The Jackson Laboratory
Hancock County
Bar Harbor, Maine
A-93-71-X-R (SM)

Departmental
Findings of Fact and Order
Air Emission License
Renewal

FINDINGS OF FACT

After review of the air emissions 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 Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

1. The Jackson Laboratory (JAX) has applied to renew their Air Emission License permitting the operation of emission sources associated with their biomedical facility.

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

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Stack #
Propane Vaporizer #1	1.09	12.0	Propane, neg. S	2013	n/a
Propane Vaporizer #2	1.09	12.0	Propane, neg. S	2013	n/a

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Stack #
Boiler #2	10.5	73	distillate, 0.05% S	pre-1989	1
Boiler #3	10.5	73	distillate, 0.05% S	pre-1989	1
Boiler #7	33.5	239.3	distillate, 0.05% S	1988	5
		370.2	propane, neg, S		
Boiler #8	33.5	239.3	distillate, 0.05% S	1993	5
		370.2	propane, neg, S		
Boiler #9	12.5	89.3	distillate, 0.05% S	2000	5
Boiler #10	20.9	149.3	distillate, 0.05% S	2000	1
Boiler #11	20.9	149.3	distillate, 0.05% S	2000	1
Boiler #12	49.9	5842 lb/hr	wood pellets, neg. S	2011	6
		48,446 scf/hr	natural gas, neg. S		
		551.4 gph	propane, neg. S		
		356.4 gph	distillate, 0.05% S		

Generators

Equipment	Power Output kW	Maximum Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur	Date of Manuf.	Stack #
Generator #2	230	17.01	2.33	distillate, 0.0015% S	pre-2006	4G
Generator #3	250	17.96	2.46	distillate, 0.0015% S	pre-2006	5G
Generator #6	1250	19.02	12.47	distillate, 0.0015% S	pre-2006	1G
Generator #8	1500	112.63	15.43	distillate, 0.0015% S	pre-2006	8G
Generator #9	1500	112.63	15.43	distillate, 0.0015% S	pre-2006	9G
Generator #10	1500	112.63	15.43	distillate, 0.0015% S	pre-2006	10G

Incinerators

	Incinerator #1	Incinerator #2
Class Incinerator	IV-B	IV-A
No. of Chambers	2	2
Type of Waste	Types 0-5, 7	Type 0-4
Max. Design (Combustion/Feed) Rate	175	175
Auxiliary Fuel Input: **Primary Chamber (MMBtu/hr)** **Secondary Chamber (MMBtu/hr)**	Distillate, 0.5% S 0.7 4.0	Distillate, 0.5% S 0.7 2.0
Emission Control	Afterburner	Afterburner

Process Equipment

Equipment	Pollution Control Equipment
Ethylene Oxide Sterilization Unit	None

C. Application Classification

The application for JAX does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules (CMR) 115 (as amended). With the annual facility fuel limit and the operating hours restriction on the emergency generators, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor. With the annual facility fuel limit and the HAP limit and the operating hours restriction on the emergency generators, the facility is licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of 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 CMR 100 (as amended). 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 #7 and #8; Boilers #2, #3, #9, #10, and #11; Boiler #12

Facility Fuel Limit:

JAX shall be subject to a facility fuel limit of 315,000 MMBtu (Million British thermal units) per year of distillate fuel, natural gas, propane, and powdered wood pellets with a maximum moisture content of 10%, in any combination.

Boilers #7 and #8:

JAX operates Boilers #7 and #8 for heat. The boilers are each rated at 33.5 MMBtu/hr and fired distillate oil and propane, and exhaust through common Stack #5. Boiler #7 was manufactured and installed in 1988; Boiler #8 in 1993.

Due to the year of manufacture, Boiler #7 is **not** subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Due to its size and year of manufacture, Boiler #8 is subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

1. BPT Findings

The BPT emission limits for the boilers were based on the following:

Distillate Fuel

PM/PM_{10} – 0.08 lb/MMBtu based on 06-096 CMR 103
SO_2 – 0.050 lb/MMBtu based on firing distillate fuel with a maximum sulfur content of 0.05% (previous BACT, A-93-71-V-A).
NO_x – 0.3 lb/MMBtu, based on data from boilers of similar type and age, 06-096 CMR 115, BPT
CO – 0.036 lb/MMBtu, based on AP-42, Table 1.5-1, dated 07/08
VOC – 0.001 lb/MMBtu based on AP-42, Table 1.5-1, dated 07/08
Opacity – 06-096 CMR 101

Propane

PM/PM_{10} – 0.05 lb/MMBtu based on 06-096 CMR 115, BPT
SO_2 – 0.2 lb/1000 gallons based on AP-42, Table 1.5-1, dated 07/08
NO_x – 13 lb/1000 gallons based on AP-42, Table 1.5-1, dated 07/08
CO – 7.5 lb/1000 gallons based on AP-42, Table 1.5-1, dated 07/08
VOC – 1 lb/1000 gallons based on AP-42, Table 1.5-1, dated 07/08
Opacity – 06-096 CMR 101

The BPT emission limits for the Boilers #7 and #8 are the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #7 - distillate	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #7 - propane	PM	0.05	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #8 - distillate	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #8 - propane	PM	0.05	06-096 CMR 103(2)(B)(1)(b), BPT

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #7 - distillate	2.68	2.68	1.69	10.05	1.20	0.05
Boiler #7 - propane	1.68	1.68	0.07	4.81	2.78	0.37
Boiler #8 - distillate	2.68	2.68	1.69	10.05	1.20	0.05
Boiler #8 - propane	1.68	1.68	0.07	4.81	2.78	0.37

Visible emissions from the common stack serving Boilers #7 and #8 when they are firing distillate fuel shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a three (3) hour period.

