics emissions inventory portion should be directed to:

Attn: Toxics Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017 Phone: (207) 287-2437

[06-096 CMR 137]

(45) **General Applicable State Regulations**

Red Shield is subject to the State regulations listed below.

Origin and Authority	Requirement Summary	Enforceability
06-096 CMR 102	Open Burning	-
06-096 CMR 109	Emergency Episode Regulation	-
06-096 CMR 110	Ambient Air Quality Standard	-
06-096 CMR 116	Prohibited Dispersion Techniques	-
38 M.R.S.A. §585-B, sub-§5	Mercury Emission Limit	**Enforceable by State-only**

(46) **Units Containing Ozone Depleting Substances**

When repairing or disposing of units containing ozone depleting substances, Red Shield shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioning units in Subpart B. An example of such units include industrial process refrigeration units. [40 CFR, Part 82, Subpart F]

(47) **Asbestos Abatement**

When undertaking Asbestos abatement activities, Red Shield shall comply with the Standard for Asbestos Demolition and Renovation 40 CFR Part 61, Subpart M. [40 CFR Part 61, Subpart M]

(48) **Risk Management Plan**

Red Shield is subject to all applicable requirements of 40 CFR Part 68 (Risk Management Plan). [40 CFR Part 68]

(49) **Certification by a Responsible Official**

All application forms, reports, and compliance certifications required by this license to be submitted to the Bureau of Air Quality must be signed by a responsible official. [06-096 CMR 140]

(50) **Expiration of a Part 70 license**

Red Shield shall submit a complete Part 70 renewal application at least 6 months prior, but no more than 18-months prior, to the expiration of this air license. Pursuant to Title 5 MRSA §10002, all terms and conditions of the Part 70 license shall remain in effect until the Department takes final action on the renewal of the Part 70 license An existing source submitting a complete renewal application under 06-096 CMR 140 prior to the expiration of the Part 70 license will not be in violation of operating without a Part 70 license.

(51) **New Source Review**

Red Shield is subject to all previous New Source Review (NSR) requirements summarized in this Part 70 air emissions license and remain in effect even if this 06-096 CMR 140 Air Emissions License, A-180-70-I-R, expires.

DONE AND DATED IN AUGUSTA, MAINE THIS 2nd DAY OF December, 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brooks for
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 21, 1997
Date of application acceptance: October 27, 1997

Date filed with the Board of Environmental Protection _____

This Order prepared by Kathleen E. Tarbuck, Bureau of Air Quality.

FILED
DEC - 3 2009
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE