STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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DEPARTMENT ORDER

State of Maine and **NEWSME Landfill Operations, LLC** **d/b/a Juniper Ridge Landfill** **Penobscot County** **Old Town, Maine** **A-921-70-F-R**	**Departmental** **Findings of Fact and Order** **Part 70 Air Emission License** **Renewal**

FINDINGS OF FACT

After review of the Part 70 License renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	State of Maine and NEWSME Landfill Operations, LLC d/b/a Juniper Ridge Landfill
LICENSE TYPE	Part 70 License Renewal
NAICS CODES	562212
NATURE OF BUSINESS	Solid Waste Landfill
FACILITY LOCATION	Old Town, Maine

Juniper Ridge Landfill (JRL) is a solid waste disposal facility currently owned by the State of Maine (Bureau of General Services) and operated by NEWSME Landfill Operations, LLC.

JRL has the potential to emit more than 100 tons per year (tpy) of sulfur dioxide (SO_2) and carbon monoxide (CO); therefore, the source is classified as a major source for criteria pollutants.

JRL does not have the potential to emit 10 tpy or more of a single hazardous air pollutant (HAP) or 25 tpy or more of combined HAP; therefore, the source is classified as an area source for HAP.

B. Emission Equipment

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

Process Equipment

Equipment	Capacity	Maximum Flow Rate (scfm)
Flare #2	22.5 MMBtu/hr	750
Flare #3	40.5 MMBtu/hr	1,350
Flare #4	106.5 MMBtu/hr	3,550
Solid Waste Landfill	19.63 MM cubic yards (approx.)	n/a

Generators

Equipment	Maximum Heat Input Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Fuel Type, % sulfur	Mfr. Date	Install. Date
Generator #1	2.33	17.0	distillate fuel, 0.0015%	3/16/2006	8/21/2006

JRL has additional insignificant activities which do not need to be listed in the table above. The list of insignificant activities can be found in the Part 70 license application and in Appendix B of *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140.

C. Acronyms and Units of Measure

ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BPT	Best Practical Treatment
C.F.R.	Code of Federal Regulations
C.M.R.	Code of Maine Rules
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
EPA or US EPA	United States Environmental Protection Agency
GHG	Greenhouse Gases
H_2S	Hydrogen Sulfide

HAP	Hazardous Air Pollutants
lb	pound
lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
LFG	Landfill Gas
M.R.S.	Maine Revised Statutes
MMBtu	Million British Thermal Units
MMBtu/hr	Million British Thermal Units per hour
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NMOC	Non-methane Organic Compounds
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O_2	Oxygen
PM	Particulate Matter less than 100 microns in diameter
PM_{10}	Particulate Matter less than 10 microns in diameter
$PM_{2.5}$	Particulate Matter less than 2.5 microns in diameter
ppmv	parts per million on a volume basis
RACT	Reasonably Available Control Technology
RICE	Reciprocating Internal Combustion Engine
SO_2	Sulfur Dioxide
ton/hr	ton per hour
tpy	ton per year
TRS	Total Reduced Sulfur
VOC	Volatile Organic Compounds

D. Definitions

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Portable Engine means an internal combustion engine which is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. This definition does NOT include engines which remain or will remain at a location (excluding storage locations) for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road (portable) engine and is subject to applicable stationary engine requirements.

E. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

The application for JRL does not include the licensing of increased emissions or the installation of new or modified equipment; therefore, the license is considered to be a Part 70 License renewal issued under *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140.

F. Facility Description

The State of Maine (Bureau of General Services) owns the Juniper Ridge Landfill which is currently operated by NEWSME Landfill Operations, LLC. Gases formed from the decomposition of the landfill materials are collected and controlled by the facility's three flares. JRL has installed and operates equipment for the control of the total reduced sulfur (TRS) compounds in the landfill gas (LFG) prior to the LFG being combusted in the flares.

An independent facility (Archaea) is planned and permitted to be co-located with JRL. Archaea will process JRL's LFG for sale or beneficial use. The processing of the LFG at the Archaea facility is considered a treatment system equivalent to the facility's flares.

G. General Facility Requirements

JRL is subject to the following state and federal regulations listed below in addition to the regulations listed for specific units as described further in this license.

Citation	Requirement Title
06-096 C.M.R. ch. 101	Visible Emissions Regulation
06-096 C.M.R. ch. 102	Open Burning
06-096 C.M.R. ch. 103	Fuel Burning Equipment Particulate Emission Standard
06-096 C.M.R. ch. 109	Emergency Episode Regulations
06-096 C.M.R. ch. 110	Ambient Air Quality Standards
06-096 C.M.R. ch. 116	Prohibited Dispersion Techniques
06-096 C.M.R. ch. 137	Emission Statements
06-096 C.M.R. ch. 140	Part 70 Air Emission License Regulations
06-096 C.M.R. ch. 143	New Source Performance Standards
06-096 C.M.R. ch. 144	National Emission Standards for Hazardous Air Pollutants
40 C.F.R. Part 60, Subpart XXX	Standards of Performance for Municipal Solid Waste Landfills that Commenced Construction, Reconstruction, or Modification After July 17, 2014
40 C.F.R. Part 63, Subpart AAAA	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills
40 C.F.R. Part 63, Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 C.F.R. Part 70	State Operating Permit Programs
40 C.F.R. Part 98	Mandatory Greenhouse Gas Reporting

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. NO_x RACT (Reasonably Available Control Technology)

Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides, 06-096 C.M.R. ch. 138 (NO_x RACT) is applicable to sources that have the potential to emit quantities of NO_x equal to or greater than 100 tpy. Annual emissions of NO_x from JRL are limited to less than 100 tpy. Therefore, NO_x RACT does not apply to this facility.

C. VOC RACT (Reasonably Available Control Technology)

Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds, 06-096 C.M.R. ch. 134 (VOC RACT) is applicable to sources that have the potential to emit quantities of VOC equal to or greater than 40 tpy from non-exempt equipment. Annual emissions of VOC from JRL are limited to less than 40 tpy. Therefore, NO_x RACT does not apply to this facility.

D. Mandatory Greenhouse Gas (GHG) Reporting

Federal regulation *Mandatory Greenhouse Gas Reporting,* 40 C.F.R. Part 98, which contains GHG reporting and related monitoring and recordkeeping requirements, is applicable to the owners/operators of any facility which falls into any one of the following three categories, per *General Provisions, Who must report?*, 40 C.F.R. § 98.2.

(a)(1) A facility that contains any source category that is listed in Table A–3 of this subpart in any calendar year starting in 2010.

(a)(2) A facility that contains any source category that is listed in Table A–4 of this subpart and that emits 25,000 metric tons CO_2e or more per year in combined emissions from stationary fuel combustion units, miscellaneous uses of carbonate, and all applicable source categories that are listed in Table A–3 and Table A–4 of this subpart.

(a)(3) A facility that in any calendar year starting in 2010 meets all three of the conditions listed in this paragraph (a)(3). For these facilities, the annual GHG report must cover emissions from stationary fuel combustion sources only.

(i) The facility does not meet the requirements of either paragraph (a)(1) or (a)(2) of this section.

(ii) The aggregate maximum rated heat input capacity of the stationary fuel combustion units at the facility is 30 MMBtu/hour or greater.

(iii) The facility emits 25,000 metric tons CO_2e or more per year in combined emissions from all stationary fuel combustion sources.

Table A-3 of Subpart 98 requires reporting for municipal solid waste landfills that generate methane (CH_4) in amounts equivalent to 25,000 metric tons CO_2e or more per year. JRL meets this criteria. Therefore, pursuant to 40 C.F.R. § 98.2(a)(1), JRL shall fulfill the recordkeeping and reporting requirements of 40 C.F.R. Part 98.

E. Compliance Assurance Monitoring (CAM)

Compliance Assurance Monitoring, 40 C.F.R. Part 64 is applicable to units at major sources if the unit has emission limits, a control device to meet the limits, and pre-control emissions greater than 100% of the major source threshold (50 tons/year for VOC and 100 tpy for any other pollutant).