Visible emissions from the common stack serving Boilers #7 and #8 when they are firing propane shall not exceed 10% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a three (3) hour period.

Prior to July 1, 2016, or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired at the facility shall not exceed maximum sulfur content of 0.5% by weight. Per 38 MRSA §603-A(2)(A)(3), beginning July 1, 2016, or on the date specified in the statute, the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, or on the date specified in the statute, the facility shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). The specific dates contained in this paragraph reflect the current dates in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates upon promulgation of the statute revision.

2. Periodic Monitoring

Periodic monitoring for Boilers #7 and #8 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, if applicable.

Boiler #12:

JAX operates Boiler #12 for heat. Boiler #12 is rated at 49.9 MMBtu/hr, and fires powdered wood pellets, natural gas, propane and distillate fuel. Boiler #12 exhausts through Stack #6.

Due to its year of manufacture and size, Boiler #12 is subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

1. BPT Findings

The BPT emission limits for Boiler #12 were based on the following:

Distillate Fuel

PM/PM_{10}	–	0.04 lb/MMBtu based on previous BACT (A-93-71-V-A)
SO_2	–	0.05 lb/MMBtu based on firing distillate fuel with a maximum sulfur content of 0.05% by weight (previous BACT, A-93-71-V-A)
NO_x	–	0.3 lb/MMBtu, based on data from boilers of similar type and age, 06-096 CMR 115, BPT
CO	–	0.30 lb/MMBtu, based on previous BACT (A-93-71-V-A)
VOC	–	0.02 lb/MMBtu based on previous BACT (A-93-71-V-A)
Opacity	–	06-096 CMR 101

Natural Gas

PM/PM_{10}	–	0.04 lb/MMBtu based on previous BACT (A-93-71-V-A)
SO_2	–	0.6 lb/10^6 scf based on AP-42, Table 1.4-2, dated 07/98
NO_x	–	0.30 lb/MMBtu previous BACT (A-93-71-V-A)
CO	–	84 lb/10^6 scf based on AP-42, Table 1.4-1, dated 07/98
VOC	–	5.5 lb/10^6 scf based on AP-42, Table 1.4-2, dated 07/98
Opacity	–	06-096 CMR 101

Propane

PM/PM_{10}	–	0.04 lb/MMBtu based on previous BACT (A-93-71-V-A)
SO_2	–	0.00020 lb/MMBtu, based on AP-42, Table 1.5-1, dated 07/08
NO_x	–	0.144 lb/MMBtu, based on AP-42, Table 1.5-1, dated 07/08
CO	–	0.083 lb/MMBtu, based on AP-42, Table 1.5-1, dated 07/08
VOC	–	0.011 lb/MMBtu, based on AP-42, Table 1.5-1, dated 07/08
Opacity	–	06-096 CMR 101

Wood Pellets

PM/PM_{10}	–	0.03 lb/MMBtu, 40 CFR Part 63, Subpart JJJJJJ
SO_2	–	0.025 lb/MMBtu based in AP-42, Table 1.6-2
NO_x	–	0.19 lb/MMBtu based on previous BACT (A-93-71-V-A)
CO	–	0.30 lb/MMBtu based on previous BACT (A-93-71-V-A)
VOC	–	0.017 lb/MMBtu based on AP-42, Table 1.6-3, dated 09/03
Opacity	–	06-096 CMR 101

The BPT emission limits for the Boiler #12 are the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #12	PM	0.04	06-096 CMR 115, previous BACT (A-93-71-V-A)

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #12 - distillate fuel	2.00	2.00	3.89	14.97	14.97	1.00
Boiler #12 - natural gas	2.00	2.00	0.03	9.48	4.07	0.27
Boiler #12 - propane	2.00	2.00	0.01	7.17	4.14	0.55
Boiler #12 - wood	2.00	2.00	0.01	9.48	14.97	0.85

Visible emissions from Stack #6 serving Boiler #12 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a three (3) hour period.

JAX shall continuously operate a baghouse on the emissions from Boiler #12 whenever Boiler #12 is burning wood pellets, except during periods of startup, shutdown or unavoidable malfunction. [06-096 CMR 115, BPT, 40 CFR 60 Subpart A, MSRA 590]

2. Periodic Monitoring

Periodic monitoring for Boiler #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, if applicable.

Boilers #2, #3, #9, #10, and #11:

JAX operates Boilers #2, #3, #9, #10 and #11 for heat. Boilers #2 and #3 are each rated at 10.5 MMBtu/hr; Boiler #9 is rated at 12.5 MMBtu/hr and Boilers #10 and #11 are each rated at 20.9 MMBtu/hr. Boilers #2, #3, #9, #10 and #11 all fire distillate fuel. Boiler #9 exhausts through common Stack #5; the remaining boilers exhaust through common Stack #1.

Due to the year of manufacture, Boilers #2 and #3 are not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

Due to the year of manufacture and their size, Boilers #9, #10 and #11 are subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989

1. BPT Findings

The BPT emission limits for the boilers were based on the following:

Distillate Fuel

PM/PM_{10}	–	0.08 lb/MMBtu based on 06-096 CMR 103
SO_2	–	0.05 lb/MMBtu based on firing distillate fuel with a maximum sulfur content by weight of 0.05% (previous BACT, A-93-71-V-A).
NO_x	–	0.3 lb/MMBtu, based on data from boilers of similar type and age, 06-096 CMR 115, BPT
CO	–	0.036 lb/MMBtu, based on AP-42, Table 1.5-1, dated 07/08
VOC	–	0.001 lb/MMBtu, based on AP-42, Table 1.5-1, dated 07/08
Opacity	–	06-096 CMR 101

The BPT emission limits for the Boilers #2, #3, #9, #10 and #11 are the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #2	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #3	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #9	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #10	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #11	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #2	0.84	0.84	0.53	3.15	0.38	0.02
Boiler #3	0.84	0.84	0.53	3.15	0.38	0.02
Boiler #9	1.00	1.00	0.63	3.75	0.45	0.02
Boiler #10	1.67	1.67	1.05	6.27	0.75	0.03
Boiler #11	1.67	1.67	1.05	6.27	0.75	0.03

Visible emissions from common Stack #1 serving Boilers #2, #3, #10 and #11, and Stack #5 serving Boiler #9, shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a three (3) hour period.

2. Periodic Monitoring

Periodic monitoring for Boilers #2, #3, #9, #10 and #11 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, if applicable.

40 CFR Part 63 Subpart JJJJJJ:

Boilers #7, #8 and #12 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJJ). Boilers #7 and #8 are considered existing oil boilers, rated more than 10 MMBtu/hr. Boiler #12 is considered an existing oil boiler, rated greater than 10 MMBtu/hr and is also considered an existing biomass boiler, rated greater than 10 MMBtu/hr.

Gas-fired boilers are exempt from 40 CFR Part 63, Subpart JJJJJJ. However, boilers which fire liquid or solid fuels are not. A "gas-fired boiler" is defined as any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year. [40 CFR Part 63.11237]

Any boiler designed to burn fuels besides gaseous fuels prior to June 4, 2010 will be considered an existing boiler under this rule. A boiler which currently fires gaseous fuels, but converts back to firing another fuel (such as distillate fuel) in the future would become subject as an existing boiler at the time it is converted back to oil.

Boilers #2, #3, #9, #10 and #11 are also subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJJ). These units are considered existing oil boilers rated greater than 10 MMBtu/hr.

A summary of the currently applicable federal 40 CFR Part 63 Subpart JJJJJJ requirements is listed below. At this time, the Department has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA, however JAX is still subject to the requirements. Notification forms and additional rule information can be found on the following website:

http://www.epa.gov/ttn/atw/boiler/boilerpg.html.

a. Compliance Dates, Notifications, and Work Practice Requirements

i. Initial Notification of Compliance

An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]

ii. Boiler Tune-Up Program

(a) A boiler tune-up program was to be implemented to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 63.11223]

1. 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
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

2. The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]

(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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 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 CFR Part 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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]
4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 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 CFR Part 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 CFR Part 63.11223(b)(7)]

(c) After conducting the initial boiler tune-up, a Notification of Compliance Status was to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b)]

iii. Energy Assessment:

Boilers #2, #3, #7, #8, #9, #10, #11 and #12 are subject to the energy assessment requirement as follows:

(a) A one-time energy assessment was required to be performed by a qualified energy assessor on the applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(3)]

(b) The energy assessment was required to include a visual inspection of the boiler system; an evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints; an inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator; a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; a list of major energy conservation measures that are within the facility's control; a list of the energy savings potential of the energy conservation measures identified; and a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.
[40 CFR Part 63, Table 2(4)

(c) A Notification of Compliance Status was required to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [63.1125(a)(4)(vi)]

C. Propane Vaporizers

JAX operates two, Ransome Manufacturing RH800m 1.09 MMBtu/hr propane-fired, propane vaporizers for Boilers #7 and #8 operations. Each vaporizer has a maximum feed rate of 12.0 gallons per hour of liquid propane.

Propane Vaporizers #1 and #2 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJJ) as they are classified as process heaters.

The BPT emission limits for the Propane Vaporizers are based on the following:

PM/PM_{10}	- 0.05 lb/MMBtu from 06-096 CMR 115, BPT
SO_2	- 0.2 lb/1000 gallons, based on AP-42, Table 1.5-1, dated 07/08
NO_x	- 13 lb/1000 gallons, based on AP-42, Table 1.5-1, dated 07/08
CO	- 7.5 lb/1000 gallons, based on AP-42, Table 1.5-1, dated 07/08
VOC	- 1 lb/1000 gallons, based on AP-42, Table 1.5-1, dated 07/08
Opacity	- 06-096 CMR 101

The BPT emission limits for the Propane Vaporizers are the following:

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

Visible emissions from each of the vaporizers shall not exceed 10% opacity on a six (6)-minute block average, except for no more than two (2) six (6) minute block averages in a (3)-hour period.

D. Emergency Generators

JAX operates six emergency generators, all of which were manufactured and installed prior to 2006. Therefore these generators are not subject to New Source Performance Standards, 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*

All six generators fire distillate fuel with a maximum sulfur limit of 0.0015% by weight, and each generator vents to a dedicated stack.

Generator #2 is rated at 2.33 MMBtu/ hr; Generator #3 at 2.46 MMBtu/hr; Generator #6 at 12.47 MMBtu/hr, and Generators #8, #9 and #10 are each rated at 15.43 MMBtu/hr.

1. BPT Findings

The BPT emission limits for Generators #2 and #3 are based on the following:

PM/PM_{10} - 0.12 lb/MMBtu from 06-096 CMR 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 dated 10/96
CO - 0.95 lb/MMBtu from AP-42 dated 10/96
VOC - 0.35 lb/MMBtu from AP-42 dated 10/96
Opacity - 06-096 CMR 101

The BPT emission limits for Generators #6, #8, #9 and #10 are based on the following:

PM/PM_{10}	- 0.12 lb/MMBtu from 06-096 CMR 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 dated 10/96
CO	- 0.85 lb/MMBtu from AP-42 dated 10/96
VOC	- 0.09 lb/MMBtu from AP-42 dated 10/96
Opacity	- 06-096 CMR 101

The BPT emission limits for the generators are the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #6, #8, #9 & #10	PM	0.12	06-096 CMR 103(2)(B)(1)(A)

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #2	0.28	0.28	0.01	10.28	2.21	0.82
Generator #3	0.30	0.30	0.01	10.85	2.34	0.86
Generator #6	1.50	1.50	0.02	39.90	10.60	1.12
Generator #8	1.85	1.85	0.02	49.38	13.12	1.39
Generator #9	1.85	1.85	0.02	49.38	13.12	1.39
Generator #10	1.85	1.85	0.02	49.38	13.12	1.39

Visible emissions from each of the distillate fuel-fired emergency generators shall not exceed 20% opacity on a six (6)-minute block average, except for no more than two (2) six (6) minute block averages in a (3)-hour period.

2. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to emergency Generators #2, #3, #6, #8, #9 and #10. The units are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source and are not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt these units from the federal requirements.

a. Emergency Definition:

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) Paragraph (1) above notwithstanding, the emergency stationary RICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:

(i) 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 beyond 100 hours per calendar year.

(ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Paragraphs (1) and (2) above notwithstanding, emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing, emergency demand response, and periods of voltage deviation or low frequency, as provided in paragraph (2) above.

The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving, non-emergency 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, except provided in the following paragraphs:

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution center.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(a) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(b) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(c) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(d) The power is provided only to the facility itself or to support the local transmission and distribution system.

(e) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

Generators #2, #3, #6, #8, #9, and #10 shall be limited to the usage outlined in §63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 CFR Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in §63.6640(f) may cause these engines to not be considered emergency engines and therefore subject to all the requirements for non-emergency engines.

b. 40 CFR Part 63, Subpart ZZZZ Requirements:

(1) Operation and Maintenance Requirements

	Operating Limitations* (40 CFR §63.6603(a) and Table 2(d))
Compression ignition (distillate fuel) units:	- Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The generators shall be operated and maintained according to the manufacturer's emission-related written instructions or JAX 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 CFR §63.6625(e)]

(2) Optional Oil Analysis Program

JAX 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, JAX 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 CFR§63.6625(i)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on each generator. [40 CFR §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, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit for Maintenance and Testing

The generators shall each be limited to 100 hours per year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours per year of the 100 hours per year may be used in non-emergency situations (this does not include peak shaving, non-emergency 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 unless the conditions in §63.6640(f)(4)(ii) are met). [40 CFR §63.6640(f)]

(6) Recordkeeping

JAX shall keep records that include maintenance conducted on the generator(s) and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), JAX shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]

(7) Requirements for Demand Response Availability Over 15 Hours Per Year (and greater than 100 brake hp)

If JAX operates or is contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), the facility shall submit an annual report containing the information in §63.6650(h)(1)(i) through (ix). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

Director, Office of Ecosystem Protection
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

[40 CFR §63.6650(h)]

E. Incinerator #1

Incinerator #1 is a Consumat C75-P2H Class IV-B incinerator for disposal of type 0 through 5, and type 7 waste only.

Incinerator #1 is designated as a co-combustor (A-93-71-K-A) according to 40 CFR Part 60, Subpart Ce; as such Incinerator #1 is restricted to the firing of not more than 10% by weight of infectious waste, as defined by the State of Maine Biomedical Waste Management Rules, 06-096 CMR 900, Sections 7.A and 7.B, based on the total weight of wastes and fuel combusted.

To meet the requirements of BPT, Incinerator #1 shall be operated according to the following specifications:

1. The operating temperature in the secondary chamber shall be maintained at or above 2000°F with a stack gas retention time at or above 2000°F, of at least 2.0 seconds.
2. To ensure an efficient burn, and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer.
3. The temperature in the secondary chamber shall be maintained at or above 2000°F for the duration of the burn cycle.
4. A pyrometer and a ¼ inch test port shall be installed and maintained at the location of the incinerator which provides sufficient volume to ensure a flue gas retention time of not less than 2.0 seconds at a minimum of 2000°F.
5. A log shall be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date and weight of waste charged may be logged on the chart.
6. A maximum particulate emission rate of 0.10 gr/dscf corrected to 7% O_2 shall be met.
7. The ash shall be disposed of in accordance with the requirements of the Bureau of Remediation and Waste management.
8. The incinerator operator(s) shall receive adequate training annually to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License. All training records shall be certified by the plant manager and be available to the Department upon request.
9. Emissions from Incinerator #1 shall be limited to the following:

Pollutant	gr/dscf	lb/hr
PM	0.10 @7% O_2	0.69
PM_{10}	n/a	0.69
SO_2	n/a	0.95
NO_X	n/a	2.10
CO	n/a	0.18
VOC	n/a	0.08

F. Incinerator #2

Incinerator #2 is a Consumat C75-P1 Class IV-A incinerator for disposal of type 0 through 4 waste only.

To meet the requirements of BPT, Incinerator #2 shall be operated according to the following specifications:

1. The operating temperature in the secondary chamber shall be maintained at or above 1800°F with a stack gas retention time at or above 1800°F, of at least 2.0 seconds.
2. To ensure an efficient burn, and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer.
3. The temperature in the secondary chamber shall be maintained at or above 1800°F for the duration of the burn cycle.
4. A pyrometer and a ¼ inch test port shall be installed and maintained at the location of the incinerator which provides sufficient volume to ensure a flue gas retention time of not less than 2.0 second at a minimum of 1800°F.
5. A log shall be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date and weight of waste charged may be logged on the chart.
6. A maximum particulate emission rate of 0.10 gr/dscf corrected to 7% O_2 shall be met.
7. The ash shall be disposed of in accordance with the requirements of the Bureau of Remediation and Waste management.
8. The incinerator operator(s) shall receive adequate training annually to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License. All training records shall be certified by the plant manager and be available to the Department upon request.
9. Emissions from Incinerator #2 shall be limited to the following:

Pollutant	gr/dscf	lb/hr
PM	0.10 (@ 7% O_2)	0.69
PM_{10}	n/a	0.69
SO_2	n/a	0.95
NO_X	n/a	2.10
CO	n/a	0.18
VOC	n/a	0.08

G. Other Emission Sources

1. Ethylene Oxide Sterilization Unit:

JAX operates one ethylene oxide sterilization unit. The emissions from this unit are greater than 20% of the insignificant threshold as stated in 06-096 CMR 115, and therefore must be addressed. This unit shall be operated according to the manufacturer's specifications to ensure emissions of ethylene oxide (a hazardous air pollutant) will be minimal. JAX shall not use more than one (1.0) ton per year of ethylene oxide.

Federal Regulation 40 CFR Part 63, Subpart O defines *National Emissions Standards for Hazardous Air Pollutants for Source Categories* for Ethylene Oxide Emissions for Sterilization Facilities. JAX is not subject to this regulation as it is excluded under §63.360 (d) because it is a laboratory facility.

2. Gasoline Storage:

JAX has a 2,000 gallon tank to dispense gasoline to motor vehicles. *Gasoline Dispensing Facilities Vapor Control*, 06-096 CMR 118 (as amended) requires the installation of a submerged fill pipe and maintenance of throughput records for all gasoline dispensing facilities, regardless of throughput. JAX shall install a submerged fill pipe in the gasoline storage tank that is no more than six (6) inches from the bottom of the tank. JAX shall also maintain on its premises records of gasoline throughput, which will allow the monthly and annual throughput to be determined. If JAX's monthly or annual throughput ever exceed the initial applicability threshold of 10,000 gallons per month for the Stage I provisions of 06-096 CMR 118, JAX shall notify the Department of its applicability within thirty (30) days and shall install a Stage I Vapor Balance System in accordance with Section 3(B)(1) of the regulation within sixty (60) days. Copies of these records shall be maintained for a minimum of three (3) years. These records shall be available for inspection during normal business hours and copies shall be provided to the Department and/or EPA upon request.

H. Annual Emissions

1. Total Annual Emissions

JAX shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on a combined annual fuel heat input limit of 315,000 MMBtu for the boilers and vaporizers and incinerators, and 100 hours per year of operation for each generator:

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

	PM	PM_{10}	SO_2	NO_x	CO	VOC	HAP
Boilers and Vaporizers	12.60	12.60	12.29	47.25	47.25	3.15	-
Generator #2	0.1	0.1	0.1	0.5	0.1	0.1	-
Generator #3	0.1	0.1	0.1	0.5	0.1	0.1	-
Generator #6	0.1	0.1	0.1	2.0	0.5	0.1	-
Generator #8, #9, #10	0.1	0.1	0.1	2.5	0.7	0.1	-
Incinerator #1	3.0	3.0	4.2	9.3	0.8	0.4	
Incinerator #2	3.0	3.0	4.2	9.3	0.8	0.4	
Sterilizers	-	-	-	-	-	1.0	1.0
Total TPY	**19.0**	**19.0**	**21.1**	**71.4**	**50.3**	**5.4**	**1.0**

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans,* 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO_2e).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, JAX is below the major source threshold of 100,000 tons of CO_2e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

JAX previously submitted an ambient air quality impact analysis for air emission license A-91-71-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-X-R subject to the following conditions.

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

STANDARD 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.A. §347-C).

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

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]

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

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

A. perform stack testing 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 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

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

[06-096 CMR 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 such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

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

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

[06-096 CMR 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 Part 70 license requirement. [06-096 CMR 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 CMR 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 CMR 115]

SPECIFIC CONDITIONS

(16) Boilers #7 and #8

A. Fuel

1. Boilers #7 and #8 are licensed to fire distillate fuel or propane.
2. JAX shall be subject to a facility fuel limit of 315,000 MMBtu per year of distillate fuel, natural gas, propane, and powdered wood pellets with a maximum moisture content of 10%, in any combination, based on a 12-month rolling total.
3. Prior to July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired in the boilers shall be ASTM D396 compliant (max. sulfur content of 0.5% by weight). [06-096 CMR 115, BPT]
4. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
5. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
6. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #7 - distillate	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #7 - propane	PM	0.05	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #8 - distillate	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #8 - propane	PM	0.05	06-096 CMR 103(2)(B)(1)(b), BPT

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #7 - distillate	2.68	2.68	1.69	10.05	1.20	0.05
Boiler #7 - propane	1.68	1.68	0.07	4.81	2.78	0.37
Boiler #8 - distillate	2.68	2.68	1.69	10.05	1.20	0.05
Boiler #8 - propane	1.68	1.68	0.07	4.81	2.78	0.37

D. Visible Emissions

1. Visible emissions from the common stack serving Boilers #7 and #8 when firing distillate fuel shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a three (3) hour period. [06-096 CMR 115, BPT]
2. Visible emissions from the common stack serving Boilers #7 and #8 when firing natural gas shall not exceed 10% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a three (3) hour period. [06-096 CMR 115, BPT]

E. JAX shall comply with all requirements of 40 CFR Part 60, Subpart Dc applicable to Boiler #8 including, but not limited to, the following:

1. JAX shall record and maintain records of the amounts of each fuel combusted during each day or, if applicable, monthly records with fuel. [40 CFR §60.48c(g)]
2. JAX shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period.
3. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
5 Post Office Sq., Suite 100
Boston, MA 02109-3912

F. Boiler MACT (40 CFR Part 63, Subpart JJJJJJ) Requirements for Boilers #7 and #8 [incorporated under 06-096 CMR 115, BPT]

1. An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]
2. The facility shall implement a boiler tune-up program to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 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
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

(b) The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]

3. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

(a) 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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(1)]

(b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]

(c) 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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]

(d) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]

(e) 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 CFR Part 63.11223(b)(5)]

(f) 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 CFR Part 63.11223(b)(7)]

4. After conducting the initial boiler tune-up, a Notification of Compliance Status was be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b).

5. Energy Assessment:

(a) A one-time energy assessment was required to be performed by a qualified energy assessor on the applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(3)]

(b) The energy assessment was required to include a visual inspection of the boiler system; an evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints; an inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator; a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; a list of major energy conservation measures that are within the facility's control; a list of the energy savings potential of the energy conservation measures identified; and a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. [40 CFR 63, Table 2(4)]

(c) A Notification of Compliance Status was required to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

6. Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

(17) **Boiler #12**

A. Fuel

1. Boiler #12 is licensed to fire distillate fuel, natural gas or propane, and powdered wood pellets with a maximum moisture content of 10%.
2. JAX shall be subject to a facility fuel limit of 315,000 MMBtu per year of distillate fuel, natural gas, propane, and powdered wood pellets with a maximum moisture content of 10%, in any combination, based on a 12-month rolling total.
3. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired in the boiler shall not exceed a maximum sulfur content of 0.5% by weight. [06-096 CMR 115, BPT]
4. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
5. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
6. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #12	PM	0.03	40 CFR Part 63, Subpart JJJJJJ

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #12 - distillate fuel	2.00	2.00	3.89	14.97	14.97	1.00
Boiler #12 - natural gas	2.00	2.00	0.03	9.48	4.07	0.27
Boiler #12 - propane	2.00	2.00	0.031	22.62	13.05	1.74
Boiler #12 - wood	2.00	2.00	0.01	9.48	14.97	0.85

D. Visible emissions from Boiler #12 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous three (3)-hour period. [06-096 CMR 115, BPT]

JAX shall continuously operate a baghouse on the emissions from Boiler #12 whenever Boiler #12 is burning wood pellets, except during periods of startup, shutdown or unavoidable malfunction. [06-096 CMR 115, BPT, 40 CFR 60 Subpart A, MSRA 590]

E. JAX shall comply with all requirements of 40 CFR Part 60, Subpart Dc applicable to Boiler #12 including, but not limited to, the following:

1. JAX shall record and maintain records of the amounts of each fuel delivered on a monthly basis, with if applicable, fuel certifications. [40 CFR §60.48c(g)(2)]
2. JAX shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period.
3. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
5 Post Office Sq. Suite 100
Boston, MA 02109-3912

F. Boiler MACT (40 CFR Part 63, Subpart JJJJJJ) Requirements for Boiler #12 [incorporated under 06-096 CMR 115, BPT]

1. An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]

2. The facility shall implement a boiler tune-up program to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 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
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

   [40 CFR Part 63.11223(a) and Table 2]

   (b) The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]

3. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

   (a) 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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(1)]

   (b) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]

   (c) 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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]

   (d) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]

   (e) 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 CFR Part 63.11223(b)(5)]

   (f) 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 CFR Part 63.11223(b)(7)

4. After conducting the initial boiler tune-up, a Notification of Compliance Status was to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b).

5. Energy Assessment:

   (a) A one-time energy assessment was required to be performed by a qualified energy assessor on the applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(3)]

   (b) The energy assessment was required to include a visual inspection of the boiler system; an evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints; an inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator; a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; a list of major energy conservation measures that are within the facility's control; a list of the energy savings potential of the energy conservation measures identified; and a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. [40 CFR 63, Table 2(4)]

   (c) A Notification of Compliance Status was required to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

6. Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

(18) **Boilers #2, #3, #9, #10 and #11**

A. Fuel

1. Boilers #2, #3, #9, #10 and #11 are licensed to fire distillate fuel.
2. JAX shall be subject to a facility fuel limit of 315,000 MMBtu per year of distillate fuel, natural gas or propane, and powdered wood pellets with a maximum moisture content of 10%, in any combination, based on a 12-month rolling total.
3. Prior to July 1, 2016 or the date specified in 38 MRSA §603-A(2)(A)(3), the distillate fuel fired in the boiler shall not exceed a maximum sulfur content of 0.5% by weight. [06-096 CMR 115, BPT]
4. Beginning July 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
5. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire distillate fuel with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
6. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered (if applicable). Records of annual fuel use shall be kept on a monthly and 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Boiler #2	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #3	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #9	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #10	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT
Boiler #11	PM	0.08	06-096 CMR 103(2)(B)(1)(b), BPT

C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #2	0.84	0.84	0.53	3.15	0.38	0.02
Boiler #3	0.84	0.84	0.53	3.15	0.38	0.02
Boiler #9	1.00	1.00	0.63	3.75	0.45	0.02
Boiler #10	1.67	1.67	1.05	6.27	0.75	0.03
Boiler #11	1.67	1.67	1.05	6.27	0.75	0.03

D. Visible emissions from the common Stack #1 serving Boilers #2, #3, #10 and #11, and common Stack #5 serving Boiler #9 shall each not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous three (3)-hour period. [06-096 CMR 115, BPT]

E. JAX shall comply with all requirements of 40 CFR Part 60, Subpart Dc applicable to Boilers #9, #10 and #11 including, but not limited to, the following:

4. JAX shall record and maintain records of the amounts of each fuel combusted during each day or, if applicable, monthly records with fuel. [40 CFR §60.48c(g)]
5. JAX shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of fuel supplier certifications. The semi-annual reports are due within 30 days of the end of each 6-month period.
6. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
5 Post Office Sq., Suite 100
Boston, MA 02109-3912

F. Boiler MACT (40 CFR Part 63, Subpart JJJJJJ) Requirements for Boilers #2, #3, #9, #10 and #11
[incorporated under 06-096 CMR 115, BPT]

7. An Initial Notification submittal to EPA was due no later than January 20, 2014. [40 CFR Part 63.11225(a)(2)]
8. The facility shall implement a boiler tune-up program to include the initial tune-up of applicable boilers no later than March 21, 2014. [40 CFR Part 63.11223]

(c) 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
New or Existing Oil, Biomass and Coal fired boilers that are not designated as "Boilers with less frequent tune up requirements" listed below	Every 2 years
New and Existing Oil, Biomass, and Coal fired Boilers with less frequent tune up requirements	
Seasonal (see definition §63.11237)	Every 5 years
Limited use (see definition §63.11237)	Every 5 years
With a heat input capacity of <5MMBtu/hr	Every 5 years
Boiler with oxygen trim system which maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune up	Every 5 years

[40 CFR Part 63.11223(a) and Table 2]

(d) The tune-up compliance report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured at high fire or typical operating load, before and after the boiler tune-up, a description of any corrective actions taken as part of the tune-up of the boiler, and the types and amounts of fuels used over the 12 months prior to the tune-up of the boiler. [40 CFR Part 63.11223(b)(6)] The compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy, and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11225(b)]

9. The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

(g) 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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(1)]

(h) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]

(i) 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 greater than 5 MMBtu/hr or 72 months from the previous inspection for oil fired boilers less than 5 MMBtu/hr, boilers with oxygen trim systems, seasonal boilers, and limited use boilers. [40 CFR Part 63.11223(b)(3)]

(j) Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]

(k) 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 CFR Part 63.11223(b)(5)]

(l) 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 CFR Part 63.11223(b)(7)

10. After conducting the initial boiler tune-up, a Notification of Compliance Status was be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(b).

11. Energy Assessment:

(d) A one-time energy assessment was required to be performed by a qualified energy assessor on the applicable boilers no later than March 21, 2014. [40 CFR Part 63.11196(a)(3)]

(e) The energy assessment was required to include a visual inspection of the boiler system; an evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints; an inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator; a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage; a list of major energy conservation measures that are within the facility's control; a list of the energy savings potential of the energy conservation measures identified; and a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. [40 CFR 63, Table 2(4)]

(f) A Notification of Compliance Status was required to be submitted to EPA no later than July 19, 2014. [40 CFR Part 63.11225(a)(4) and 40 CFR Part 63.11214(c)]

12. Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; 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; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.

(19) **Propane Vaporizers**

A. Propane Vaporizers #1 and #2 are licensed to fire propane.

B. JAX shall be subject to a facility fuel limit of 315,000 MMBtu per year of distillate fuel, natural gas or propane, and powdered wood pellets with a maximum moisture content of 10%, in any combination, based on a 12-month rolling total.

C. Emissions from the Propane Vaporizers shall not exceed the following [06-096 CMR 115, BPT]:

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

D. Visible emissions from each of the Propane Vaporizers shall not exceed 10% opacity on a six (6)-minute block average, except for no more than two (2) six (6) minute block averages in a (3)-hour period. [06-096 CMR 115, BPT]

(20) **Emergency Generators #2, #3, #6, #8, #9 and-#10**

A. Each of the emergency generators shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115]

B. The fuel sulfur content for the emergency generators shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BPT]

C. Emissions shall not exceed the following:

Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #6	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Generator #8	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Generator #9	PM	0.12	06-096 CMR 103(2)(B)(1)(a)
Generator #10	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

D. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #2	0.28	0.28	0.01	10.28	2.21	0.82
Generator #3	0.30	0.30	0.01	10.85	2.34	0.86
Generator #6	1.50	1.50	0.02	39.90	10.60	1.12
Generator #8	1.85	1.85	0.02	49.38	13.12	1.39
Generator #9	1.85	1.85	0.02	49.38	13.12	1.39
Generator #10	1.85	1.85	0.02	49.38	13.12	1.39

E. Visible Emissions

Visible emissions from each of the distillate fuel-fired generators shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a three (3) hour period. [06-096 CMR 101]

F. The Emergency Generators shall meet the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, including the following:

1. JAX shall meet the following operational limitations for each of the compression ignition emergency generators:

   a. Change the oil and filter annually,
   b. Inspect the air cleaner annually and replace as necessary, and
   c. Inspect the hoses and belts annually and replace as necessary.

   A log shall be maintained documenting compliance with the operational limitations.

