STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

The Jackson Laboratory **Hancock County** **Bar Harbor, Maine** **A-93-71-AE-R/M**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Renewal and Amendment**

FINDINGS OF FACT

After review of the air emission 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

The Jackson Laboratory (Jackson) has applied to renew their Air Emission License for the operation of emission sources associated with their biomedical research facility. Jackson has also requested to remove Boiler #9 from their license.

The equipment addressed in this license is located at 600 Main Street, Bar Harbor, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Boiler #2	10.5	73 gal/hr	Distillate fuel	Pre-1989	Pre-1989	1
Boiler #3	10.5	73 gal/hr	Distillate fuel	Pre-1989	Pre-1989	1
Boiler #7	33.5	239.3 gal/hr 370.2 gal/hr	Distillate fuel Propane	1988	1988	5
Boiler #8	33.5	239.3 gal/hr 370.2 gal/hr	Distillate fuel Propane	1993	1993	5
Boiler #10	20.9	149.3 gal/hr	Distillate fuel	2000	2000	1
Boiler #11	20.9	149.3 gal/hr	Distillate fuel	2000	2000	1
Boiler #12	49.9*	5,842 lb/hr 48,921 scf/hr 551 gal/hr 356 gal/hr	Wood pellets Natural gas Propane Distillate fuel	2011	2011	6
*Boiler #9***	*12.5*	*89.3 gal/hr*	*Distillate fuel*	*2000*	*2000*	*5*

* 44.4 MMBtu/hr when firing wood pellets

** Removed from license

Fuel Burning Equipment

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Propane Vaporizer #1	1.09	12 gal/hr	Propane	2013	2013	N/A
Propane Vaporizer #2	1.09	12 gal/hr	Propane	2013	2013	N/A

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #3	2.5	250	Distillate fuel	18.0	Pre-2006	Pre-2006
Generator #6	12.3	1,250	Distillate fuel	89.7	1992	1992
Generator #8	15.2	1,500	Distillate fuel	111.2	2003	2003
Generator #9	15.2	1,500	Distillate fuel	111.2	2003	2003
Generator #10	19.0	2,000	Distillate fuel	138.0	2016	2016
Generator #11	2.7	250	Distillate fuel	19.4	2021	2021

Jackson may operate small stationary engines smaller than 0.5 MMBtu/hr. These engines are considered insignificant activities and are not required to be included in this license. However, they are still subject to applicable State and Federal regulations. More information regarding requirements for small stationary engines is available on the Department's website at the link below.
http://www.maine.gov/dep/air/publications/docs/SmallRICEGuidance.pdf

Additionally, Jackson may operate portable engines used for maintenance or emergency-only purposes. These engines are considered insignificant activities and are not required to be included in this license. However, they may still be subject to applicable State and Federal regulations.

Incinerators

	Incinerator #3	Incinerator #4
Class Incinerator	IV-A	IV-B
No. of Chambers	2	2
Type of Waste	Types 0-4	Types 0-5, 7
Make	Mathews	Mathews
Model Number	IEB Series 32	Surefire 100
Date of Manufacture	2015	2021
Date of Installation	2016	2022
Max. Design Combustion Rate (lb/hr)	250	220
Auxiliary Fuel Input:	Propane	Propane
Primary Chamber (MMBtu/hr)	0.6	4.0
Secondary Chamber (MMBtu/hr)	1.2	2.0
Emission Control	Afterburner	Afterburner

Process Equipment

Equipment	Production Rate	Pollution Control Equipment	Date of Manuf.	Date of Install.	Stack #
EtO* Sterilizer #3	170 gram EtO/ batch	Catalytic Abator	2018	2018	N/A
EtO Sterilizer #4	170 gram EtO/ batch	Catalytic Abator	2021	2021	N/A
EtO Sterilizer #5	170 gram EtO/ batch	Catalytic Abator	2021	2021	N/A

* EtO = Ethylene Oxide

Fuel Storage Tank

Equipment	Capacity (gallons)
Gasoline Storage Tank	2,000

C. Definitions

Biomass means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (*e.g.,* trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings). This definition also includes wood chips and processed pellets made from wood or other forest residues. Inclusion in this definition does not constitute a determination that the material is not considered a solid waste. Jackson should consult with the Department before adding any new biomass type to its fuel mix.

Class IVA Incinerator means a crematory and pathological incinerator suitable for type 4 waste.

Class IVB Incinerator means a crematory and pathological incinerator suitable for type 7 waste.

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.

Incinerator means any device, apparatus, or equipment used for destroying, reducing, or salvaging by fire or heat any material or substance. Incinerators include smelters, bake-off ovens, and other similar units, but do not include recovery boilers, smelt tanks, lime kilns, boilers, or stationary internal combustion units.

Portable or Non-Road 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.

Records or *Logs* mean either hardcopy or electronic records.

Waste means unwanted or discarded materials of any kind and source, which constitute a solid waste and not a fuel, and which shall be classified as defined in 06-096 C.M.R. ch. 100.

D. Application Classification

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

Jackson has applied to renew currently licensed emission units as well as modify their license as addressed in Section I(A) above. This amendment will not increase licensed emissions of any pollutant. Therefore, the license is considered to be a renewal and minor revision and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (C.M.R.) ch. 115.

E. Facility Classification

With the annual fuel limit on the boilers and vaporizers, the operating hours restrictions on the engines, and the VOC limits associated with the sterilizers, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Jackson is subject to license restrictions that keep facility emissions below major source thresholds for PM, PM_{10}, $PM_{2.5}$, NO_x, CO, and VOC; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

II. BEST PRACTICAL TREATMENT (BPT)

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.

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 emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #2, #3, #7, #8, #10, #11, #12

Jackson operates seven boilers for heat, Boilers #2, #3, #7, #8, #10, #11, and #12. Boilers #2 and #3 are each rated at 10.5 MMBtu/hr and fire distillate fuel. Boilers #2 and #3 were each manufactured and installed before 1989. Boilers #7 and #8 are each rated at 33.5 MMBtu/hr and fire distillate fuel and propane. Boilers #7 and #8 are equipped with oxygen trim systems. Boiler #7 was manufactured and installed in 1988, and Boiler #8 was manufactured and installed in 1993. Boilers #10 and #11 are each rated at 20.9 MMBtu/hr and fire distillate fuel. Boilers #10 and #11 are equipped with oxygen trim systems. Boilers #10 and #11 were each manufactured and installed in 2000. Boilers #2, #3, #10, and #11 exhaust through the same stack, Stack #1. Boilers #7 and #8 exhaust through the same stack, Stack #5.

Boiler #12 is rated at 49.9 MMBtu/hr when firing natural gas, propane, and distillate fuel. Boiler #12 is equipped with an oxygen trim system. Boiler #12 is rated at 44.4 MMBtu/hr when firing wood pellets. The wood pellets are pulverized in hammermills prior to combustion in Boiler #12. Boiler #12 is equipped with a baghouse emissions control system designed to reduce PM/PM_{10}/$PM_{2.5}$ emissions while combusting wood pellets. The baghouse emissions control system is equipped with a continuous parameter monitoring system (CPMS) that includes a bag leak detection system. Boiler #12 was manufactured and installed in 2011. Boiler #12 exhaust through its own stack, Stack #6.

State statute directs that, with limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in Boilers #2, #3, #7, #8, #10, #11, and #12 shall not exceed 0.0015% by weight (15 ppm).

1. BPT Findings

The BPT emission limits for Boilers #2, #3, #7, #8, #10, #11, and #12 were based on the following:

Distillate Fuel (Boilers #2, #3, #7, #8, #10, and #11)

$PM/PM_{10}/PM_{2.5}$	–	0.08 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO_x	–	20 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
CO	–	5 lb/1,000 gal based on AP-42 Table 1.3-1 dated 5/10
VOC	–	0.20 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10

Distillate Fuel (Boiler #12)

$PM/PM_{10}/PM_{2.5}$	–	0.03 lb/MMBtu based on 40 C.F.R. § 60.43c(e)(1)
SO_2	–	based on firing distillate fuel with a maximum sulfur content of 0.0015% by weight
NO_x	–	0.30 lb/1,000 gal based on BACT from A-93-71-V-A (2/18/2011)
CO	–	0.30 lb/1,000 gal based on BACT from A-93-71-V-A (2/18/2011)
VOC	–	0.20 lb/1,000 gal based on AP-42 Table 1.3-3 dated 5/10

Propane (Boilers #7, #8, and #12)

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	0.054 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
NO_x	–	13 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
CO	–	7.5 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
VOC	–	1 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08

Natural Gas (Boiler #12)

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
NO_x	–	100 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
CO	–	84 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
VOC	–	5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98

Wood Pellets (Boiler #12)

$PM/PM_{10}/PM_{2.5}$	–	0.03 lb/MMBtu, 40 C.F.R. § 63.11201(a)
SO_2	–	0.025 lb/MMBtu based on AP-42 Table 1.6-2 dated 4/22
NO_x	–	0.19 lb/MMBtu based on BACT from A-93-71-V-A (2/18/2011)
CO	–	0.3 lb/MMBtu based on BACT from A-93-71-V-A (2/18/2011)
VOC	–	0.017 lb/MMBtu based on AP-42 Table 1.6-3 dated 4/22

The BPT emission limits for Boilers #2, #3, #7, #8, #10, #11, and #12 are the following:

Unit	Pollutant	lb/MMBtu
Boiler #2	PM	0.08
Boiler #3	PM	0.08
Boiler #7 *Distillate fuel*	PM	0.08
Boiler #7 *Propane*	PM	0.05
Boiler #8 *Distillate fuel*	PM	0.08
Boiler #8 *Propane*	PM	0.05
Boiler #10	PM	0.08
Boiler #11	PM	0.08
Boiler #12 *Wood pellets*	PM	0.03
Boiler #12 *Natural gas*	PM	0.05
Boiler #12 *Propane*	PM	0.05
Boiler #12 *Distillate fuel*	PM	0.08

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #2	0.84	0.84	0.84	0.02	1.50	0.38	0.02
Boiler #3	0.84	0.84	0.84	0.02	1.50	0.38	0.02
Boiler #7 *Distillate fuel*	2.68	2.68	2.68	0.05	4.79	1.20	0.05
Boiler #7 *Propane*	1.68	1.68	1.68	0.02	4.81	2.78	0.37
Boiler #8 *Distillate fuel*	2.68	2.68	2.68	0.05	4.79	1.20	0.05
Boiler #8 *Propane*	1.68	1.68	1.68	0.02	4.81	2.78	0.37
Boiler #10	1.67	1.67	1.67	0.03	2.99	0.75	0.03

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #11	1.67	1.67	1.67	0.03	2.99	0.75	0.03
Boiler #12 *Wood pellets*	1.33	1.33	1.33	1.11	8.44	13.32	0.75
Boiler #12 *Natural gas*	2.50	2.50	2.50	0.03	4.89	4.11	0.27
Boiler #12 *Propane*	2.50	2.50	2.50	0.03	7.17	4.14	0.55
Boiler #12 *Distillate fuel*	1.50	1.50	1.50	0.08	14.97	14.97	0.07

Jackson shall be limited to a combined fuel use limit of 315,000 MMBtu per year of distillate fuel, propane, natural gas, and wood pellets in the boilers and propane vaporizers on a 12-month rolling total basis. Calculations shall be based on the following heat content for each fuel:

Distillate fuel 0.14 MMBtu/gal
Propane 0.0915 MMBtu/gal
Natural gas 0.00103 MMBtu/scf
Wood pellets 0.00828 MMBtu/lb (based on 8% moisture)

Jackson shall operate the oxygen trim systems installed on Boilers #7, #8, #10, #11, and #12 according to the manufacturer's instructions.

2. Visible Emissions

Stack #1 (Boilers #2, #3, #10, and #11)

Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, §§ 4(A)(2) and 4(D)(1)]

Stack #5 (Boilers #7 and #8)

Visible emissions from Stack #5 shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired in either of the boilers. [06-096 C.M.R. ch. 101, §§ 4(A)(2) and 4(D)(1)]

Visible emissions from Stack #5 shall not exceed 10% opacity on a six-minute block average basis when propane only is being fired in the boilers. [06-096 C.M.R. ch. 101, §§ 4(A)(3) and 4(D)(1)]

Stack #6 (Boiler #12)

Visible emissions from Stack #6 shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired in Boiler #12. [06-096 C.M.R. ch. 101, §§ 4(A)(2)]

Visible emissions from Stack #6 shall not exceed 10% opacity on a six-minute block average basis when propane or natural gas is being fired in Boiler #12. [06-096 C.M.R. ch. 101, §§ 4(A)(3)]

Visible emissions from Stack #6 shall not exceed 20% opacity on a six-minute block average basis, except for one six-minute period per hour of not more than 27% opacity when wood pellets are fired in Boiler #12, except for periods of startup, shutdown, or malfunction during which time the owner or operator must meet the normal operating visible emissions standard or the following alternative visible emissions standard. [40 C.F.R § 60.43c(c)]

During periods of startup, shutdown, or malfunction, visible emissions shall not exceed 30% opacity on a six-minute block average basis. This alternative visible emissions standard shall not be utilized for more than one hour (10 consecutive six-minute block averages) per event. If this alternative visible emissions standard is utilized, Jackson shall keep records of the date, time, and duration of all startup, shutdown, and malfunction events and provide them to the Department upon request. [06-096 C.M.R. ch. 101, § 4(A)(5)(a)

3. Periodic Monitoring

Periodic monitoring for Boilers #2, #3, #7, #8, #10, #11, and #12 shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the type of fuel used and sulfur content of the fuel, as applicable.

4. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

Due to their size and years of manufacture, Boilers #8, #10, #11, and #12 are subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. Due to their years of manufacture, Boilers #2, #3, and #7 are not subject to 40 C.F.R. Part 60, Subpart Dc. [40 C.F.R. § 60.40c]

Jackson shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers #8, #10, #11, and #12 including, but not limited to, the following:

a. Standards

(1) Sulfur Dioxide (SO_2)
The fuel fired in Boilers #8, #10, #11, and #12 shall not exceed 0.5% sulfur by weight. [40 C.F.R. § 60.42c(d)] This fuel sulfur content limit shall be streamlined to the lower limit required by State statute.

(2) Particulate Matter (PM)
Boiler #12 shall not exceed an emission limit of 0.030 lb/MMBtu. [40 C.F.R. § 60.43c(e)(1)]

(3) Opacity

Distillate Fuel
Boilers #8, and #12 are subject to an applicable visible emission standard pursuant to 40 C.F.R. §§ 60.43c(c) and (d). However, the Department has determined that the visible emission limit from 06-096 C.M.R. ch. 101 is more stringent than the applicable limit in 40 C.F.R. Part 60, Subpart Dc for Boiler #8 and for Boiler #12 when firing distillate fuel. Therefore, the visible emission limit for Boiler #8 and for Boiler #12 when firing distillate fuel has been streamlined to the more stringent limit, and only this more stringent limit shall be included in the Order of this air emission license.

Wood Pellets
Boiler #12 is subject to the applicable visible emission standard pursuant to 40 C.F.R. §§ 60.43c(c) and (d) when firing wood pellets. This limit is included in Section II(B)(2) above.

b. Monitoring Requirements

(1) Except as provided in paragraph (3) below, Jackson shall conduct performance tests on Boilers #8 and #12 for opacity using 40 C.F.R. Part 60, Appendix A, Method 9 according to the following schedule:
[40 C.F.R. § 60.47c(a)]

(i) If no visible emissions were observed in the most recent Method 9 performance test, the next performance test shall be completed within 12 calendar months from the most recent Method 9 test or within 45 days of firing oil in the boiler, whichever is later.
(ii) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was less than or equal to 5% opacity, the next performance test shall be completed within six calendar months from the most recent Method 9 test or within 45 days of firing oil in the boiler, whichever is later.

(iii) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was greater than 5% but less than or equal to 10% opacity, the next performance test shall be completed within three calendar months from the most recent Method 9 test or within 45 days of firing oil in the boiler, whichever is later.

(iv) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was greater than 10% opacity, the next performance test shall be completed within 45 days from the most recent Method 9 test.

(2) The observation period for the Method 9 performance test may be reduced from 3 hours to 60 minutes if all 6-minute block averages are less than 10% opacity and all individual 15-second observations are less than or equal to 20% opacity during the initial 60 minutes of observation.

(3) If the visible emissions observed in the most recent Method 9 performance test were less than 10% opacity, Jackson may elect to perform subsequent performance tests using 40 C.F.R. Part 60, Appendix A, Method 22 as follows:

(i) Jackson shall conduct 10-minute observations each operating day Boilers #8 or #12 fires distillate fuel using Method 22.

(ii) If no visible emissions are observed for 10 operating days, Jackson may reduce observations to once every 7 operating days. If any visible emissions are observed, daily observations shall be resumed.

(iii) If the sum of the occurrence of any visible emissions is greater than 30 seconds per 10-minute observation, Jackson shall immediately conduct a 30-minute observation.

(iv) If the sum of the occurrence of any visible emissions is greater than 90 seconds per 30-minute observation, Jackson shall either document the adjustments made to Boilers #8 and #12 and demonstrate within 24 hours that the sum of the occurrence of any visible emissions is not greater than 90 seconds per 30-minute observation or conduct a Method 9 performance test within 45 days.

c. Reporting and Recordkeeping

(1) Jackson shall maintain monthly records with fuel certifications for any distillate fuel burned Boilers #8, #10, #11, and #12. The fuel certification shall include the following information.

(i) The name of the supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

[40 C.F.R. §§ 60.48c (f)(1) and 60.48c(g)(2)]

(2) For each opacity performance test performed, Jackson shall maintain records of the following:

(i) Dates and time intervals of all opacity or visible emissions observation periods;
(ii) Name and affiliation for each visible emission observer participating in the performance test. For Method 9 performance tests, include a copy of the current visible emission reading certification for each visible emission observer.
(iii) Copies of all visible emission observer opacity field data sheets; and
(iv) Documentation of any adjustments made and the time the adjustments were completed to demonstrate compliance with the applicable monitoring requirements (Method 22 observations only).

(3) Jackson shall submit semi-annual reports to EPA and to the Department. [40 C.F.R. § 60.48c(d)] These reports shall include the following:

(i) Calendar dates covered in the reporting period; [40 C.F.R. § 60.48c(e)(1)]
(ii) Records of fuel supplier certifications; [40 C.F.R. § 60.48c(e)(11)] and
(iii) Any instances of excess emissions (including opacity) from Boilers #7, #8, #10, #11, and #12. [40 C.F.R. § 60.48c(c)]

(4) The semi-annual reports are due within 30 days of the end of each six-month period. [40 C.F.R. § 60.48c(j)]

(5) The following address for EPA shall be used for any reports or notifications required to be copied to them:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

(6) Jackson shall maintain records required by Subpart Dc for a period of two years following the date of the record. [40 C.F.R. § 60.48c(i)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the two-year record retention requirement of Subpart Dc shall be streamlined to the more stringent six-year requirement.

5. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart JJJJJJ

Boilers #2, #3, #7, #8, #10, #11, and #12 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers*

Area Sources, 40 C.F.R. Part 63, Subpart JJJJJJ. Boilers #2, #3, #7, #8, #10, and #11 are considered existing oil boilers rated more than 10 MMBtu/hr. Boiler #12 is considered a new oil and biomass boiler rated more than 10 MMBtu/hr [40 C.F.R. §§ 63.11193 and 63.11195]

Applicable federal 40 C.F.R. Part 63, Subpart JJJJJJ requirements include the following. Additional rule information can be found on the following website: https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source.

a. Compliance Dates, Notifications, and Work Practice Requirements

(1) Boiler Tune-Up Program

(i) A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]

(ii) Tune-ups shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	**Tune-Up Frequency**
Boilers #2 and #3	Every 2 years
Boilers #7, #8, #10, #11, and #12 (oxygen trim systems installed)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

(iii) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection for Boilers #2 and #3. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Boilers #7, #8, #10, #11, and #12. [40 C.F.R. § 63.11223(b)(1)]
2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection for Boilers #2 and #3. Delay of

the inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Boilers #7, #8, #10, #11, and #12. [40 C.F.R. § 63.11223(b)(3)]

4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

(iv) Tune-Up Report: A tune-up report shall be maintained onsite and, submitted to the Department and/or EPA upon request. The report shall contain the following information:

1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;

2. A description of any corrective actions taken as part of the tune-up of the boiler; and

3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

(2) Emission Limits (Boiler #12)

Boiler #12 shall have a filterable PM (PM/PM_{10}) emissions limit of 0.03 lb/MMBtu of heat input while burning either biomass (wood pellets) or distillate fuel. [40 C.F.R. § 63.11201(a) and Table 1] This limit is included in Section II(B)(1).

(3) Operating Limits (Boiler #12)

Boiler #12 shall install and operate a bag leak detection system according to § 63.11224 and operate the baghouse such that the bag leak detection system alarm does not sound more than 5% of the operating time during each 6-month period. [40 C.F.R. § 63.11201(c) and Table 3] Boiler #12 is equipped with a baghouse emissions control system, which is equipped with a continuous

parameter monitoring system (CPMS) that includes a bag leak detection system.

(4) Compliance Report

For each year, Jackson shall prepare a compliance report by March 1st of the following year. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request, unless the source experiences any deviations from the applicable requirements of this Subpart during the previous calendar year, then the report must be submitted to the Department and to the EPA by March 15th. The report must include the items contained in § 63.11225(b)(1) through (4), including the following: [40 C.F.R. § 63.11225(b)]

(i) Company name and address;

(ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;

(iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;

(iv) The following certifications, as applicable:

1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
2. "No secondary materials that are solid waste were combusted in any affected unit."
3. "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

(v) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken; and

(vi) The total fuel use by each affected boiler subject to an emission limit for each calendar month within the reporting period.

b. Recordkeeping

(1) Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:

(i) Copies of notifications and reports with supporting compliance documentation;

(ii) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;

(iii) Records of the occurrence and duration of each malfunction of each applicable boiler; and

(iv) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

(2) Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJJ shall be streamlined to the more stringent six-year requirement.

C. Propane Vaporizers #1 and #2

Jackson operates two propane vaporizers, Propane Vaporizers #1 and #2, for the operation of Boilers #7 and #8. Propane Vaporizers #1 and #2 are each rated at 1.09 MMBtu/hr and fire propane. Propane Vaporizers #1 and #2 were each manufactured and installed in 2013.

1. BPT Findings

The BPT emission limits for Propane Vaporizers #1 and #2 were based on the following:

Propane

$PM/PM_{10}/PM_{2.5}$	–	0.05 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	–	0.054 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
NO_x	–	13 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
CO	–	7.5 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08
VOC	–	1 lb/1,000 gal based on AP-42 Table 1.5-1 dated 7/08

The BPT emission limits for Propane Vaporizers #1 and #2 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Propane Vaporizer #1	0.05	0.05	0.05	0.001	0.16	0.09	0.01
Propane Vaporizer #2	0.05	0.05	0.05	0.001	0.16	0.09	0.01

Fuel fired in the Propane Vaporizers shall be included under the combined fuel limit of 315,000 MMBtu per year of distillate fuel, propane, natural gas, and wood pellets in the boilers and propane vaporizers on a 12-month rolling total basis.

2. Visible Emissions

   Visible emissions from Propane Vaporizers #1 and #2 shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

3. Periodic Monitoring

   Periodic monitoring for Propane Vaporizers #1 and #2 shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the type and quantity of fuel used.

4. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

   Due to their size and due to the fact that Propane Vaporizers #1 and #2 are not steam generating units, Propane Vaporizers #1 and #2 are not subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

5. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart JJJJJJ

   Propane Vaporizers #1 and #2 not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ. Propane Vaporizers #1 and #2 fire propane and do not meet the definition of a boiler as defined in 40 C.F.R. § 63.11237 and are therefore exempt from 40 C.F.R. Subpart JJJJJJ. [40 C.F.R. §§ 63.11193, 63.11195, and 63.11237]

D. <u>Emergency Generators #3, #10, and #11 (emergency engines)</u>

Jackson operates three emergency generators, Generators #3, #10, and #11. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. The engines all fire distillate fuel. Generator #3 has an engine rated at 2.5 MMBtu/hr and was manufactured and installed before 2006. Generator #10 has an engine rated at 19.0 MMBtu/hr and was manufactured and installed in 2016. Generator #11 has an engine rated at 2.7 MMBtu/hr and was manufactured and installed in 2021.

1. BPT Findings

The BPT emission limits for Generators #3 and #11 (small engines) are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
CO	–	0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
VOC	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96

The BPT emission limits for Generator #10 (large engine) are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
CO	–	0.85 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
VOC	–	0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96

The BPT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu
Generator #10	PM	0.12

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #3	0.30	0.30	0.30	0.004	11.03	2.38	0.90
Generator #10	2.28	2.28	2.28	0.03	60.80	16.15	1.71
Generator #11	0.32	0.32	0.32	0.004	11.91	2.57	0.97

2. Visible Emissions

Generator #3 (Pre-2006)

Visible emissions from Generator #3 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Jackson shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

a. The duration of the startup shall not exceed 30 minutes per event;
b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
c. Jackson shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

Generators #10 and #11 (Post-2006)

Visible emissions from Generators #10 and #11 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]

3. Chapter 169

Generators #3, #10, and #11 were installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and are therefore exempt from this rule pursuant to section 1.

4. New Source Performance Standards (NSPS)

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to Generators #10 and #11 since these units were ordered after July 11, 2005, and manufactured after April 1, 2006. Due to the date of manufacture of Generator #3, this engine is not subject to 40 C.F.R. Part 60, Subpart IIII since the unit was manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart IIII requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an **emergency** stationary ICE (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 40 C.F.R. Part 60, Subpart IIII, 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;
- 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 ICE 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.

[40 C.F.R. §§ 60.4211(f) and 60.4219]

b. 40 C.F.R. Part 60, Subpart IIII Requirements

(1) Manufacturer Certification Requirement
The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 C.F.R. § 60.4202. [40 C.F.R. § 60.4205(b)]

(2) Ultra-Low Sulfur Fuel Requirement
The fuel fired in the engines shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 C.F.R. § 60.4207(b)]

(3) Non-Resettable Hour Meter Requirement
A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 60.4209(a)]

(4) Operation and Maintenance Requirements
The engines shall be operated and maintained according to the manufacturer's emission-related written instructions. Jackson may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

Jackson shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(5) Annual Time Limit for Maintenance and Testing
As emergency engines, the units shall each 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. § 60.4211(f)]

(6) Initial Notification Requirement
No initial notification is required under 40 C.F.R. Part 60, Subpart IIII for emergency engines. [40 C.F.R. § 60.4214(b)]

(7) Recordkeeping
Jackson shall keep records that include the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

5. National Emission Standards for Hazardous Air Pollutants (NESHAP): 40 C.F.R. Part 63, Subpart ZZZZ

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to the emergency engines listed above. Generator #3 is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source and is not subject to New Source Performance Standards regulations. Generators #10 and #11 are considered new, emergency stationary reciprocating internal combustions engines at an area source and is subject to NSPS 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. [40 C.F.R. § 63.6585]

By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII described in the previous, Generators #10 and #11 also meet the requirements found in 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements for Generator #3 is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 63, 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 40 C.F.R. Part 63, 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;
- 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 #3 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
(i) Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
(ii) Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and

(iii)Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

[40 C.F.R. § 63.6603(a) and Table 2(d)]

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or Jackson 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

Jackson 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, Jackson 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 each 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

Jackson 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)]

E. Non-Emergency Generators #6, #8, and #9 (non-emergency engines)

Jackson operates three non-emergency generators, Generators #6, #8, and #9. The generators are generator sets with each gen set consisting of an engine and an electrical generator. The engines all fire distillate fuel. Generator #6 has an engine rated at 12.3 MMBtu/hr and was manufactured and installed in 1992. Generators #8 and #9 each have an engine rated at 15.2 MMBtu/hr and were each manufactured and installed in 2003.

Jackson installed an oxidation catalyst on each non-emergency generator, which is designed to achieve a 70%+ reduction in CO emissions. Each catalyst system is equipped with pre- and post-catalyst test ports for emissions testing and a continuous parameter monitoring system (CPMS).

1. BPT Findings

The BPT emission limits for the generators are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	3.2 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96
CO	–	0.255 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96 and 70% control
VOC	–	0.09 lb/MMBtu from AP-42 Table 3.4-1 dated 10/96

The BPT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu
Generator #6	PM	0.12
Generator #8	PM	0.12
Generator #9	PM	0.12

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #6	1.48	1.48	1.48	0.02	39.36	3.14	1.11
Generator #8	1.82	1.82	1.82	0.02	48.64	3.88	2.89
Generator #9	1.82	1.82	1.82	0.02	48.64	3.88	2.89

2. Visible Emissions

Visible emissions from Generators #6, #8, and #9 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Jackson shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

a. The duration of the startup shall not exceed 30 minutes per event;
b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
c. Jackson shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

3. Chapter 169

Generators #6, #8, and #9 were installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and are therefore exempt from this rule pursuant to section 1.

4. New Source Performance Standards (NSPS)

Due to the dates of manufacture of the compression ignition engines listed above, the engines are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE),* 40 C.F.R. Part 60, Subpart IIII since the units were manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

5. National Emission Standards for Hazardous Air Pollutants (NESHAP):
40 C.F.R. Part 63, Subpart ZZZZ

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to the engines listed above. The units are considered existing, non-emergency stationary reciprocating internal combustion engines 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. [40 C.F.R. § 63.6585]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements is listed below.

a. Operation and Maintenance Requirements [40 C.F.R. § 63.6603(a) and Tables 2(b) and 2(d)]

(1) Limit concentration of CO in the exhaust to 23 ppmvd at 15% O_2 or reduce CO emissions by 70% or more (Table 2d);
(2) Minimize the engine's time spent at idle and minimize the engine's startup time at startup 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 apply (Table 2d);
(3) Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test (Table 2b); and
(4) Maintain the temperature of the exhaust so that the catalyst inlet temperature is 450 ºF – 1,350 ºF. (Table 2b)

b. Crankcase Filtration
Jackson shall operate on Generators #6, #8, and #9 either a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere or an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals. [40 C.F.R. § 63.6625(g)]

c. Continuous Parameter Monitoring System (CPMS)
(1) Jackson shall install, operate, and maintain a CPMS on Generators #6, #8, and #9.
(2) Jackson shall monitor the catalyst inlet temperature and reduce this data to 4-hour rolling averages to demonstrate compliance with the limitations on the catalyst inlet temperature range.
(3) For any month in which the generator operated, Jackson shall monitor the pressure drop across the catalyst once per month to demonstrate compliance with the operating limit established during the last performance test.
(4) Jackson shall prepare a site-specific monitoring plan that addresses the requirements outlined in 40 C.F.R. § 63.6625(b)(1).
(5) The CPMS shall be continuously operated in accordance with the site-specific monitoring plan at all times that Generator #6, #8, or #9 is operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities.
(6) The CPMS shall collect data at least once every 15 minutes.
(7) The minimum tolerance for a CPMS measuring temperature is 5 ºF (2.8 ºC) or 1% of the measurement range, whichever is larger.
(8) CPMS audit procedures shall be performed at least annually.
[40 C.F.R. § 63.6625(b), § 63.6635, and Table 6]

d. Performance Tests
   (1) Jackson shall perform performance tests on each generator every 8,760 hours of operation or 3 years, whichever comes first.
   [40 C.F.R. § 63.6640(a), Table 3, and Table 6]
   (2) Jackson shall conduct three separate test runs for each performance test. Each test run must be at least 1 hour, unless otherwise specified.
   [40 C.F.R. § 63.6620(d)]
   (3) During a performance test, the facility must establish the pressure drop across the catalyst to be used to demonstrate compliance per the CPMS.
   [40 C.F.R. § 63.6630(b)]
   (4) If the facility changes the catalyst, Jackson shall reestablish the values of the operating parameters measured during the performance test. In order to reestablish the operating parameters, the facility shall conduct a performance test to demonstrate that the required emission limitation is being met.
   [40 C.F.R. § 63.6640(b)]

e. Ultra-Low Sulfur Diesel Fuel Requirement
   The diesel fuel fired in Generators #6, #8, and #9 shall not exceed 15 ppm sulfur (0.0015% sulfur) by weight. [40 C.F.R. § 63.6604(a)]

f. General Requirement to Minimize Emissions
   At all times Jackson shall operate and maintain Generators #6, #8, and #9, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 C.F.R. § 63.6605(b)]

g. Reporting
   Jackson shall submit to EPA all reports required by Subpart ZZZZ including, but not limited to, the following:
   (1) Notification of Intent to conduct a performance test at least 60 days before a performance test is scheduled to begin. [40 C.F.R. § 63.6645(g)]
   (2) Semiannual Compliance Reports shall cover the period between January 1 and June 30 or July 1 through December 31 of each year and shall be postmarked by July 31 or January 31 as applicable. The Semiannual Compliance Report shall include the following information:
      (i) Company name and address;
      (ii) Statement by a responsible official, with the official's name, title, and signature, certifying the accuracy of the content of the report;
      (iii) Date of report and beginning and ending dates of the reporting period;
      (iv) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to

minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

(v) If there are no deviations from any applicable emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period;

(vi) If there were no periods during which the continuous monitoring system (CMS), i.e. CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period; and

(vii) If there were periods of deviation from an emission or operating limitation occurring where the CPMS is used to comply with the emission and operating limitation, the Semiannual Compliance Report shall also include the following information:

1. The date and time that each malfunction started and stopped;
2. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;
3. The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8);
4. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
5. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
6. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, or other known causes, and other unknown causes;
7. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the associated generator during that reporting period;
8. An identification of each parameter and pollutant that was monitored;
9. A brief description of stationary RICE (Generators #6, #8, and #9);
10. A brief description of the CMS;
11. The date of the last CMS certification or audit; and
12. A description of any changes in CMS, processes, or controls since the last reporting period.

[40 C.F.R. § 63.6650 and Table 7]

h. Record Keeping

Jackson shall keep all records required by Subpart ZZZZ including, but not limited to, the following:

(1) A copy of each notification and report that was submitted to comply with Subpart ZZZZ, including all supporting documentation;

(2) Records of the occurrence and duration of each malfunction of the engine, pollution control equipment, or monitoring equipment;

(3) Records of the occurrence and duration of each deviation;
(4) Records of performance tests and performance evaluations;
(5) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions taken to restore normal operation;
(6) Monitoring data from the CPMS; and
(7) Records of maintenance conducted on Generators #6, #8, and #9 and associated control equipment to demonstrate the equipment was operated and maintained according to the maintenance plan.

[40 C.F.R. § 63.6655]

F. Incinerator #3

Jackson operates Incinerator #3 for waste disposal purposes. Incinerator #3 is a dual-combustion chamber Mathews Environmental Solutions IEB Series 32 incinerator unit which is used for the disposal of type 0 through 4 wastes only. Incinerator #3 has a maximum combustion rate of 250 lb/hr and fires propane.

1. BPT Findings

The BPT emission limits for Incinerator #3 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.10 gr/dscf @ 7% O_2 based on 06-096 C.M.R. ch. 115, BPT 7.00 lb/ton from AP-42 Table 2.1-12 dated 10/96
SO_2	–	2.50 lb/ton from AP-42 Table 2.1-12 dated 10/96
NO_x	–	3.00 lb/ton from AP-42 Table 2.1-12 dated 10/96
CO	–	10.0 lb/ton from AP-42 Table 2.1-12 dated 10/96
VOC	–	3.00 lb/ton from AP-42 Table 2.1-12 dated 10/96

BPT emission limits for Incinerator #3 are the following:

	PM (lb/hr)	**PM (gr/dscf)**	**PM_{10} (lb/hr)**	**$PM_{2.5}$ (lb/hr)**	**SO_2 (lb/hr)**	**NO_x (lb/hr)**	**CO (lb/hr)**	**VOC (lb/hr)**
Incinerator #3	0.88	0.10 (@ 7% O_2)	0.88	0.88	0.31	0.38	1.25	0.38

2. Incinerator Particulate Emission Standards

Incinerator #3 is subject to a particulate emission standard (0.2 gr/dscf) and opacity standard contained in *Incinerator Particulate Emission Standard,* 06-096 C.M.R. ch. 104. The BPT emission standards contained in this license have been determined to be more stringent than those contained in the rule. Therefore, the particulate matter emission limit for Incinerator #3 has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the Order of this air emission license.

3. Visible Emissions

   Chapter 101

   Visible emission from Incinerator #3 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

   Chapter 115, BPT

   Visible emissions from Incinerator #3 shall not exceed 5% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

   Visible Emissions Streamlining

   The Department has determined that the BPT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for Incinerator #3 has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the Order of this air emission license.

4. Operating Parameters [06-096 C.M.R. ch. 115, BPT]

   a. Incinerator #3 shall be used for the disposal of type 0 through 4 wastes and shall not be used for the disposal of plastics, cytotoxic (antineoplastic) drugs, or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in 06-096 C.M.R. ch. 100. However, the incidental use of plastics used in wrapping animal carcasses for handling and storage purposes is allowed.

   b. Operating temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,600 ^{o}F with a stack gas retention time of at least 1.0 second at or above 1,600 ^{o}F.

   c. To ensure an efficient burn and to prevent odors and minimize visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1,600 ^{o}F prior to commencing the burn cycle.

   d. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,600 ^{o}F in the secondary chamber.

   e. The temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,600 ^{o}F for the duration of the burn cycle.

f. A pyrometer and ¼-inch test port shall be installed and maintained at the location of the incinerator or refractory-lined stack, which provides sufficient volume to ensure a flue gas retention time of not less than 1.0 second at the minimum of 1,600 ºF.

g. A log shall be maintained detailing and quantifying the hours of operation on a daily basis for Incinerator #3. The log shall record the weight of each charge to the incinerator, preheating temperature, preheating time, charging time, and afterburner temperature directly after charging and every 60 minutes after startup until and including final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location.

h. A log shall be maintained detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location.

i. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management.

j. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

5. New Source Performance Standards

Solid waste incinerators constructed after June 4, 2010, are subject to *Standards of Performance for Commercial and Industrial Solid Waste Incinerator Units,* 40 C.F.R. Part 60, Subpart CCCC. Pursuant to § 60.2020, units which burn 90% or more by weight of pathological waste are not subject to Subpart CCCC provided the source (1) notifies the Administrator that the unit meets this criteria and (2) keeps records on a calendar quarter basis of the weight of all pathological waste burned and the weight of all other fuels and waste burned in the unit. Incinerator #3 meets these requirements and is therefore not subject to Subpart CCCC. [40 C.F.R. § 60.2020(a)]

Hospital, medical, and infectious waste incinerators constructed after December 1, 2008, are subject to *Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators,* 40 C.F.R. Part 60, Subpart Ec. The waste burned in Incinerator #3 contains animal remains, bags containing waste material, and animal bedding which has <u>not</u> been exposed to infectious agents. Therefore, this material is not hospital, medical, or infectious waste per the definitions of 40 C.F.R. § 60.51c. In addition, units are not subject to Subpart Ec during times when only pathological waste is burned provided the source (1) notifies

the Administrator that the unit meets these criteria and (2) keeps records on a calendar quarter basis of times when only pathological waste is burned.

G. Incinerator #4

Jackson operates Incinerator #4 used for waste disposal purposes. Incinerator #4 is a dual-combustion chamber Mathews Surefire 100 incineration unit which is used for the disposal of type 0-5 and 7 wastes. Incinerator #4 has a maximum combustion rate of 220 lb/hr and fires propane.

1. BPT Findings

The BPT emission limits for Incinerator #4 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.10 gr/dscf @ 7% O_2 based on 06-096 C.M.R. ch. 115, BPT 7.00 lb/ton from AP-42 Table 2.1-12 dated 10/96
SO_2	–	2.50 lb/ton from AP-42 Table 2.1-12 dated 10/96
NO_x	–	3.00 lb/ton from AP-42 Table 2.1-12 dated 10/96
CO	–	10.0 lb/ton from AP-42 Table 2.1-12 dated 10/96
VOC	–	3.00 lb/ton from AP-42 Table 2.1-12 dated 10/96

BPT emission limits for Incinerator #4 are the following:

	PM (lb/hr)	**PM (gr/dscf)**	**PM_{10} (lb/hr)**	**$PM_{2.5}$ (lb/hr)**	**SO_2 (lb/hr)**	**NO_x (lb/hr)**	**CO (lb/hr)**	**VOC (lb/hr)**
Incinerator #4	0.77	0.10 (@ 7% O_2)	0.77	0.77	0.28	0.33	1.10	0.33

2. Incinerator Particulate Emission Standards

Incinerator #4 is subject to a particulate emission standard (0.2 gr/dscf) and opacity standard contained in *Incinerator Particulate Emission Standard,* 06-096 C.M.R. ch. 104. The BPT emission standards contained in this license have been determined to be more stringent than those contained in the rule. Therefore, the particulate matter emission limit for Incinerator #4 has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the Order of this air emission license.

3. Visible Emissions

Chapter 101

Visible emissions from Incinerator #4 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(4)]

Chapter 115, BPT

Visible emissions from Incinerator #4 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

Visible Emissions Streamlining

The Department has determined that the BPT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for Incinerator #4 has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the Order of this air emission license.

4. Operating Parameters

   a. Operating temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,560 ºF for Incinerator #4 with a stack gas retention time of at least 2.0 seconds at or above 1,560 ºF.

   b. To ensure an efficient burn and to prevent odors and minimize visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1,560 ºF prior to commencing the burn cycle.

   c. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,560 ºF in the secondary chamber.

   d. The temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,560 ºF for the duration of the burn cycle.

   e. A pyrometer and ¼-inch test port shall be installed and maintained at the location of the incinerator or refractory-lined stack, which provides sufficient volume to ensure a flue gas retention time of not less than 2.0 seconds at the minimum of 1,560 ºF.

   f. A log shall be maintained detailing and quantifying the hours of operation on a daily basis for Incinerator #4. The log shall record the weight of each charge to the incinerator, preheating temperature, preheating time, charging time, and afterburner temperature directly after charging and every 60 minutes after startup until and including final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location.

g. A log shall be maintained detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location.

h. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management.

i. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

5. New Source Performance Standards

Solid waste incinerators constructed after June 4, 2010, are subject to *Standards of Performance for Commercial and Industrial Solid Waste Incinerator Units,* 40 C.F.R. Part 60, Subpart CCCC. Pursuant to § 60.2020, units which burn 90% or more by weight of pathological waste are not subject to Subpart CCCC provided the source (1) notifies the Administrator that the unit meets this criteria and (2) keeps records on a calendar quarter basis of the weight of all pathological waste burned and the weight of all other fuels and waste burned in the unit. Incinerator #4 meets these requirements and is therefore not subject to Subpart CCCC. [40 C.F.R. § 60.2020(a)]

Hospital, medical, and infectious waste incinerators constructed after December 1, 2008, are subject to *Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators,* 40 C.F.R. Part 60, Subpart Ec. Jackson has proposed an enforceable requirement limiting Incinerator #4 to combusting 10% or less of medical/infectious waste on a calendar quarter basis. (Pathological waste is not considered medical/infectious waste.) Therefore, Incinerator #4 meets the definition of *co-fired combustor* and is not subject to Subpart Ec provided the source (1) notifies the Administrator that the unit meets this criteria and (2) keeps records on a calendar quarter basis of the weight of all medical/infectious waste burned and the weight of all other fuels and waste burned in the unit [40 C.F.R. § 60.50c(c)]

H. Ethylene Oxide Sterilization Units

Jackson operates three ethylene oxide (EtO) sterilization units, EtO Sterilizers #3, #4, and #5. These units are 3M^{TM} Steri-Vac GS8X sterilizers. EtO Sterilizers #3, #4, and #5 have sealed EtO cartridges that are only punctured once the cartridge is inside the locked and sealed sterilization chamber, minimizing the potential for EtO leaks. The EtO cartridges are single-use and contain 170 grams of EtO each. EtO is both a VOC and HAP.

1. BPT Findings

   a. EtO Sterilizers #3, #4, and #5 are each equipped with a catalytic oxidizer known as an abator. The 3M™ EtO Abator Model 50AN converts the EtO exhausted from the sterilization unit into carbon dioxide and water vapor. The exothermic reaction occurs in the presence of a proprietary catalyst and has an EtO destruction efficiency of 99.9%. The minimum cycle time for a batch is one hour. Operating continuously (8,760 batches/year) with the catalytic oxidizer, EtO Sterilizers #3, #4, and #5 each has the potential to emit less than 10 pounds per year of EtO. [06-096 C.M.R. ch. 115, BPT]

   b. Jackson shall operate EtO Sterilizers #3, #4, and #5 and the associated catalytic oxidizers in accordance with the manufacturer's specifications. [06-096 C.M.R. ch. 115, BPT]

   c. Jackson shall keep records for EtO Sterilizers #3, #4, and #5 and the associated catalytic oxidizers of all maintenance performed including dates and details of what work was performed. Jackson shall also keep records of the number of batches processed in each sterilizer between catalytic oxidizer replacements. [06-096 C.M.R. ch. 115, BPT]

   d. Jackson shall be limited to 1.0 ton per year of EtO emissions from EtO Sterilizers #3, #4, and #5. [06-096 C.M.R. ch. 115, BPT]

2. Visible Emissions

   Chapter 101

   Visible emissions from EtO Sterilizers #3, #4, and #5 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101 § 4(B)(4)]

   Chapter 115, BPT
   Visible emissions from EtO Sterilizers #3, #4, and #5 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

   Visible Emissions Streamlining
   The Department has determined that the BPT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit from EtO Sterilizers #3, #4, and #5 has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the air emission license.

3. National Emission Standards for Hazardous Air Pollutants Subpart O

   Jackson is not subject to *Ethylene Oxide Emissions Standards for Sterilization Facilities* 40 C.F.R. Part 63, Subpart O because it is a research or laboratory facility as defined in the *Clean Air Act Amendments of 1990*, § 112(C)(7). [40 C.F.R. § 63.360(g)]

4. National Emission Standards for Hazardous Air Pollutants Subpart WWWWW

   Jackson is not subject to *National Emission Standards for Hospital Ethylene Oxide Sterilizers,* 40 C.F.R. Part 63, Subpart WWWWW because Jackson does not provide medical care and treatment for patients under supervision of licensed physicians or under nursing care. Therefore, Jackson does not meet the definition of a hospital and is not subject to this subpart. [40 C.F.R. §§ 63.10382(a) and 63.10448]

I. Gasoline Storage Tank

Jackson operates a 2,000-gallon gasoline tank, and has an estimated annual throughput of 10,000 gallons.

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

   The Gasoline Storage Tank, which has a capacity of more than 500 gallons, is subject to *NESHAP for Source Category: Gasoline Dispensing Facilities*, 40 C.F.R. Part 63, Subpart CCCCCC. The Gasoline Storage Tank has a monthly throughput of less than 10,000 gallons of gasoline.

   The applicable requirements of Subpart CCCCCC for the Gasoline Storage Tank are the following:

   a. Jackson shall, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, 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 which 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 source. [40 C.F.R. § 63.11115(a)]

   b. Jackson shall keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b). [40 C.F.R. § 63.11115(b)]

c. Jackson shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: [40 C.F.R. §63.11116(a)]

1. Minimize gasoline spills;
2. Clean up spills as expeditiously as practicable;
3. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
4. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

d. Jackson shall have records available within 24 hours of a request by the Department to document the gasoline throughput of the Gasoline Storage Tank. [40 C.F.R §63.11116(b)]

2. Although the Gasoline Storage Tank has always had a throughput below the 10,000 gallons per month applicability threshold included in *Gasoline Dispensing Facilities Vapor Control* 06-096 C.M.R. ch. 118 and thus has not been subject to requirements of 06-096 C.M.R. ch. 118 (vapor system, testing, training, and public education), the Gasoline Storage Tank is still subject to the following two requirements of that regulation:

a. The fill pipe must extend within six inches of the bottom of the gasoline storage tank. [06-096 C.M.R. ch. 118, § 4(A)]

b. Jackson shall maintain records of the monthly and annual throughput of gasoline and notify the Department of its applicability within 30 days if the monthly or annual throughput of the Gasoline Storage Tank ever exceeds the initial applicability threshold of 06-096 C.M.R. ch. 118. These records must be maintained for a minimum of three years, be available for inspection during normal business hours, and be provided to the Department and/or EPA upon request. [06-096 C.M.R. ch. 118, § 10(B)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the three-year record retention requirement of 06-096 C.M.R. ch. 118 shall be streamlined to the more stringent six-year requirement.

J. Emission Statements

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

1. The amount of distillate fuel fired in Boilers #2, #3, #7, #8, #10, #11, and #12, and in Generators #3, #6, #8, #9, #10, and #11 (each) on a monthly basis;

2. The amount of propane fired in Boilers #7, #8, and #12, in Propane Vaporizers #1 and #2, and in Incinerators #3 and #4 (each) on a monthly basis;
3. The amount of natural gas fired in Boiler #12 on a monthly basis;
4. The amount of wood pellets fired in Boiler #12 on a monthly basis;
5. The sulfur content of the distillate fuel fired in Boilers #2, #3, #7, #8, #10, #11, and #12, and in Generators #3, #6, #8, #9, #10, and #11;
6. Calculations of the VOC emissions from the Ethylene Oxide Sterilization Units on a calendar year total basis; and
7. Hours each emission unit was operating on a monthly basis.

Every third year, or as requested by the Department, Jackson shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. Jackson 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. 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 and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- A combined fuel limit of 315,000 MMBtu/yr of distillate fuel, propane, natural gas, and wood pellets in the boilers and propane vaporizers;
- Operating Generators #3, #10, and #11 for 100 hrs/yr of non-emergency operation, each;
- Operating Generators #6, #8, and #9 for 300 hrs/yr, each;
- Operating Incinerators #3 and #4 for 8,760 hr/yr, each; and
- A VOC limit of 0.1 tpy combined from the Ethylene Oxide Sterilization Units.

This information does not 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
Boilers and Vaporizers	12.6	12.6	12.6	3.9	47.3	47.3	2.7
Generator #3	--	--	--	--	0.6	0.1	--
Generator #6	0.2	0.2	0.2	--	5.9	0.5	0.2
Generator #8	0.3	0.3	0.3	--	7.3	0.6	0.4
Generator #9	0.3	0.3	0.3	--	7.3	0.6	0.4
Generator #10	0.1	0.1	0.1	--	3.0	0.8	0.1
Generator #11	--	--	--	--	0.6	0.1	--
Incinerator #3	3.8	3.8	3.8	1.4	1.6	5.5	1.6
Incinerator #4	3.4	3.4	3.4	1.2	1.4	4.8	1.4
Sterilizers	--	--	--	--	--	--	0.1
Total TPY	**20.7**	**20.7**	**20.7**	**6.5**	**75.0**	**60.3**	**6.9**

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by-case basis. In accordance with 06-096 C.M.R. ch. 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

Pollutant	Tons/Year
PM_{10}	25
$PM_{2.5}$	15
SO_2	50
NO_x	50
CO	250

Jackson previously submitted an ambient air quality impact analysis outlined in air emission license A-93-71-V-A (dated February 18, 2011) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate Ambient Air Quality Standards (AAQS). An additional air quality impact analysis is not required for this renewal.

ORDER

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

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

The Department hereby grants Air Emission License A-93-71-AE-R/M subject to the following conditions.

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 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 (38 M.R.S. § 347-C).

(2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]

(3) 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. 115]

(4) 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. 115]

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115] Payment of the annual air emission license fee for Jackson is due by the end of February of each year. [38 M.R.S. § 353-A(3)]

(6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]

(7) The licensee shall maintain and operate all emission units and air pollution 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. 115]

(8) 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. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. 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 a renewal of a license or amendment shall not stay any condition of the license.
[06-096 C.M.R. ch. 115]

(10) 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. 115]

(11) 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 to demonstrate compliance with the applicable emission standards 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; or
   2. 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. 115]

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

A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, 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. 115]

(13) Notwithstanding any other provisions 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 license requirement. [06-096 C.M.R. ch. 115]

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]

(15) Upon written request from 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 a 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. 115]

(16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605). [06-096 C.M.R. ch. 115]

SPECIFIC CONDITIONS

(17) **Boilers #2, #3, #7, #8, #10, #11, and #12**

A. Fuel

1. Boilers #2, #3, #7, #8, #10, #11, and #12 are licensed to fire distillate fuel. [06-096 C.M.R. ch. 115, BPT]
2. Boilers #7, #8, and #12 are licensed to fire propane. [06-096 C.M.R. ch. 115, BPT]
3. Boiler #12 is license to fire natural gas and wood pellets. [06-096 C.M.R. ch. 115, BPT]
4. Jackson shall be limited to combined fuel limit of 315,000 MMBtu per year of distillate fuel, propane, natural gas, and wood pellets in the boilers and propane vaporizers on a 12-month rolling total basis. [06-096 C.M.R. ch. 115, BPT]
5. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]
6. Compliance shall be demonstrated by fuel records showing the quantity, type, and the percent sulfur of the fuel delivered or fuel used (as applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, a statement from the supplier that the fuel delivered meets Maine's fuel sulfur content standards, fuel supplier certification, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

B. Jackson shall operate the oxygen trim systems installed on Boilers #7, #8, #10, #11, and #12 according to the manufacturer's instructions. [06-096 C.M.R. ch. 115, BPT]

C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #2	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #3	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #7 *Distillate fuel*	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #7 *Propane*	PM	0.05	06-096 C.M.R. ch. 115, BPT
Boiler #8 *Distillate fuel*	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #8 *Propane*	PM	0.05	06-096 C.M.R. ch. 115, BPT

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #10	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #11	PM	0.08	06-096 C.M.R. ch. 115, BPT
Boiler #12 *Wood pellets*	PM	0.03	40 C.F.R. § 63.11201(a)
Boiler #12 *Natural gas*	PM	0.05	06-096 C.M.R. ch. 115, BPT
Boiler #12 *Propane*	PM	0.05	06-096 C.M.R. ch. 115, BPT
Boiler #12 *Distillate fuel*	PM	0.08	40 C.F.R. § 60.43c(e)(1)

D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #2	0.84	0.84	0.84	0.02	1.50	0.38	0.02
Boiler #3	0.84	0.84	0.84	0.02	1.50	0.38	0.02
Boiler #7 *Distillate fuel*	2.68	2.68	2.68	0.05	4.79	1.20	0.05
Boiler #7 *Propane*	1.68	1.68	1.68	0.02	4.81	2.78	0.37
Boiler #8 *Distillate fuel*	2.68	2.68	2.68	0.05	4.79	1.20	0.05
Boiler #8 *Propane*	1.68	1.68	1.68	0.02	4.81	2.78	0.37
Boiler #10	1.67	1.67	1.67	0.03	2.99	0.75	0.03
Boiler #11	1.67	1.67	1.67	0.03	2.99	0.75	0.03
Boiler #12 *Wood pellets*	1.33	1.33	1.33	1.11	8.44	13.32	0.75
Boiler #12 *Natural gas*	2.50	2.50	2.50	0.03	4.89	4.11	0.27
Boiler #12 *Propane*	2.50	2.50	2.50	0.03	7.17	4.14	0.55
Boiler #12 *Distillate fuel*	1.50	1.50	1.50	0.08	14.97	14.97	0.07

E. Visible Emissions

Stack #1 (Boilers #2, #3, #10, and #11)

Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, §§ 4(A)(2) and 4(D)(1)]

Stack #5 (Boilers #7 and #8)

Visible emissions from Stack #5 shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired in either of the boilers. [06-096 C.M.R. ch. 101, §§ 4(A)(2) and 4(D)(1)]

Visible emissions from Stack #5 shall not exceed 10% opacity on a six-minute block average basis when propane is the only being fired in the boilers. [06-096 C.M.R. ch. 101, §§ 4(A)(3) and 4(D)(1)]

Stack #6 (Boiler #12)

Visible emissions from Stack #6 shall not exceed 20% opacity on a six-minute block average basis when distillate fuel is being fired in Boiler #12. [06-096 C.M.R. ch. 101, §§ 4(A)(2)]

Visible emissions from Stack #6 shall not exceed 10% opacity on a six-minute block average basis when propane or natural gas is being fired in Boiler #12. [06-096 C.M.R. ch. 101, §§ 4(A)(3)]

Visible emissions from Stack #6 shall not exceed 20% opacity on a six-minute block average basis, except for one six-minute period per hour of not more than 27% opacity when wood pellets are fired in Boiler #12, except for periods of startup, shutdown, or malfunction during which time the owner or operator must meet the normal operating visible emissions standard or the following alternative visible emissions standard. [40 C.F.R § 60.43c(c)]

During periods of startup, shutdown, or malfunction, visible emissions shall not exceed 30% opacity on a six-minute block average basis. This alternative visible emissions standard shall not be utilized for more than one hour (10 consecutive six-minute block averages) per event. If this alternative visible emissions standard is utilized, Jackson shall keep records of the date, time, and duration of all startup, shutdown, and malfunction events and provide them to the Department upon request. [06-096 C.M.R. ch. 101, § 4(A)(5)(a)

F. Jackson shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers #8, #10, #11, and #12 including, but not limited to, the following:

1. Standards

a. Sulfur Dioxide (SO_2)
The fuel fired in Boilers #7, #8, #10, #11, and #12 shall not exceed 0.5% sulfur by weight. [40 C.F.R. § 60.42c(d)] This fuel sulfur content limit shall be streamlined to the lower limit required by State statute.

b. Particulate Matter (PM)
Boiler #12 shall not exceed an emission limit 0.030 lb/MMBtu [40 C.F.R. § 60.43c(e)(1)]

c. Visible Emissions
Distillate Fuel
Boilers #8, and #12 are subject to an applicable visible emission standard pursuant to 40 C.F.R. §§ 60.43c(c) and (d). However, the Department has determined that the visible emission limit from 06-096 C.M.R. ch. 101 is more stringent than the applicable limit in 40 C.F.R. Part 60, Subpart Dc for Boilers #8 and for Boiler #12 when firing distillate fuel. Therefore, the visible emission limit for Boiler #8 and for Boiler #12 when firing distillate fuel has been streamlined to the more stringent limit, and only this more stringent limit shall be included in the air emission license.

Wood Pellets
Boiler #12 is subject to the applicable visible emission standard pursuant to 40 C.F.R. §§ 60.43c(c) and (d) when firing wood pellets. This limit is included in Section II(B)(2) above.

2. Monitoring Requirements

a. Except as provided in paragraph (3) below, Jackson shall conduct performance tests on Boilers #8 and #12 for opacity using 40 C.F.R. Part 60, Appendix A, Method 9 according to the following schedule:
[40 C.F.R. § 60.47c(a)]

(1) If no visible emissions were observed in the most recent Method 9 performance test, the next performance test shall be completed within 12 calendar months from the most recent Method 9 test or within 45 days of firing oil in the boiler, whichever is later.
(2) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was less than or equal to 5% opacity, the next performance test shall be completed within 6 calendar months from the most recent Method 9 test or within 45 days of firing oil in the boiler, whichever is later.
(3) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was greater than 5% but less than or equal to 10% opacity, the next performance test shall be completed within three calendar months from the most recent Method 9 test or within 45 days of firing oil in the boiler, whichever is later.
(4) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was greater than 10% opacity, the next performance test shall be completed within 45 days from the most recent Method 9 test.

b. The observation period for the Method 9 performance test may be reduced from 3 hours to 60 minutes if all 6-minute block averages are less than 10% opacity and all individual 15-second observations are less than or equal to 20% opacity during the initial 60 minutes of observation.

c. If the visible emissions observed in the most recent Method 9 performance test were less than 10% opacity, Jackson may elect to perform subsequent performance tests using 40 C.F.R. Part 60, Appendix A, Method 22 as follows:

(1) Jackson shall conduct 10-minute observations each operating day Boilers #8 or #12 fires distillate fuel using Method 22.
(2) If no visible emissions are observed for 10 operating days, Jackson may reduce observations to once every 7 operating days. If any visible emissions are observed, daily observations shall be resumed.
(3) If the sum of the occurrence of any visible emissions is greater than 30 seconds per 10-minute observation, Jackson shall immediately conduct a 30-minute observation.
(4) If the sum of the occurrence of any visible emissions is greater than 90 seconds per 30-minute observation, Jackson shall either document the adjustments made to Boilers #8 and #12 and demonstrate within 24 hours that the sum of the occurrence of any visible emissions is not greater than 90 seconds per 30-minute observation or conduct a Method 9 performance test within 45 days.

3. Reporting and Recordkeeping

a. Jackson shall maintain monthly records with fuel certifications for any distillate fuel burned in Boilers #8, #10, #11, and #12. The fuel certification shall include the following information.

(1) The name of the supplier;
(2) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c; and
(3) The sulfur content or maximum sulfur content of the oil.
[40 C.F.R. § 60.48c(g)]

b. For each opacity performance test performed, Jackson shall maintain records of the following:

(1) Dates and time intervals of all opacity or visible emissions observation periods;
(2) Name and affiliation for each visible emission observer participating in the performance test. For Method 9 performance tests, include a copy of the current visible emission reading certification for each visible emission observer.

(3) Copies of all visible emission observer opacity field data sheets; and
(4) Documentation of any adjustments made and the time the adjustments were completed to demonstrate compliance with the applicable monitoring requirements (Method 22 observations only).

c. Jackson shall submit semi-annual reports to EPA and to the Department. [40 C.F.R. § 60.48c(d)] These reports shall include the following:

(1) Calendar dates covered in the reporting period; [40 C.F.R. § 60.48c(e)(1)]
(2) Records of fuel supplier certifications; [40 C.F.R. § 60.48c(e)(11)] and
(3) Any instances of excess emissions (including opacity) from Boilers #8, #10, #11, and #12. [40 C.F.R. § 60.48c(c)]

d. The semi-annual reports are due within 30 days of the end of each six-month period. [40 C.F.R. § 60.48c(j)]

e. The following address for EPA shall be used for any reports or notifications required to be copied to them:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

f. Jackson shall maintain records required by Subpart Dc for a period of two years following the date of the record. [40 C.F.R. § 60.48c(i)]
Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the two-year record retention requirement of Subpart Dc shall be streamlined to the more stringent six-year requirement.

G. Jackson shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJJ applicable to Boilers #2, #3, #7, #8, #10, #11, and #12 including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]

a. Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. See chart below:

Boiler Category	**Tune-Up Frequency**
Boilers #2 and #3	Every 2 years
Boilers #7, #8, #10, #11, and #12 (oxygen trim systems installed)	Every 5 years

[40 C.F.R. § 63.11223(a) and Table 2]

b. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
   (1) As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection for Boilers #2 and #3. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Boilers #7, #8, #10, #11, and #12. [40 C.F.R. § 63.11223(b)(1)]
   (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 C.F..R § 63.11223(b)(2)]
   (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection for Boilers #2 and #3. Delay of the burner inspection until the next scheduled shutdown is permitted for up to 72 months from the previous inspection for Boilers #7, #8, #10, #11, and #12. [40 C.F.R. § 63.11223(b)(3)]
   (4) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
   (5) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]
   (6) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

c. Tune-Up Report: A tune-up report shall be maintained onsite and submitted to the Department and EPA upon request. The report shall contain the following information:
   (1) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
   (2) A description of any corrective actions taken as part of the tune-up of the boiler; and
   (3) The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 C.F.R. § 63.11223(b)(6)]

2. Emissions Limits (Boiler #12)

   Boiler #12 shall have a filterable PM (PM/PM_{10}) emissions limit of 0.03 lb/MMBtu of heat input while burning either biomass (wood pellets) or distillate fuel. [40 C.F.R. § 63.11201(a) and Table 1]

3. Operating Limits (Boiler #12)

   Boiler #12 shall install and operate a bag leak detection system according to § 63.11224 and operate the baghouse such that the bag leak detection system alarm does not sound more than 5% of the operating time during each six-month period. [40 C.F.R. § 63.11201(c) and Table 3] Boiler #12 is equipped with a baghouse emissions control system, which is equipped with a continuous parameter monitoring system (CPMS) that includes a bag leak detection system.

4. Compliance Report

   Each year, Jackson shall prepare a compliance report by March 1st of the following year. The report shall be maintained by the source and submitted to the Department and/or to the EPA upon request, unless the source experiences any deviations from the applicable requirements of this Subpart during the previous calendar year, then the report must be submitted to the Department and to the EPA by March 15th. The report must include the items contained in § 63.11225(b)(1) through (4), including the following: [40 C.F.R. § 63.11225(b)]

   a. Company name and address;
   b. A statement of whether the source has complied with all the relevant requirements of this Subpart;
   c. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
   d. The following certifications, as applicable:
      (1) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
      (2) "No secondary materials that are solid waste were combusted in any affected unit."
      (3) "This facility complies with the requirement in §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

e. If the sources experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken; and
f. The total fuel use by each affected boiler subject to an emission limit for each calendar month within the reporting period.

5. Recordkeeping

a. Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:

(1) Copies of notifications and reports with supporting compliance documentation;
(2) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
(3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
(4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

b. Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action. Each record must be kept on-site or be accessible from a central location by computer or other means that instantly provides access at the site for at least 2 years after the date of each recorded action. The records may be maintained off-site for the remaining 3 years. [40 C.F.R. § 63.11225(d)]
Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the five-year record retention requirement of Subpart JJJJJJ shall be streamlined to the more stringent six-year requirement.

(18) **Propane Vaporizers #1 and #2**

A. Propane Vaporizers #1 and #2 are licensed to fire propane. [06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Propane Vaporizer #1	0.05	0.05	0.05	0.001	0.16	0.09	0.01
Propane Vaporizer #2	0.05	0.05	0.05	0.001	0.16	0.09	0.01

C. Visible emissions from Propane Vaporizers #1 and #2 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

(19) **Generators #3, #10, and #11 (emergency engines)**

A. Generators #3, #10, and #11 are licensed to fire distillate fuel. [06-096 C.M.R. ch. 115, BPT]

B. Jackson shall keep records of all maintenance conducted on the engines associated with Generators #3, #10, and #11. [06-096 C.M.R. ch. 115, BPT]

C. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #10	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #3	0.30	0.30	0.30	0.004	11.03	2.38	0.90
Generator #10	2.28	2.28	2.28	0.03	60.80	16.15	1.71
Generator #11	0.32	0.32	0.32	0.004	11.91	2.57	0.97

E. Visible Emissions

Generator #3 (Pre-2006)

Visible emissions from Generator #3 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Facility shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

a. The duration of the startup shall not exceed 30 minutes per event;
b. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
c. Jackson shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

Generators #10 and #11 (Post-2006)

Visible emissions from Generators #10 and #11 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(4)]

F. Generators #10 and #11 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Manufacturer Certification
   The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in § 60.4202. [40 C.F.R. § 60.4205(b)]

2. Ultra-Low Sulfur Fuel
   The fuel fired in the engines shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [40 C.F.R. § 60.4207(b) and 06-096 C.M.R. ch. 115, BPT]

3. Non-Resettable Hour Meter
   A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 60.4209(a)]

4. Annual Time Limit for Maintenance and Testing

   a. As emergency engines, the units shall each 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 log) of all engine operating hours. [40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BPT]

   b. Jackson shall keep records that include the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. § 60.4214(b)]

5. Operation and Maintenance
   The engines shall be operated and maintained according to the manufacturer's emission-related written instructions. Jackson may only change those emission-related settings that are permitted by the manufacturer. [40 C.F.R. § 60.4211(a)]

   Jackson shall have available for review by the Department a copy of the manufacturer's emission-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

G. Generator #3 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Jackson shall meet the following operational limitations for Generator #3:

   a. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;

   b. Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and

   c. Inspect the hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, 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. 115]

2. Oil Analysis Program Option
   Jackson 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, Jackson must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for each engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]

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

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

   a. 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 to 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. 115]

   b. Jackson 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 shall be operated and maintained according to the manufacturer's emission-related written instructions, or Jackson shall develop a maintenance plan which provides 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)]

   Jackson shall have available for review by the Department a copy of the manufacturer's emissions-related written instructions for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

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]

(20) **Generators #6, #8, and #9 (non-emergency engines)**

A. Generators #6, #8, and #9 are licensed to fire distillate fuel. [06-096 C.M.R. ch. 115, BPT]

B. The fuel sulfur content for Generators #6, #8, and #9 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

C. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #6	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator #8	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)
Generator #9	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

D. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #6	1.48	1.48	1.48	0.02	39.36	3.14	1.11
Generator #8	1.82	1.82	1.82	0.02	48.64	3.88	2.89
Generator #9	1.82	1.82	1.82	0.02	48.64	3.88	2.89

E. Visible Emissions

Visible emissions from Generators #6, #8 and #9 shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Jackson shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

1. The duration of the startup shall not exceed 30 minutes per event;
2. Visible emissions shall not exceed 50% opacity on a six-minute block average basis; and
3. Jackson shall keep records of the date, time, and duration of each startup.

Use of the work practice standards and alternative visible emissions standard in lieu of the normal operating standard is limited to no more than once per day.

Note: This does not limit the engine to one startup per day. It only limits the use of the alternative emission standard to once per day.

[06-096 C.M.R. ch. 101, § 4(A)(4)]

F. Generators #6, #8, and #9 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Operation and Maintenance Requirements [40 C.F.R. § 63.6603(a) and Tables 2(b) and 2(d)]:

   a. Limit concentration of CO in the exhaust to 23 ppmvd at 15% O_2 or reduce CO emissions by 70% or more (Table 2d);

b. Minimize the engine's time spent at idle and minimize the engine's startup time at startup 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 apply (Table 2d);

c. Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test (Table 2b); and

d. Maintain the temperature of the exhaust so that the catalyst inlet temperature is 450 ºF – 1,350 ºF. (Table 2b)

2. Crankcase Filtration

Jackson shall operate on Generators #6, #8, and #9 either a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere or an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals. [40 C.F.R. § 63.6625(g)]

3. Continuous Parameter Monitoring System (CPMS)

a. Jackson shall install, operate, and maintain a CPMS on Generators #6, #8, and #9.

b. Jackson shall monitor the catalyst inlet temperature and reduce this data to 4-hour rolling averages to demonstrate compliance with the limitations on the catalyst inlet temperature range.

c. For any month in which the generator operated, Jackson shall monitor the pressure drop across the catalyst once per month to demonstrate compliance with the operating limit established during the last performance test.

d. Jackson shall prepare a site-specific monitoring plan that addresses the requirements outlined in 40 C.F.R. § 63.6625(b)(1).

e. The CPMS shall be continuously operated in accordance with the site-specific monitoring plan at all times that Generator #6, #8, or #9 are operating except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities.

f. The CPMS shall collect data at least once every 15 minutes.

g. The minimum tolerance for a CPMS measuring temperature is 5 ºF (2.8 ºC) or 1% of the measurement range, whichever is larger.

h. CPMS audit procedures shall be performed at least annually.

[40 C.F.R. § 63.6625(b), § 63.6635, and Table 6]

4. Performance Tests

a. Jackson shall perform performance tests on each generator every 8,760 hours of operation or 3 years, whichever comes first. [40 C.F.R. § 63.6640(a), Table 3, and Table 6]

b. Jackson shall conduct three separate test runs for each performance test. Each test run must be at least 1 hour, unless otherwise specified.
[40 C.F.R. § 63.6620(d)]

c. During a performance test the facility must establish the pressure drop across the catalyst to be used to demonstrate compliance per the CPMS.
[40 C.F.R. § 63.6630(b)]

d. If the facility changes the catalyst, Jackson shall reestablish the values of the operating parameters measured during the performance test. In order to reestablish the operating parameters, the facility shall conduct a performance test to demonstrate that the required emission limitation is being met.
[40 C.F.R. § 63.6640(b)]

5. Ultra-Low Sulfur Diesel Fuel Requirement

The diesel fuel fired in Generators #6, #8, and #9 shall not exceed 15 ppm sulfur (0.0015% sulfur) by weight. [40 C.F.R. § 63.6604(a)]

6. General Requirement to Minimize Emissions

At all times Jackson shall operate and maintain Generators #6, #8, and #9, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 C.F.R. § 63.6605(b)]

7. Reporting

a. Jackson shall submit to EPA all reports required by Subpart ZZZZ including, but not limited to, the following:

b. Notification of Intent to conduct a performance test at least 60 days before a performance test is scheduled to begin. [40 C.F.R. § 63.6645(g)]

c. Semiannual Compliance Reports shall cover the period between January 1 and June 30 or July 1 through December 31 of each year and shall be postmarked by July 31 or January 31 as applicable. The Semiannual Compliance Report shall include the following information:

(1) Company name and address;
(2) Statement by a responsible official, with the official's name, title, and signature, certifying the accuracy of the content of the report;
(3) Date of report and beginning and ending dates of the reporting period;
(4) If there was a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.;
(5) If there are no deviations from any applicable emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period;
(6) If there were no periods during which the continuous monitoring system (CMS), i.e. CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period; and
(7) If there were periods of deviation from an emission or operating limitation occurring where the CPMS is used to comply with the emission and operating limitation, the Semiannual Compliance Report shall also include the following information:
    (i) The date and time that each malfunction started and stopped;
    (ii) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;
    (iii) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).
    (iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;
    (v) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;
    (vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, or other known causes, and other unknown causes;
    (vii) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent

of the total operating time of the associated generator during that reporting period;

(viii) An identification of each parameter and pollutant that was monitored;

(ix) A brief description of stationary RICE (Generators #6, #8, and #9);

(x) A brief description of the CMS;

(xi) The date of the last CMS certification or audit; and

(xii) A description of any changes in CMS, processes, or controls since the last reporting period.

[40 C.F.R. § 63.6650 and Table 7]

8. Record Keeping

Jackson shall keep all records required by Subpart ZZZZ including, but not limited to, the following:

a. A copy of each notification and report that was submitted to comply with Subpart ZZZZ, including all supporting documentation;

b. Records of the occurrence and duration of each malfunction of the engine, pollution control equipment, or monitoring equipment;

c. Records of the occurrence and duration of each deviation;

d. Records of performance tests and performance evaluations;

e. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions taken to restore normal operation;

f. Monitoring data from the CPMS; and

g. Records of maintenance conducted on Generators #6, #8, and #9 and associated control equipment to demonstrate the equipment was operated and maintained according to the maintenance plan.

[40 C.F.R. § 63.6655]

(21) **Incinerator #3**

A. Incinerator #3 shall be used for the disposal of type 0 through 4 wastes and shall not be used for the disposal of plastics, cytotoxic (antineoplastic) drugs, or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in 06-096 C.M.R. ch. 100. However, the incidental use of plastics used in wrapping animal carcasses for handling and storage purposes is allowed. [06-096 C.M.R. ch. 115, BPT]

B. The incinerator shall not exceed the maximum combustion rate of 250 pounds per hour. Auxiliary fuel input to the primary and secondary chamber shall be propane fuel. [06-096 C.M.R. ch. 115, BPT]

C. Jackson shall not exceed a particulate emission rate of 0.10 gr/dscf corrected to 7% O_2 from the auxiliary fuel fired in Incinerator #3. [06 096 C.M.R. ch. 115, BPT]

D. BPT emission limits for Incinerator #3 are the following:

	PM (lb/hr)	**PM_{10} (lb/hr)**	**$PM_{2.5}$ (lb/hr)**	**SO_2 (lb/hr)**	**NO_x (lb/hr)**	**CO (lb/hr)**	**VOC (lb/hr)**
Incinerator #3	0.88	0.88	0.88	0.31	0.38	1.25	0.38

E. Visible emissions from Incinerator #3 shall not exceed 5% opacity based on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

F. Operating temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,600 ºF with a stack gas retention time of at least 1.0 second at or above 1,600 ºF. [06-096 C.M.R. ch. 115, BPT]

G. To ensure an efficient burn and to prevent odors and minimize visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1,600 ºF prior to commencing the burn cycle. [06-096 C.M.R. ch. 115, BPT]

H. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,600 ºF in the secondary chamber. [06-096 C.M.R. ch. 115, BPT]

I. The temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,600 ºF for the duration of the burn cycle. [06-096 C.M.R. ch. 115, BPT]

J. A pyrometer and ¼-inch test port shall be installed and maintained at the location of the incinerator or refractory-lined stack, which provides sufficient volume to ensure a flue gas retention time of not less than 1.0 second at the minimum of 1,600 ºF. [06-096 C.M.R. ch. 115, BPT]

K. A log shall be maintained detailing and quantifying the hours of operation on a daily basis for Incinerator #3. The log shall record the weight of each charge to the incinerator, preheating temperature, preheating time, charging time, and afterburner temperature directly after charging and every 60 minutes after startup until and including final shutdown time. For facilities operating a chart recorder, the start time,

date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location. [06-096 C.M.R. ch. 115, BPT]

L. A log shall be maintained detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location. [06-096 C.M.R. ch. 115, BPT]

M. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management. [06-096 C.M.R. ch. 115, BPT]

N. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission License as it pertains to the operation of the incinerator. [06-096 C.M.R. ch. 115, BPT]

O. Although not required at this time, the installation and operation of continuous chart recording devices may become necessary to document compliance with the temperature requirements of this license. Should the Bureau of Air Quality determine that continuous recording devices are necessary, the licensee shall, within 120 days, demonstrate that continuous recorders have been installed and are operational. [06-096 C.M.R. ch. 115, BPT]

(22) **Incinerator #4**

A. The incinerator shall be used for the disposal of type 0 through 5 and 7 wastes. [06-096 C.M.R. ch. 115, BPT]

B. Jackson shall keep records on a calendar quarter basis of the weight of medical/infectious waste combusted and the weight of all other fuels and wastes combusted in Incinerator #4. Jackson shall not combust more than 10% medical/infectious waste by weight. Incinerator #4 shall burn at least 90% or more by weight of pathological waste (type 4) on a quarterly basis excluding auxiliary fuel and combustion air. [06-096 C.M.R. ch. 115, BPT and 40 C.F.R. § 60.2020(a)(2)]

C. The incinerator shall not exceed the maximum combustion rate of 220 pounds per hour. Auxiliary fuel input to the primary and secondary chamber shall be propane. [06-096 C.M.R. ch. 115, BPT]

D. Jackson shall not exceed a particulate emission rate of 0.10 gr/dscf corrected to 7% O_2 from the auxiliary fuel fired in Incinerator #4. [06 096 C.M.R. ch. 104 § 2(B)]

E. BPT emission limits for Incinerator #4 are the following:

	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Incinerator #4	0.77	0.77	0.77	0.28	0.33	1.10	0.33

F. Visible emissions from Incinerator #4 shall not exceed 10% opacity based on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

G. Operating temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,560 ºF with a stack gas retention time of at least 2.0 seconds at or above 1,560 ºF. [06-096 C.M.R. ch. 115, BPT]

H. To ensure an efficient burn and to prevent odors and minimize visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1,560 ºF prior to commencing the burn cycle. [06-096 C.M.R. ch. 115, BPT]

I. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,560 ºF in the secondary chamber. [06-096 C.M.R. ch. 115, BPT]

J. The temperature in the secondary chamber or refractory-lined stack shall be maintained at or above 1,560 ºF for the duration of the burn cycle. [06-096 C.M.R. ch. 115, BPT]

K. A pyrometer and ¼-inch test port shall be operated and maintained at that location of the incinerator or refractory-lined stack which provides sufficient volume to insure a flue gas retention time of not less than 2.0 seconds at the minimum of 1,560 ºF. [06-096 C.M.R. ch. 115, BPT]

L. A log shall be maintained detailing and quantifying the hours of operation on a daily basis for Incinerator #4. The log shall record the weight of each charge to the incinerator, preheating temperature, preheating time, charging time, and afterburner temperature directly after charging and every 60 minutes after startup until and including final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location. [06-096 C.M.R. ch. 115, BPT]

M. A log shall be maintained detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location. [06-096 C.M.R. ch. 115, BPT]

N. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management. [06-096 C.M.R. ch. 115, BPT]

O. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission License as it pertains to the operation of the incinerator. [06-096 C.M.R. ch. 115, BPT]

P. Although not required at this time, the installation and operation of continuous chart recording devices may become necessary to document compliance with the temperature requirements of this license. Should the Bureau of Air Quality determine that continuous recording devices are necessary, the licensee shall, within 120 days, demonstrate that continuous recorders have been installed and are operational. [06-096 C.M.R. ch. 115, BPT]

(23) **Ethylene Oxide Sterilizers #3, #4, and #5**

A. EtO Sterilizers #3, #4, and #5 are each equipped with a catalytic oxidizer known as an abator. [06-096 C.M.R. ch. 115, BPT]

B. Jackson shall operate EtO Sterilizers #3, #4, and #5 and the associated catalytic oxidizers in accordance with the manufacturer's specifications. [06-096 C.M.R. ch. 115, BPT]

C. Jackson shall keep records for EtO Sterilizers #3, #4, and #5 and the associated catalytic oxidizers of all maintenance performed including dates and details of what work was performed. Jackson shall also keep records of the number of batches processed in each sterilizer between catalytic oxidizer replacements. [06-096 C.M.R. ch. 115, BPT]

D. Jackson shall be limited to 1.0 ton per year combined of EtO emissions from EtO Sterilizers #3, #4, and #5. [06-096 C.M.R. ch. 115, BPT]

E. Visible emissions from EtO Sterilizers #3, #4, and #5 shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(24) **Gasoline Storage Tank**

A. Jackson shall limit the annual throughput of the Gasoline Storage Tank to 10,000 gallons or less. [06-096 C.M.R. ch. 115, BPT]

B. Jackson shall comply with all requirements of 40 C.F.R. Part 63, Subpart CCCCCC applicable to the Gasoline Storage Tank including, but not limited to, the following:

1. Jackson shall, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, 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 which 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 source. [40 C.F.R. § 63.11115(a)]

2. Jackson shall keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b). [40 C.F.R. § 63.11115(b)]

3. Jackson shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: [40 C.F.R. §63.11116(a)]

   a. Minimize gasoline spills;
   b. Clean up spills as expeditiously as practicable;
   c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
   d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

4. Jackson shall have records available within 24 hours of a request by the Department to document the gasoline throughput of the Gasoline Storage Tank. [40 C.F.R §63.11116(b)]

C. Jackson shall comply with all requirements of 06-096 C.M.R. ch. 118 applicable to the Gasoline Storage Tank including, but not limited to, the following:

1. The fill pipe must extend within six inches of the bottom of the gasoline storage tank. [06-096 C.M.R. ch. 118, § 4(A)]

2. Jackson shall maintain records of the monthly and annual throughput of gasoline and notify the Department of its applicability within 30 days if the monthly or annual throughput of the Gasoline Storage Tank ever exceeds the initial applicability threshold of 06-096 C.M.R. ch. 118. These records must be maintained for a minimum of three years, be available for inspection during normal business hours, and be provided to the Department and/or EPA upon request. [06-096 C.M.R. ch. 118, § 10(B)] Note: Standard Condition (8) of this license requires all records be retained for six years; therefore, the three-year record retention requirement of 06-096 C.M.R. ch. 118 shall be streamlined to the more stringent six-year requirement.

(25) **Annual Emission Statements**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Jackson 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. Jackson shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of distillate fuel fired in Boilers #2, #3, #7, #8, #10, #11, and #12, and in Generators #3, #6, #8, #9, #10, and #11 (each) on a monthly basis;
2. The amount of propane fired in Boilers #7, #8, and #12, in Propane Vaporizers #1 and #2, and in Incinerators #3 and #4 (each) on a monthly basis;
3. The amount of natural gas fired in Boiler #12 on a monthly basis;
4. The amount of wood pellets fired in Boiler #12 on a monthly basis;
5. The sulfur content of the distillate fuel fired in Boilers #2, #3, #7, #8, #10, #11, and #12, and in Generators #3, #6, #8, #9, #10, and #11;
6. Calculations of the VOC emissions from the Ethylene Oxide Sterilization Units on a calendar year total basis; and
7. Hours each emission unit was operating on a monthly basis.

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

C. Every third year, or as requested by the Department, Jackson shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. Jackson 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)]

(26) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, Jackson may be required to submit additional information. Upon written request from the Department, Jackson shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter.
[06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 11th DAY OF APRIL, 2025.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for _____
MELANIE LOYZIM, COMMISSIONER

The term of this license shall be ten (10) years from the signature date above.

[Note: If a renewal application, determined as complete by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S. § 10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the license renewal application.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 3, 2024
Date of application acceptance: October 3, 2024

This Order prepared by Kendra Nash, Bureau of Air Quality.