This regulation's 40 C.F.R. § 64.2(b)(1)(vi) specifies the exemption from specific CAM requirements for any emission unit subject to emission limitations or standards for which a Part 70 air emission license specifies a continuous compliance determination method. Furthermore, 40 C.F.R. § 64.2(b)(1)(i) specifies the exemption from specific CAM requirements for any emission unit subject to emission limitations or standards in a NSPS or NESHAP regulation proposed by the Administrator after November 15, 1990. [40 C.F.R. Part 64 § 64.2(b)]

The following table lists all the specific pollutants for each unit meeting CAM applicability criteria and the determination of the applicability of CAM requirements for each.

40 C.F.R. Part 64 Applicability Table

Unit	Pollutant	CAM Required	Reason	Regulatory Authority
Landfill	VOC	No	Subject to standard in NESHAP 40 C.F.R. Part 63, Subpart AAAA proposed after Nov. 15, 1990	40 C.F.R. § 64.2(b)(1)(i)
Flares	SO_2	Yes	Thiopaq® system is used to meet short-term (lb/hr) and annual (tpy) emission limits for SO_2. Pre-control emissions exceed 100 tpy.	40 C.F.R. § 64.2(a)

JRL submitted a CAM plan for emissions of SO_2 as summarized below.

Unit	Eligible Pollutant	Indicator	Recording Frequency
Flares	SO_2	TRS concentration exiting TRS control equipment	See Note 1
		LFG flow to each flare and to the Archaea facility	Totalized Monthly; See Note 1

Note 1: JRL shall sample the TRS content of the landfill gas to be flared three times during a single day (i.e., three samples at the inlet to the scrubber and three samples at the scrubber outlet) once per month using a test method approved

by the Department. JRL shall record the gas flow rate on the days of sampling events. The average of the sampling results for each month, along with the associated gas flow rates, shall be used to estimate the monthly SO_2 emissions based on the assumption that TRS compounds are converted to SO_2 during combustion. Records of SO_2 emissions shall be kept on a monthly and 12-month rolling total basis.

The CAM requirements are incorporated in this license.

F. Fuel Sulfur Content Requirements

Generator #1 is licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, the distillate fuel purchased or otherwise obtained for use at this facility shall not exceed 0.0015% by weight (15 ppm).

G. Solid Waste Landfill

JRL operates a municipal solid waste landfill with a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters with a calculated non-methane organic compound (NMOC) emission rate greater than 34 megagrams per year.

1. Clarification of Terms – TRS, H_2S, and SO_2

   This license addresses the control of total reduced sulfur (TRS) present in the landfill gas. Based on actual periodic TRS grab sample tests performed at the facility, the speciation results show that hydrogen sulfide (H_2S) is the primary TRS constituent of the landfill gas (approximately 99%) with the remaining 1% consisting of additional various sulfur containing compounds. This license includes requirements for total TRS as well as TRS measured as H_2S.

   The combustion of TRS gases results in the formation of sulfur dioxide (SO_2). The SO_2 emissions are directly correlated to the amount of sulfur in the landfill gas prior to combustion.

2. Control Equipment

   The LFG generated at JRL is collected and then flared or sent to the Archaea facility for treatment. JRL is equipped with an active gas collection and control system which consists of gas extraction wells and horizontal gas collection trenches that connect by a system of gas conveyance lines to a vacuum blower and then to the flares.

The primary flare at JRL is Flare #4, rated at 106.5 MMBtu/hr (3,550 scfm). Flares #2 and #3 are to be used as back-up and are rated at 22.5 MMBtu/hr (750 scfm) and 40.5 MMBtu/hr (1,350 scfm), respectively. The flare LFG flow rates were calculated assuming the LFG consists of approximately 50% methane and has a heat content of 500 Btu/scf. Flares #2 and #3 are not licensed to operate simultaneously with Flare #4. Flares #2 and #3 are expected to be operated together to handle the gas flow when used as back-up to Flare #4 and shall be limited to 100 hours of operation per calendar year each. All flares are located on the southeast end of the facility when in operation. Flares may be stored in other locations when not operating.

SO_2 is emitted as a result of combustion of TRS compounds in the LFG. As part of New Source Review (NSR) Amendment A-921-77-3-M (issued 2/7/2014), JRL agreed to install and operate a sulfur treatment system to maintain concentration of TRS compounds in LFG to less than or equal to 1,000 ppmv.

In January 2015, JRL installed and began operating a Thiopaq® sulfur treatment system as part of the gas control system to remove TRS compounds from the LFG prior to combustion in the flares. The Thiopaq® system is also required to be used if the LFG is sent to Archaea for treatment.

JRL maintains the flexibility to operate other temporary or additional TRS control equipment (e.g., SulfaTreat) for cases of scrubber downtime or temporary surges in LFG flow or TRS concentration, provided licensed limits are met.

The flares, in conjunction with the sulfur treatment system, have previously been determined to meet BACT for all criteria pollutants.

3. New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP)

JRL commenced construction on a design capacity increase on May 7, 2018, making the facility subject to NSPS *Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014*, 40 C.F.R. Part 60, Subpart XXX. JRL is also subject to *National Emission Standards for Hazardous Air Pollutants (NESHAP): Municipal Solid Waste Landfills*, 40 C.F.R. Part 63, Subpart AAAA.

Many of the requirements in Subpart XXX and Subpart AAAA are duplicative, overlapping or referring to the other regulation for compliance. Therefore, the requirements of these two regulations will be addressed simultaneously in this license amendment.

On March 26, 2020, NESHAP Subpart AAAA was updated with some changes not required to take effect until September 2021. However, JRL was required to begin operating pursuant to NSPS Subpart XXX no later than January 31, 2021. Therefore, JRL agreed to begin complying with both changes in applicable requirements as of the issuance date of air emission license A-921-70-H-A (1/6/2021).

JRL shall comply with all applicable requirements of 40 C.F.R. Part 60, Subpart XXX and 40 C.F.R. Part 63, Subpart AAAA including, but not limited to, the following:

a. Standards

JRL shall install and operate an active collection and control system that meets the requirements of 40 C.F.R. §§ 60.762(b)(2)(ii)(C) and 60.762(b)(2)(iii).
[40 C.F.R. § 60.762(b)(2)(ii)]

JRL has elected to control emissions of NMOC through use of either a non-enclosed flare (Flares #2, #3, and #4) pursuant to § 60.762(b)(2)(iii)(A) or by routing the gas to a treatment system that processes the gas for sale or beneficial use (Archaea facility) pursuant to § 60.762(b)(2)(iii)(C).

b. Operation

JRL has elected to comply with the operational standards, compliance provisions, and monitoring requirements of NSPS §§ 60.763, 60.765, and 60.766 by complying with the similar provisions of NESHAP §§ 63.1958, 63.1960, 63.1961. However, by electing to comply with the NESHAP Subpart AAAA requirements, JRL must continue to operate the collection and control devices pursuant to those requirements and cannot return to the provisions of NSPS §§ 60.763, 60.765, and 60.766. [40 C.F.R. § 60.762(b)(2)(iv)]

(1) JRL shall operate the collection system with negative pressure at each wellhead except under the following conditions:

(i) A fire or increased well temperature (i.e., > 145 °F). JRL must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the semi-annual reports.
(ii) Areas of the landfill where a geomembrane or synthetic cover is being used and acceptable pressure limits as specified in the design plan are maintained.
(iii)A decommissioned well.
[40 C.F.R. § 63.1958(b)]

(2) JRL shall operate each interior wellhead in the collection system with a landfill gas temperature less than 145 °F. JRL may establish a higher operating temperature value for a particular well(s) by submitting a request to the Department demonstrating that the elevated temperature neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. [40 C.F.R. § 63.1958(c)]

(3) JRL shall operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. [40 C.F.R. § 63.1958(d)(1)]

Background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. [40 C.F.R. § 63.1960(c)(2)]

(4) If monitoring demonstrates that the operational requirements listed above are not met, corrective action shall be taken as specified in 40 C.F.R. §§ 63.1960(a)(3) and (c)(4). As long as the specified actions are taken, the monitored exceedance is not a deviation of the operational requirements. [40 C.F.R. § 63.1958(g)]

(5) JRL shall operate the control system at all times when the collected gas is routed to the system. [40 C.F.R. § 63.1958(f)]

(6) The collection and control requirements apply at all times, including periods of startup, shutdown, and malfunction (SSM). During periods of SSM, JRL shall comply with the following work practice standards [40 C.F.R. § 63.1960(e)(2)]:

In the event the collection or control system is not operating:

(i) The gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour.
(ii) Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation.

[40 C.F.R. § 63.1958(e)]

c. Monitoring

(1) For the purpose of demonstrating whether the gas collection system flow rate is sufficient, JRL shall measure gauge pressure monthly in the gas collection header applied to each individual well. If a positive pressure exists, JRL shall initiate action to correct the exceedance as specified in 40 C.F.R. § 63.1960(a)(3)(i). [40 C.F.R. §§ 63.1960(a)(3) and 63.1961(a)(1)]

(2) JRL shall monitor each wellhead monthly for nitrogen or oxygen concentration in the landfill gas as specified in 40 C.F.R. § 63.1961(a)(2).

(3) For the purpose of identifying whether excess air infiltration into the landfill is occurring, JRL shall monitor each well monthly for temperature. [40 C.F.R. §§ 63.1960(a)(4) and 63.1961(a)(4)]

(4) If a well exceeds the operating parameter (or approved higher operating value) for temperature, JRL shall:
(i) Initiate action to correct the exceedance as specified in 40 C.F.R. § 63.1960(a)(4)(i); and
(ii) Initiate enhanced monitoring as described in 40 C.F.R. § 63.1961(a)(5).
[40 C.F.R. §§ 63.1960(a)(4) and 63.1961(a)(5)]

(5) JRL shall monitor surface concentrations of methane on a quarterly basis along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals using a monitor specified in 40 C.F.R. § 63.1960(d) and the procedures in 40 C.F.R. § 63.1960(c). [40 C.F.R. §§ 63.1960(c)(1) and 63.1961(f)]

Areas with steep slopes or other dangerous areas may be excluded from the surface testing. [40 C.F.R. § 63.1958(d)(1)]

(6) JRL shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis. [40 C.F.R. § 63.1960(c)(5)]

(7) JRL shall install, calibrate, maintain, and operate according to the manufacturer's specifications:

(i) A heat sensing device at the pilot light or the flame itself of each flare; and
(ii) A device which records the flow to each flare, the landfill gas treatment system (i.e., Archaea facility), and any bypass of these systems.
[40 C.F.R. §§ 63.1961(c) and (g)]

d. Notifications and Reports

(1) JRL submitted an Initial Design Capacity Report and NMOC Emission Rate Report on July 31, 2018.
[40 C.F.R. §§ 60.767(a) and (b) and 40 C.F.R. §§ 63.1981(a) and (c)]

(2) JRL submitted a Gas Collection and Control System Design Plan on July 31, 2019. [40 C.F.R. § 60.767(c) and 40 C.F.R. § 63.1981(d)]

(3) JRL shall submit a revised design plan to the Department and EPA for approval:
(i) At least 90 days before expanding operations to an area not covered by the previously approved design plan; or
(ii) Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was previously submitted.
[40 C.F.R. §§ 60.767(d) and 63.1981(e)]

(4) JRL shall submit an Initial Performance Test Report to the Department and EPA by September 30, 2021, which contains the information listed in 40 C.F.R. §§ 60.767(h) and 63.1981(i). [40 C.F.R. §§ 63.7, 60.767(h), and 63.1981(i)]

(5) JRL shall submit to the Department and EPA semi-annual reports which contain the information listed in 40 C.F.R. § 63.1981(h). The initial semi-annual report is due July 31, 2021. [40 C.F.R. § 63.1981(h)]

As described in 40 C.F.R. § 60.767(g), the semi-annual report takes the place of the annual report required by Subpart XXX.

(6) Reports shall be submitted electronically pursuant to 40 C.F.R. §§ 60.767(i) and 63.1981(l), (m), and (n).

(7) Unless a higher operating temperature value has been approved by the Department under Subpart XXX, if a landfill gas temperature measured at the wellhead or at any point in the well is greater than or equal to 170 °F and the carbon monoxide concentration measured is greater than or equal to 1,000 ppm, JRL shall submit a report to the Department via email within 24 hours. The report shall contain the date, time, well identifier, temperature, and carbon monoxide reading. [40 C.F.R. § 63.1981(k)]

e. Records

(1) JRL shall keep for at least five years up-to-date, readily accessible, on-site records of the design capacity report, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats are acceptable. [40 C.F.R. §§ 60.768(a) and 63.1983(a)]

(2) JRL shall keep up-to-date, readily accessible records of the following:

(i) The date upon which JRL began complying with the provisions of 40 C.F.R. §§ 63.1958, 63.1960, and 63.1961 in lieu of §§ 60.763, 60.765, and 60.766; [40 C.F.R. § 60.768(e)(6)]
(ii) The applicable data listed in 40 C.F.R. §§ 60.768(b)(1) and 63.1983(b);
(iii) Indication of flow to the control system and the indication of bypass flow; [40 C.F.R. §§ 60.768(c)(2) and 63.1983(c)(2)]
(iv) Monitoring of each flare flame or pilot flame including all periods of operation in which the flame or flare pilot flame were absent; [40 C.F.R. §§ 60.768(c)(4) and 63.1983(c)(4)]
(v) Periods when the collection system or control device is not operating; [40 C.F.R. §§ 60.768(c)(5) and 63.1983(c)(5)]
(vi) Date and time of any SSM event in which the collection and control system was not operated, including the times the gas mover system was shut down and all venting ceased. [40 C.F.R. § 63.1958(e)]
(vii) Date, time, and duration of each startup and/or shutdown period for each control device; [40 C.F.R. § 63.1983(c)(6)]
(viii) The information contained in 40 C.F.R. § 63.1983(c)(7) for periods when a control device fails to operate as required;
(ix) Maps showing each existing and planned collector in the system providing a unique identification location label for each collector, for the life of the collection system; [40 C.F.R. §§ 60.768(d) and 63.1983(d)]
(x) All collection and control system exceedances of the operational standards, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance; [40 C.F.R. § 63.1983(e)(1)]
(xi) Each wellhead temperature monitoring value of 145 °F or above; [40 C.F.R. § 63.1983(e)(2)(i)]
(xii) All enhanced monitoring activities due to an exceedance of the operating parameter for temperature; [40 C.F.R. § 63.1983(e)(2)(ii)]
(xiii) Email transmissions of 24-hour high temperature reports; [40 C.F.R. § 63.1983(e)(2)(iii)]

(xiv) Any root cause analysis as specified in 40 C.F.R. §§ 63.1983(e)(3) and (4); and

(xv) All collection and control system monitoring data required by 40 C.F.R. § 63.1961(a)(1) thru (6). [40 C.F.R. § 63.1983(g)]

4. Emission Limits and Streamlining

a. Criteria Pollutants and Hazardous Air Pollutants

For the Solid Waste Landfill, a listing of potentially applicable emission standards, the origin and authority of the standards, notation if streamlining of the standards has been requested (* denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Solid Waste Landfill (facility-wide)			
Pollutant	**Applicable Emission Standards**	**Origin and Authority**	**Licensed Emission Limits**
VOC	39.9 tpy	06-096 C.M.R. ch. 140, BPT **Enforceable by State-only**	39.9 tpy
Single HAP	9.9 tpy	06-096 C.M.R. ch. 140, BPT (A-921-70-B-R, 10/7/2014) **Enforceable by State-only**	9.9 tpy
Total HAP	24.9 tpy	06-096 C.M.R. ch. 140, BPT (A-921-70-B-R, 10/7/2014) **Enforceable by State-only**	24.9 tpy

All Flares Combined			
Pollutant	**Applicable Emission Standards**	**Origin and Authority**	**Licensed Emission Limits**
SO_2 (All flares combined)	449.0 tpy	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	449.0 tpy

Flare #2			
Pollutant	**Applicable Emission Standards**	**Origin and Authority**	**Licensed Emission Limits**
PM	0.38 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.38 lb/hr
PM_{10}	0.38 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.38 lb/hr
$PM_{2.5}$	0.38 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.38 lb/hr
SO_2	33.09 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	33.09 lb/hr
NO_x	1.53 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	1.53 lb/hr
CO	8.33 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	8.33 lb/hr
VOC	0.07 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.07 lb/hr

Flare #3			
Pollutant	**Applicable Emission Standards**	**Origin and Authority**	**Licensed Emission Limits**
PM	0.69 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.69 lb/hr
PM_{10}	0.69 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.69 lb/hr
$PM_{2.5}$	0.69 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.69 lb/hr
SO_2	59.56 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	59.56 lb/hr
NO_x	2.75 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	2.75 lb/hr
CO	14.99 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	14.99 lb/hr
VOC	0.12 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.12 lb/hr

Flare #4			
Pollutant	**Applicable Emission Standards**	**Origin and Authority**	**Licensed Emission Limits**
PM	1.81 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	1.81 lb/hr
PM_{10}	1.81 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	1.81 lb/hr
$PM_{2.5}$	1.81 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	1.81 lb/hr
SO_2	157.0 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	157.0 lb/hr
NO_x	7.24 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	7.24 lb/hr
CO	39.41 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	39.41 lb/hr
VOC	0.32 lb/hr	06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)	0.32 lb/hr

b. Visible Emissions

Visible emissions from Flares #2, #3, and #4 shall each not exceed 20% opacity on a 6-minute block average basis. [06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)]

The BACT visible emission limit listed above is determined to be more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for the flares has been streamlined to the more stringent BACT limit and only the more stringent limit shall be included in this air emission license.

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a 5-minute block average basis. [06-096 C.M.R. ch. 101, § 3(C)]

5. Emission Limit Compliance Methods

Compliance with the SO_2 lb/hr and tpy limits and the TRS ppmv limit shall be based on sampling of the landfill gas entering and exiting the control equipment three times during a single day (i.e. three samples at the inlet to the scrubber and three samples at the scrubber outlet) once per month using a test method approved by the Department. JRL shall record the gas flow rate on the days of sampling events. The average of the sampling results for each month, along with the associated gas flow rates, shall be used

to estimate the monthly SO_2 emissions based on the assumption that TRS compounds are converted to SO_2 during combustion. Compliance with the SO_2 lb/hr and tpy limits and the TRS ppmv limit shall be based on a 12-month rolling average. [060-96 C.M.R. ch. 115, BACT (A-921-77-4-M, 5/9/2014)]

Compliance with all other emission limits associated with the flares shall be demonstrated upon request by the Department.

Compliance with the facility-wide VOC and HAP emission limits shall be demonstrated by calculating actual emissions at least once annually as required by *Emission Statements*, 06-096 C.M.R. ch. 137.

6. Compliance Assurance Monitoring

CAM is applicable to SO_2 emissions from the flares. The CAM monitoring requirements are included in the monitoring sections below.

7. Periodic Monitoring

JRL shall record data and maintain records for the following periodic monitoring values in addition to the monitoring required by 40 C.F.R. Part 60, Subpart XXX and 40 C.F.R. Part 63, Subpart AAAA.

Item to be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
TRS concentration entering TRS control equipment	ppmv	Periodic TRS grab sample tests (or equivalent method)	See Note 1
LFG flow entering TRS control equip (daily average)	scfm	Flow meter	See Note 2
LFG flow exiting TRS control equip (daily average)	scfm	Flow meter	See Note 2
H_2S concentration entering TRS control equip	ppmv	Colorimetric tubes	See Note 2
H_2S concentration exiting TRS control equip	ppmv	Colorimetric tubes	See Note 2
Control Equipment Downtime	Hours	Record in logbook with explanation	As occurs
Unscrubbed bypass	Hours	Record in logbook with explanation	As occurs

Item to be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
Calibration of flow meters	Dates	As specified by manufacturer	Once per year
Propane fuel use	gal	Purchase records	Monthly
Hours of Operation for each flare	Dates & Hours	Logbook	As occurs

Note 1: JRL shall sample the TRS content of the landfill gas to be flared three times during a single day (i.e., three samples at the inlet to the scrubber and three samples at the scrubber outlet) once per month using a test method approved by the Department. JRL shall record the gas flow rate on the days of sampling events. The average of the sampling results for each month, along with the associated gas flow rates, shall be used to estimate the monthly SO_2 emissions based on the assumption that TRS compounds are converted to SO_2 during combustion. Records of SO_2 emissions shall be kept on a monthly and 12-month rolling total basis.

Note 2: JRL shall sample the landfill gas H_2S concentration (both entering and exiting the control equipment) twice in the same day (morning and afternoon, with at least four hours between the two sample times) using colorimetric tubes and average the samples for that day. This sampling method shall occur at least two times per week with at least three days between samples. The colorimetric tube data shall be used as an operational tool and not for determining compliance with numerical emission limits.

8. Parameter Monitors

During all operating times, JRL shall operate, record data, and maintain records from the following parameter monitors in accordance with JRL's approved CAM plan:

Item to be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
TRS concentration exiting TRS control equipment	ppmv (12-month rolling average basis)	Periodic TRS grab sample tests (or equivalent method)	See Note 1
LFG flow to each flare and to the Archaea facility	scf	Flow meter	Totalized Monthly; See Note 1

[40 C.F.R. Part 64]

Note 1: JRL shall sample the TRS content of the landfill gas to be flared three times during a single day (i.e. three samples at the inlet to the scrubber and three samples at the scrubber outlet) once per month using a test method approved by the Department. JRL shall record the gas flow rate on the days of sampling events. The average of the sampling results for each month, along with the associated gas flow rates, shall be used to estimate the monthly SO_2 emissions based on the assumption that TRS compounds are converted to SO_2 during combustion. Records of SO_2 emissions shall be kept on a monthly and 12-month rolling total basis.

9. CEMS and COMS

There are no CEMS or COMS associated with the Solid Waste Landfill.

H. Generator #1

JRL operates one stationary emergency generator (Generator #1). It is a generator set consisting of an engine and an electrical generator. Generator #1's engine is rated at 2.33 MMBtu/hr firing distillate fuel with a maximum sulfur content of 0.0015% by weight. The engine was manufactured on March 16, 2006.

1. New Source Performance Standards (NSPS)

Generator #1 is not subject to *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 40 C.F.R. Part 60, Subpart IIII, because it was manufactured prior to April 1, 2006.

2. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines 40 C.F.R. Part 63, Subpart ZZZZ is applicable to Generator #1. The unit is considered an existing, emergency stationary reciprocating internal combustion engines (RICE) at an area HAP source and is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt these units from the federal requirements.

a. Emergency Engine Designation and Operating Criteria

Under Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under Subpart ZZZZ, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation. Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster or equipment failure;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

(i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the

manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE more than 100 hours per calendar year.

(ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Generator #1 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all applicable requirements for non-emergency engines.

b. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements
(40 C.F.R. § 63.6603(a) and Table 2(d))

	Operating Limitations
Compression ignition (distillate fuel) units:	- Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or JRL shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

(2) Optional Oil Analysis Program
JRL has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, JRL must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R.§ 63.6625(i)]

(3) Non-Resettable Hour Meter Requirement
A non-resettable hour meter shall be installed and operated on the engine.
[40 C.F.R. § 63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements
During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
[40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit for Maintenance and Testing
As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). [40 C.F.R. § 63.6640(f)]

(6) Recordkeeping
JRL shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time.
[40 C.F.R. § 63.6655(f)]

3. Emission Limits and Streamlining

a. Criteria Pollutants

For Generator #1, a listing of potentially applicable emission standards, the origin and authority of the standards, notation if streamlining of the standards has been requested ("*" denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.72 lb/hr	06-096 C.M.R. ch. 140, BPT **Enforceable by State-only**	0.72 lb/hr
PM_{10}	0.72 lb/hr	06-096 C.M.R. ch. 140, BPT **Enforceable by State-only**	0.72 lb/hr
$PM_{2.5}$	0.72 lb/hr	06-096 C.M.R. ch. 140, BPT **Enforceable by State-only**	0.72 lb/hr
SO_2	considered negligible based on 0.0015% sulfur fuel		
NO_x	10.28 lb/hr	06-096 C.M.R. ch. 140, BPT **Enforceable by State-only**	10.28 lb/hr
CO	2.21 lb/hr	06-096 C.M.R. ch. 140, BPT **Enforceable by State-only**	2.21 lb/hr
VOC	0.82 lb/hr	06-096 C.M.R. ch. 140, BPT **Enforceable by State-only**	0.82 lb/hr

b. Visible Emissions

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time JRL may comply with the following work practice standards in lieu of the numerical visible emissions standard. [06-096 C.M.R. ch. 101, § 3(A)(4)]

(1) Maintain a log (written or electronic) of the date, time, and duration of all generator startups.

(2) Operate Generator #1 in accordance with the manufacturer's emission-related operating instructions.

(3) Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.

(4) Operate Generator #1, including any associated air pollution control equipment, at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

4. Emission Limit Compliance Methods

Compliance with the emission limits associated with Generator #1 shall be demonstrated in accordance with the appropriate test methods upon request of the Department.

5. Compliance Assurance Monitoring

CAM is not applicable to Generator #1.

6. Periodic Monitoring

JRL shall record data and maintain records for the following periodic monitoring values for Generator #1.

a. Hours of operating time on a calendar year basis. [06-096 C.M.R. ch. 137]
b. Log of the duration and reasons for all operating times as they occur. [40 C.F.R. §§ 63.6655(f)]
c. Records of all maintenance conducted. [40 C.F.R. §§ 63.6655(e)]
d. Sulfur content of the distillate fuel fired. [06-096 C.M.R. ch. 140, BPT]

I. Portable Engines

Facility may operate portable engines on-site for maintenance and emergency-only purposes. Depending on their size and age, these engines may be subject to *Visible Emissions Regulation*, 06-096 C.M.R. ch. 101 and *Fuel Burning Equipment Particulate Emission Standard*, 06-096 C.M.R. ch. 103.

Any engine which cannot meet the definition of "portable engine" as defined by this license may be subject to additional State and Federal regulations. A license amendment may be necessary for a portable engine to be reclassified as stationary.

J. Emission Statements

JRL is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. JRL shall maintain the following records in order to comply with this rule:

1. Hours each flare is operating on a monthly and calendar year basis;
2. Hours of operation of Generator #1 on a monthly and calendar year basis;
3. Amount of distillate fuel fired in Generator #1 on a calendar year basis;
4. The sulfur content of the distillate fuel fired in Generator #1;
5. LFG flow to each flare and the Archaea facility on a monthly and calendar year basis;
6. Site-specific sampling data on the NMOC concentration of the LFG;
7. TRS concentration of the LFG measured on a monthly basis; and
8. Calculations of the VOC and HAP emissions from the facility on a calendar year total basis.

In reporting year 2020 and every third year thereafter, JRL shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. JRL shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3).
[38 M.R.S. § 353-A(1-A)]

K. Facility Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee. Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included. Maximum potential emissions were calculated based on the following assumptions:

- Firing Flare #4 at its rated capacity (106.5 MMBtu/hr, 3,550 scfm of landfill gas with 50% methane) for 8,760 hr/year;
- Prohibition of Flares #2 and #3 firing simultaneously with Flare #4;
- A facility-wide limit on SO_2 and VOC; and
- Operating Generator #1 for 100 hrs/yr

Please note, this information provides the basis for fee calculation only and should not be construed to represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Flares	7.9	7.9	7.9	–	31.7	172.6	–
Generator #1	0.1	0.1	0.1	–	0.5	0.1	–
Facility-wide limit	–	–	–	449.0	–	–	39.9
Total TPY	**8.0**	**8.0**	**8.0**	**449.0**	**32.2**	**172.7**	**39.9**

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

JRL previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards (see license A-921-77-2-A, issued 11/26/2012). An additional ambient air quality analysis is not required for this Part 70 License.

ORDER

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

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

The Department hereby grants the Part 70 License A-921-70-F-R pursuant to 06-096 C.M.R. ch. 140 and the preconstruction permitting requirements of 06-096 C.M.R. ch. 115 and subject to the standard and specific conditions below.

All federally enforceable and State-only enforceable conditions in existing air licenses previously issued to JRL pursuant to the Department's preconstruction permitting requirements have been incorporated into this Part 70 license, except for such conditions that the Department has determined are obsolete, extraneous, or otherwise environmentally insignificant, as explained in

the Findings of Fact accompanying this Order. As such, the conditions in this license supersede all previously issued air license conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 for making such changes and pursuant to the applicable requirements in 06-096 C.M.R. ch. 140.

For each standard and specific 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 of this License or part thereof 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 C.M.R. ch. 140]

(2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 140]

(3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable. [06-096 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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 affect 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 their application.

Permit Shield Table

Source	Citation	Description	Basis for Determination
Flares	06-096 C.M.R. ch. 102	Open Burning	These units are not considered open burning within the prohibition of 06-096 C.M.R. ch. 102.
Flares	06-096 C.M.R. ch. 103	Fuel Burning Equipment Particulate Emission Standard	No applicable requirements for equipment burning non-petroleum gas
Generator #1	06-096 C.M.R. ch. 103	Fuel Burning Equipment Particulate Emission Standard	Generator #1 is smaller than 3.0 MMBtu/hr heat input.
Flares	06-096 C.M.R. ch. 104	Incinerator Particulate Emission Standard	Landfill flares are not considered incinerators.
Facility	06-096 C.M.R. ch. 105	General Process Source Particulate Emission Standard	All sources of PM at the facility are considered fugitive.
Facility	06-096 C.M.R. ch. 134	VOC RACT	Source's potential to emit for VOC is less than 40 tpy.
Facility	06-096 C.M.R. ch. 138	NO_x RACT	Source's potential to emit for NO_x is less than 100 tpy.

Source	Citation	Description	Basis for Determination
Solid Waste Landfill	40 C.F.R. Part 60, Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification on or After May 30, 1991, but Before July 18, 2014	JRL commenced construction on a design capacity increase on May 7, 2018.
Generator #1	40 C.F.R. Part 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Generator #1 was manufactured prior to April 1, 2006.

[06-096 C.M.R. ch. 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 three 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 C.M.R. ch. 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 C.M.R. ch. 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 C.M.R. ch. 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. § 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 C.M.R. ch. 140. [06-096 C.M.R. ch. 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 C.M.R. ch. 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. § 353-A.

(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 C.M.R. ch. 140]
Enforceable by State-only

(6) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. In addition, 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 C.M.R. ch. 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 C.M.R. ch. 140]

(8) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. 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 C.F.R. 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 C.M.R. ch. 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 C.F.R. 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 C.M.R. ch. 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. § 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 C.M.R. ch. 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 C.M.R. ch. 140]

(12) The licensee shall submit semiannual reports of any required periodic monitoring by January 31 and July 31 of each year, or on an equivalent schedule specified in the license.

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 C.M.R. ch. 140]

(13) The licensee shall submit a compliance certification to the Department and EPA annually by January 31 of each year, 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 C.M.R. ch. 140]

SPECIFIC CONDITIONS

(14) **Solid Waste Landfill**

A. JRL shall continue to use good operating practices to minimize the formation and release of the TRS laden landfill gases. These practices include but are not limited to: minimizing landfill waste moisture and ambient landfill gas releases through the use of synthetic intermediate cover or an approved equivalent; the appropriate use of daily cover; and the proper design, installation, maintenance, and operation of landfill gas management system infrastructure in accordance with the Solid Waste Management Regulations. [06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)]

B. Flares #2 and #3 shall not operate when Flare #4 is operating. Flares #2 and #3 shall be used as backup to Flare #4, with backup defined for the purpose of this license as each of the Flares #2 and #3 operating no more than 100 hours per calendar year. All flares are located on the southeast end of the facility when in operation. Flares may be stored in other locations when not operating. [06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)]

C. The elevation of the top of Flare #4 shall be maintained at or above 265 feet above sea level at the established location on the southeast end of the facility. [06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)]

D. Flare Emission Limits

1. Emissions from Flare #2 shall not exceed the following limits:

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	0.38	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
PM_{10}	0.38	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
$PM_{2.5}$	0.38	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
SO_2	33.09	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
NO_x	1.53	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
CO	8.33	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
VOC	0.07	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable

2. Emissions from Flare #3 shall not exceed the following limits:

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	0.69	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
PM_{10}	0.69	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
$PM_{2.5}$	0.69	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
SO_2	59.56	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
NO_x	2.75	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
CO	14.99	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
VOC	0.12	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable

3. Emissions from Flare #4 shall not exceed the following limits:

Pollutant	lb/hr	Origin and Authority	Enforceability
PM	1.81	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
PM_{10}	1.81	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
$PM_{2.5}$	1.81	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
SO_2	157.0	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
NO_x	7.24	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
CO	39.41	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable
VOC	0.32	06-096 C.M.R. ch.115, BACT (A-921-77-2-A, 11/26/2012)	Federally Enforceable

4. Visible emissions from the flares shall each not exceed 20% opacity on a six (6) minute block average basis.
[06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)]

E. Annual Emissions

1. Total SO_2 emissions from the JRL flares shall not exceed 449.0 tpy, based on a 12-month rolling total. Compliance shall be demonstrated by monthly sampling of the landfill gas as described in Condition (15).
[06-096 C.M.R. ch. 115, BACT (A-921-77-2-A, 11/26/2012)]

2. Total VOC emissions from the facility shall not exceed 39.9 tpy based on a 12-month rolling total. Compliance shall be demonstrated by calculating actual emissions at least once annually as required by *Emission Statements*, 06-096 C.M.R. ch. 137. [06-096 C.M.R. ch. 140, BPT] **Enforceable by State-only**

3. Total emissions of any single HAP from the facility shall not exceed 9.9 tpy based on a 12-month rolling total. Total emissions for all HAP combined at the facility shall not exceed 24.9 tpy based on a 12-month rolling total. Compliance shall be demonstrated by calculating actual emissions at least once annually as required by *Emission Statements*, 06-096 C.M.R. ch. 137.
[06-096 C.M.R. ch. 140, BPT (A-921-70-B-R, 10/7/2014)]

(15) **Control Technology Requirements**

A. JRL shall install and operate pollution control equipment as necessary on the landfill gas to achieve (on a 12-month rolling average basis) an outlet TRS concentration of 1,000 ppmv or less and to control emissions of SO_2 so as to be in compliance with the facility's SO_2 tpy limit. JRL may utilize alternative control equipment in conjunction with the Thiopaq system as necessary to meet the TRS and SO_2 emission limits. Any change in the type or configuration of the control equipment used must be submitted to the Department prior to use. Compliance testing of any alternative control equipment shall be performed within 60 days of beginning operation. If alternative control equipment is used, JRL shall notify the compliance inspector at least 30 days prior to any TRS compliance testing.
[060-96 C.M.R. ch. 115, BACT (A-921-77-4-M, 5/6/2014)]

B. Compliance with the SO_2 lb/hr and tpy limits and the TRS ppmv limit shall be based on sampling of the landfill gas entering and exiting the control equipment three times during a single day (i.e. three samples at the inlet to the scrubber and three samples at the scrubber outlet) once per month using a test method approved by the Department. JRL shall record the gas flow rate on the days of sampling events. The average of the sampling results for each month, along with the associated gas flow rates, shall be used to estimate the monthly SO_2 emissions based on the assumption that TRS compounds are converted to SO_2 during combustion. Compliance with the SO_2 lb/hr and tpy limits and the TRS ppmv limit shall be based on a 12-month rolling average.
[060-96 C.M.R. ch. 115, BACT (A-921-77-4-M, 5/9/2014)]

C. Periodic Monitoring [060-96 C.M.R. ch. 115, BACT (A-921-77-4-M, 5/9/2014)]

JRL shall record data and maintain records for the following periodic monitoring values in addition to the monitoring required by 40 C.F.R. Part 60, Subpart XXX and 40 C.F.R. Part 63, Subpart AAAA.

Item to be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
TRS concentration entering TRS control equipment	ppmv	Periodic TRS grab sample tests (or equivalent method)	See Note 1
LFG flow entering TRS control equip (daily average)	scfm	Flow meter	See Note 2
LFG flow exiting TRS control equip (daily average)	scfm	Flow meter	See Note 2

Item to be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
H_2S concentration entering TRS control equip	ppmv	Colorimetric tubes	See Note 2
H_2S concentration exiting TRS control equip	ppmv	Colorimetric tubes	See Note 2
Control Equipment Downtime	Hours	Record in logbook with explanation	As occurs
Unscrubbed bypass	Hours	Record in logbook with explanation	As occurs
Calibration of flow meters	Dates	As specified by manufacturer	Once per year
Propane fuel use	gal	Purchase records	Monthly
Hours of Operation for each flare	Dates & Hours	Logbook	As occurs

Note 1: JRL shall sample the landfill gas TRS concentration in accordance with Condition (15)(B) above.

Note 2: JRL shall sample the landfill gas H_2S concentration (both entering and exiting the control equipment) twice in the same day (morning and afternoon, with at least four hours between the two sample times) using colorimetric tubes and average the samples for that day. This sampling method shall occur at least two times per week with at least three days between samples. The colorimetric tube data shall be used as an operational tool and not for determining compliance with numerical emission limits.

D. Parameter Monitoring [40 C.F.R. Part 64)]

During all operating times, JRL shall operate, record data, and maintain records from the following parameter monitors in accordance with JRL's approved CAM plan:

Item to be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
TRS concentration exiting TRS control equipment	ppmv (12-month rolling average basis)	Periodic TRS grab sample tests (or equivalent method)	See Note 1
LFG flow to each flare and to the Archaea facility	scf	Flow meter	Totalized Monthly; See Note 1

Note 1: JRL shall sample the landfill gas TRS concentration in accordance with Condition (15)(B) above.

E. Control Equipment Uptime

1. JRL shall utilize the flares at all times unless switching is occurring between the primary flare and the backup flares. Switching to and from primary Flare #4 and backup Flares #2 and #3 shall be performed as expediently as possible. Records shall be maintained documenting the date and timeframe when no flaring occurs. [06-096 C.M.R. ch. 115, BACT (A-921-77-4-M, 5/9/2014)]

2. JRL shall meet a 95% uptime for all sulfur control equipment on a 12-month rolling total basis, including, but not limited to, scheduled or unscheduled maintenance and repair and equipment malfunction. Periods of downtime (not to exceed 438 hours per 12-month period) may be excluded when determining compliance with the H_2S and TRS ppmv limits. JRL shall keep records documenting compliance with the uptime requirement. [06-096 C.M.R. ch. 115, BACT (A-921-77-4-M, 5/9/2014)]

3. Pursuant to 38 M.R.S. §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. In the event of an unavoidable malfunction, the licensee must notify the Commissioner in writing

within 48 hours and submit a written report, together with any exemption requests, to the Department on a quarterly basis. **Enforceable by State-Only**

(16) **New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP)**

JRL shall comply with all applicable requirements of NSPS 40 C.F.R. Part 60, Subpart XXX and NESHAP 40 C.F.R. Part 63, Subpart AAAA including, but not limited to, the following:

A. Standards

JRL shall install and operate an active collection and control system that meets the requirements of 40 C.F.R. §§ 60.762(b)(2)(ii)(C) and 60.762(b)(2)(iii).
[40 C.F.R. § 60.762(b)(2)(ii)]

JRL shall control emissions of NMOC through use of either a non-enclosed flare (Flares #2, #3, and #4) pursuant to § 60.762(b)(2)(iii)(A) or by routing the gas to a treatment system that processes the gas for sale or beneficial use (Archaea facility) pursuant to § 60.762(b)(2)(iii)(C).

B. Operation

JRL shall comply with the operational standards, compliance provisions, and monitoring requirements of §§ 60.763, 60.765, and 60.766 by complying with the similar provisions of §§ 63.1958, 63.1960, and 63.1961. However, by electing to comply with the Subpart AAAA requirements, JRL must continue to operate the collection and control devices pursuant to those requirements and cannot return to the provisions of §§ 60.763, 60.765, and 60.766. [40 C.F.R. § 60.762(b)(2)(iv)]

1. JRL shall operate the collection system with negative pressure at each wellhead except under the following conditions:

   a. A fire or increased well temperature (i.e., > 145 °F). JRL must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the semi-annual reports.
   b. Areas of the landfill where a geomembrane or synthetic cover is being used and acceptable pressure limits are maintained as specified by the design plan.
   c. A decommissioned well.

   [40 C.F.R. § 63.1958(b)]

2. JRL shall operate each interior wellhead in the collection system with a landfill gas temperature less than 145 °F. JRL may establish a higher operating temperature value for a particular well(s) by submitting a request to the Department demonstrating that the elevated temperature neither causes fires nor significantly inhibits anaerobic decomposition by killing methanogens. [40 C.F.R. § 63.1958(c)]

3. JRL shall operate the collection system so that the methane concentration is less than 500 parts per million (ppm) above background at the surface of the landfill. [40 C.F.R. § 63.1958(d)(1)]

   Background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. [40 C.F.R. § 63.1960(c)(2)]

4. If monitoring demonstrates that the operational requirements listed above are not met, corrective action shall be taken as specified in 40 C.F.R. §§ 63.1960(a)(3) and (c)(4). As long as the specified actions are taken, the monitored exceedance is not a deviation of the operational requirements. [40 C.F.R. § 63.1958(g)]

5. JRL shall operate the control system at all times when the collected gas is routed to the system. [40 C.F.R. § 63.1958(f)]

6. The collection and control requirements apply at all times, including periods of startup, shutdown, and malfunction (SSM). During periods of SSM, JRL shall comply with the following work practice standards [40 C.F.R. § 63.1960(e)(2)]:

   In the event the collection or control system is not operating:

   a. The gas mover system must be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere must be closed within 1 hour.
   b. Efforts to repair the collection or control system must be initiated and completed in a manner such that downtime is kept to a minimum, and the collection and control system must be returned to operation.

   [40 C.F.R. § 63.1958(e)]

C. Monitoring

1. For the purpose of demonstrating whether the gas collection system flow rate is sufficient, JRL shall measure gauge pressure monthly in the gas collection header applied to each individual well. If a positive pressure exists, JRL shall initiate action to correct the exceedance as specified in 40 C.F.R. § 63.1960(a)(3)(i).
[40 C.F.R. §§ 63.1960(a)(3) and 63.1961(a)(1)]

2. JRL shall monitor each wellhead monthly for nitrogen or oxygen concentration in the landfill gas as specified in 40 C.F.R. § 63.1961(a)(2).

3. For the purpose of identifying whether excess air infiltration into the landfill is occurring, JRL shall monitor each well monthly for temperature.
[40 C.F.R. §§ 63.1960(a)(4) and 63.1961(a)(4)]

4. If a well exceeds the operating parameter (or approved higher operating value) for temperature, JRL shall:

   a. Initiate action to correct the exceedance as specified in 40 C.F.R. § 63.1960(a)(4)(i); and
   b. Initiate enhanced monitoring as described in 40 C.F.R. § 63.1961(a)(5).
   [40 C.F.R. §§ 63.1960(a)(4) and 63.1961(a)(5)]

5. JRL shall monitor surface concentrations of methane on a quarterly basis along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30-meter intervals using a monitor specified in 40 C.F.R. § 63.1960(d) and the procedures in 40 C.F.R. § 63.1960(c).
[40 C.F.R. §§ 63.1960(c)(1) and 63.1961(f)]

   Areas with steep slopes or other dangerous areas may be excluded from the surface testing. [40 C.F.R. § 63.1958(d)(1)]

6. JRL shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis. [40 C.F.R. § 63.1960(c)(5)]

7. JRL shall install, calibrate, maintain, and operate according to the manufacturer's specifications:

   a. A heat sensing device at the pilot light or the flame itself of each flare; and
   b. A device which records the flow to each flare, the landfill gas treatment system (i.e., Archaea facility), and any bypass of these systems.
   [40 C.F.R. §§ 63.1961(c) and (g)]

D. Notifications and Reports

1. JRL shall submit a revised design plan to the Department and EPA for approval:

   a. At least 90 days before expanding operations to an area not covered by the previously approved design plan; or
   b. Prior to installing or expanding the gas collection system in a way that is not consistent with the design plan that was previously submitted.

   [40 C.F.R. §§ 60.767(d) and 63.1981(e)]

2. JRL shall submit an Initial Performance Test Report to the Department and EPA by September 30, 2021, which contains the information listed in 40 C.F.R. §§ 60.767(h) and 63.1981(i). [40 C.F.R. §§ 63.7, 60.767(h), and 63.1981(i)]

3. JRL shall submit to the Department and EPA semi-annual reports which contain the information listed in 40 C.F.R. § 63.1981(h). The initial semi-annual report is due July 31, 2021. [40 C.F.R. § 63.1981(h)]

   As described in 40 C.F.R. § 60.767(g), the semi-annual report takes the place of the annual report required by Subpart XXX.

4. Reports shall be submitted electronically pursuant to 40 C.F.R. §§ 60.767(i) and 63.1981(l), (m), and (n).

   Copies of all reports shall be provided to the DEP. [40 C.F.R. § 70.6(c)(1)]

5. Unless a higher operating temperature value has been approved by the Department under Subpart XXX, if a landfill gas temperature measured at the wellhead or at any point in the well is greater than or equal to 170 °F and the carbon monoxide concentration measured is greater than or equal to 1,000 ppm, JRL shall submit a report to the Department via email within 24 hours. The report shall contain the date, time, well identifier, temperature, and carbon monoxide reading.
   [40 C.F.R. § 63.1981(k)]

E. Records

1. JRL shall keep for at least five years up-to-date, readily accessible, on-site records of the design capacity report, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within four hours. Either paper copy or electronic formats are acceptable. [40 C.F.R. §§ 60.768(a) and 63.1983(a)]

2. JRL shall keep up-to-date, readily accessible records of the following:

   a. The date upon which JRL began complying with the provisions of 40 C.F.R. §§ 63.1958, 63.1960, and 63.1961 in lieu of §§ 60.763, 60.765, and 60.766; [40 C.F.R. § 60.768(e)(6)]
   b. The applicable data listed in 40 C.F.R. §§ 60.768(b)(1) and 63.1983(b);
   c. Indication of flow to the control system and the indication of bypass flow; [40 C.F.R. §§ 60.768(c)(2) and 63.1983(c)(2)]
   d. Monitoring of each flare flame or pilot flame including all periods of operation in which the flame or flare pilot flame were absent; [40 C.F.R. §§ 60.768(c)(4) and 63.1983(c)(4)]
   e. Periods when the collection system or control device is not operating; [40 C.F.R. §§ 60.768(c)(5) and 63.1983(c)(5)]
   f. Date and time of any SSM event in which the collection and control system was not operated, including the times the gas mover system was shut down and all venting ceased. [40 C.F.R. § 63.1958(e)]
   g. Date, time, and duration of each startup and/or shutdown period for each control device; [40 C.F.R. § 63.1983(c)(6)]
   h. The information contained in 40 C.F.R. § 63.1983(c)(7) for periods when a control device fails to operate as required;
   i. Maps showing each existing and planned collector in the system providing a unique identification location label for each collector, for the life of the collection system; [40 C.F.R. §§ 60.768(d) and 63.1983(d)]
   j. All collection and control system exceedances of the operational standards, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance; [40 C.F.R. § 63.1983(e)(1)]
   k. Each wellhead temperature monitoring value of 145 °F or above; [40 C.F.R. § 63.1983(e)(2)(i)]
   l. All enhanced monitoring activities due to an exceedance of the operating parameter for temperature; [40 C.F.R. § 63.1983(e)(2)(ii)]
   m. Email transmissions of 24-hour high temperature reports; [40 C.F.R. § 63.1983(e)(2)(iii)]
   n. Any root cause analysis as specified in 40 C.F.R. §§ 63.1983(e)(3) and (4); and
   o. All collection and control system monitoring data required by 40 C.F.R. § 63.1961(a)(1) thru (6). [40 C.F.R. § 63.1983(g)]

(17) **Generator #1**

A. Generator #1 shall fire distillate fuel. [06-096 C.M.R. ch. 140, BPT] **Enforceable by State-only**

B. Fuel Sulfur Content

1. The fuel oil sulfur content for Generator #1 shall be limited to 0.0015% sulfur by weight. [06-096 C.M.R. ch. 140, BPT] **Enforceable by State-only**

2. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the tank containing the fuel to be fired. [06-096 C.M.R. ch. 140, BPT] **Enforceable by State-only**

C. Emissions shall not exceed the following limits.
[06-096 C.M.R. ch. 140, BPT] **Enforceable by State-only**

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.72	0.72	–	10.28	2.21	0.82

D. Visible Emissions

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time JRL may comply with the following work practice standards in lieu of the numerical visible emissions standard. [06-096 C.M.R. ch. 101, § 3(A)(4)]

1. Maintain a log (written or electronic) of the date, time, and duration of all generator startups.

2. Operate Generator #1 in accordance with the manufacturer's emission-related operating instructions.

3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.

4. Operate Generator #1, including any associated air pollution control equipment, at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

E. Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:

1. JRL shall meet the following operational limitations for Generator #1:

   a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
   b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
   c. Inspect the hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

   Records shall be maintained documenting compliance with the operational limitations.

   [40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 140, BPT]

2. Oil Analysis Program Option
   JRL has the option of utilizing an oil analysis program which complies with the requirements of § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, JRL must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R.§ 63.6625(i)]

3. Non-Resettable Hour Meter
   A non-resettable hour meter shall be installed and operated on the engine.
   [40 C.F.R. § 63.6625(f)]

4. Maintenance, Testing, and Non-Emergency Operating Situations

   a. The engine shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 140, BPT]

b. JRL shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. §§ 63.6655(e) and (f)]

5. Operation and Maintenance
The engine(s) shall be operated and maintained according to the manufacturer's emission-related written instructions, or JRL shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

6. Startup Idle and Startup Time Minimization
During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.
[40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(18) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a 5-minute block average basis.
[06-096 C.M.R. ch. 101, § 3(C)]

(19) **Parameter Monitor General Requirements**
[06-096 C.M.R. ch. 140 and 117]

A. Parameter monitors required by this license shall be installed, operated, maintained, and calibrated in accordance with manufacturer recommendations or as otherwise required by the Department.

B. Parameter monitors required by this license shall continuously monitor data at all times the associated emissions unit is in operation. "Continuously" with respect to the operation of parameter monitors required by this license means providing equally spaced data points with at least one valid data point in each successive 15-minute period. A minimum of three valid 15-minute periods constitute a valid hour.

C. Each parameter monitor must record accurate and reliable data. If any parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement

action. The Department may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the Department's satisfaction that the failure of the system to record such data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

Enforceable by State-only

(20) **Compliance Assurance Monitoring (CAM) – General Requirements**

A. The licensee shall operate and monitor all emission units and their associated control equipment in accordance with the approved CAM Plan. [40 C.F.R. Part 64]

B. Any excursion shall be reported in semiannual reports. If excursions occur, the licensee must also certify intermittent compliance with the emission limits for the control device monitored in the annual compliance certification. [40 C.F.R. Part 64]

C. Upon detecting an excursion, the licensee shall restore normal operation of the control equipment as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. [40 C.F.R. § 64.7(d)]

D. Prior to making any changes to the approved CAM plan, the licensee shall notify the Department and, if necessary, submit a proposed license modification application to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. [40 C.F.R. § 64.7(e)]

E. Any change of the target level shall be submitted in a letter to the Department for written approval. [06-096 C.M.R. ch. 140, BPT]

(21) **Semiannual Reporting** [06-096 C.M.R. ch. 140]

Note: This semiannual report is separate from, and in addition to, any semiannual report required by specific NSPS or NESHAP regulations.

A. The licensee shall submit to the Bureau of Air Quality semiannual reports which are due on **January 31st** and **July 31st** of each year. The facility's designated responsible official must sign this report.

B. The semiannual report shall be considered on-time if the postmark of the submittal is on or before the due date or if the report is received by the Department within seven calendar days of the due date.
C. Each semiannual report shall include a summary of the periodic and CAM monitoring required by this license.
D. 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.

(22) **Annual Compliance Certification**

JRL shall submit an annual compliance certification to the Department and EPA in accordance with Standard Condition (13) of this license. The annual compliance certification is due **January 31st** of each year. The facility's designated responsible official must sign this report.

The annual compliance certification shall be considered on-time if the postmark of the submittal is on or before the due date or if the report is received by the Department 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 C.M.R. ch. 140]

(23) **Annual Emission Statements**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, JRL shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

B. JRL shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. Hours each flare is operating on a monthly and calendar year basis;
2. Hours of operation of Generator #1 on a monthly and calendar year basis;
3. Amount of distillate fuel fired in Generator #1 on a calendar year basis;
4. The sulfur content of the distillate fuel fired in Generator #1;
5. LFG flow to each flare and the Archaea facility on a monthly and calendar year basis;
6. Site-specific sampling data on the NMOC concentration of the LFG;
7. TRS concentration of the LFG measured on a monthly basis; and

8. Calculations of the VOC and HAP emissions from the facility on a calendar year total basis.

[06-096 C.M.R. ch. 137]

C. In reporting year 2020 and every third year thereafter, JRL shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). JRL shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

(24) **General Applicable State Regulations**

The licensee is subject to the State regulations listed below.

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

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

When repairing or disposing of units containing ozone depleting substances, the licensee shall comply with the standards for recycling and emission reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for motor vehicle air conditioning units in Subpart B. Examples of such units include refrigerators and any size air conditioners that contain CFCs. [40 C.F.R. Part 82, Subpart F]

(26) **Asbestos Abatement**

When undertaking Asbestos abatement activities, JRL shall comply with the *Standard for Asbestos Demolition and Renovation,* 40 C.F.R. Part 61, Subpart M.

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

A. JRL shall submit a complete Part 70 renewal application at least six but no more than 18 months prior to the expiration of this air license.

B. Pursuant to Title 5 M.R.S. §10002, and 06-096 C.M.R. ch. 140, the Part 70 license shall not expire and all terms and conditions shall remain in effect until the Department takes final action on the renewal application of the Part 70 license. An existing source

submitting a complete renewal application under 06-096 C.M.R. ch. 140 prior to the expiration of the Part 70 license will not be in violation of operating without a Part 70 license. **Enforceable by State-only**

(28) **New Source Review**

JRL is subject to all previous New Source Review (NSR) requirements summarized in this Part 70 air emission license, and the NSR requirements remain in effect even if this 06-096 C.M.R. ch. 140 Air Emissions License, A-921-70-F-R, expires.

DONE AND DATED IN AUGUSTA, MAINE THIS 24th DAY OF MAY, 2021.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____ for _____
MELANIE LOYZIM, COMMISSIONER

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

[Note: If a complete renewal application, as determined by the Department, is submitted at least six but no more than 18 months prior to expiration of the facility's Part 70 license, then pursuant to Title 5 M.R.S. §10002, all terms and conditions of the Part 70 license shall remain in effect until the Department takes final action on the Part 70 license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/4/2019
Date of application acceptance: 4/4/2019

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

FILED

MAY 24, 2021

State of Maine
Board of Environmental Protection