   [40 CFR §63.6603(a) and Table 2(d); and 06-096 CMR 115]

2. Oil Analysis Program Option

   JAX 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, JAX 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 CFR§63.6625(i)]

3. Non-Resettable Hour Meter

   A non-resettable hour meter shall be installed and operated on each generator. [40 CFR §63.6625(f)]

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

   a. The generators shall each be limited to 100 hours per year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours per year of the 100 hours per year may be used in non-emergency situations (this does not include peak shaving, non-emergency 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 unless the conditions in §63.6640(f)(4)(ii) are met). These limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §63.6640(f) and 06-096 CMR 115]

b. JAX shall keep records that include maintenance conducted on the generator(s) and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If the generators are operated during a period of demand response or deviation from standard voltage or frequency, or to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), the JAX shall keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]

5. Operation and Maintenance

The generators shall be operated and maintained according to the manufacturer's emission-related written instructions or JAX 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 CFR §63.6625(e)]

6. Startup Idle and Startup Time Minimization

During periods of startup, JAX 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, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

7. Requirements For Demand Response Availability Over 15 Hours Per Year

If JAX operates or is contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), the facility shall submit an annual report containing the information in §63.6650(h)(1)(i) through (ix). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

Director, Office of Ecosystem Protection
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Boston, MA 02109-3912

[40 CFR §63.6650(h)]

(21) **Incinerator #1**

A. Incinerator #1 (co-fired combustor) shall be used for disposal of type 0- through 5, and type 7, waste only. [06-096 CME 115, BPT]
B. Incinerator #1 shall not exceed the maximum design charging rate of 175 pounds per hour. Auxiliary fuel input to the primary and secondary chamber shall be distillate fuel with a maximum sulfur content not to exceed 0.05% by weight. [06-096 CME 115, BPT]
C. A log shall be maintained recording the weight of waste charged, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time, and time of final shutdown. For facilities operating a charge recorder, the start time, date and weight of waste charged may be logged on the chart. [06-096 CME 115, BPT]

D. JAX 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 the co-fired combustor. JAX shall not combust more than 10% medical/infectious waste by weight, as defined by the State of Maine Biomedical Waste Management Rules, 06-960 CMR 900, Sections 7.A and 7.B, based on the total weight of waste(s) and fuel combusted, measured on a calendar quarter basis, in the co-fired combustor. [06-096 CMR 115, BPT]

E. The secondary chamber of Incinerator #1 shall be preheated as specified by the manufacturer to a minimum of 2000°F prior to combusting any waste and shall be maintained at a minimum of 2000°F for the duration of the burn. [06-096 CME 115, BPT]

F. Once the burn cycle has commenced by introduction of primary chamber combustion, Incinerator #1 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 of a minimum of 2000°F in the secondary chamber. [06-096 CME 115, BPT]

G. A pyrometer and a 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 2000°F. [06-096 CME 115, BPT]

H. Emissions from Incinerator #1 shall be limited to the following:

Pollutant	gr/dscf	lb/hr
PM	0.10 @ 7%O_2	0.69
PM_{10}	n/a	0.69
SO_2	n/a	0.95
NO_X	n/a	2.10
CO	n/a	0.18
VOC	n/a	0.08

I. Visible emissions from Incinerator #1 shall not exceed an opacity limit of 5% based on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a one (1) hour period. [06-096 CMR 115, BPT]

J. The ash shall be disposed of in accordance with the requirement of the Bureau of Remediation and Waste Management. [06-096 CMR 115, BPT]

K. The incinerator operator(s) shall receive annual 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.

(22) **Incinerator #2**

A. Incinerator #2 shall be used for disposal of type 0 through 4 waste only, and shall not be used for the disposal of any cytotoxic (antineoplastic) drugs or any radioactive wastes. [06-096 CME 115, BPT]
B. Incinerator #2 shall not exceed the maximum design charging rate of 175 pounds per hour. Auxiliary fuel input to the primary and secondary chamber shall be distillate fuel with a maximum sulfur content not to exceed 0.05% by weight. [06-096 CME 115, BPT]
C. A log shall be maintained recording the weight of waste charged, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time, and time of final shutdown. For facilities operating a charge recorder, the start time, date and weight of waste charged may be logged on the chart. [06-096 CME 115, BPT]
D. The secondary chamber of Incinerator #2 shall be preheated as specified by the manufacturer to a minimum of 1800°F prior to combusting any waste and shall be maintained at a minimum of 1800°F for the duration of the burn. [06-096 CME 115, BPT]
E. Once the burn cycle has commenced by introduction of primary chamber combustion, Incinerator #2 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 of a minimum of 1800°F in the secondary chamber. [06-096 CME 115, BPT]
F. A pyrometer and a 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 1800°F. [06-096 CME 115, BPT]
G. Emissions from Incinerator #2 shall be limited to the following:

Pollutant	gr/dscf	lb/hr
PM	0.10 @7% O_2	0.69
PM_{10}	n/a	0.69
SO_2	n/a	0.95
NO_X	n/a	2.10
CO	n/a	0.18
VOC	n/a	0.08

H. Visible emissions from Incinerator #2 shall not exceed an opacity limit of 5% based on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a one (1) hour period. [06-096 CMR 115, BPT]

I. The ash shall be disposed of in accordance with the requirement of the Bureau of Remediation and Waste Management. [06-096 CMR 115, BPT]

J. The incinerator operator(s) shall receive annual 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.

(23) **Other emission sources:**

A. Ethylene Oxide Sterilization Units

JAX shall operate the ethylene oxide sterilization units in accordance with the manufacturer's specifications and keep records as necessary to demonstrate use of ethylene oxide does not exceed 1.0 ton per year. [06-096 CMR 115, BPT]

B. Gasoline Storage

JAX shall install and maintain a submerged fill pipe in the 2,000 gallon gasoline storage tank that is no more than six (6) inches from the bottom of the tank. JAX shall also maintain on its premises, records of gasoline throughput, which will allow the monthly and annual throughput to be determined. If JAX's monthly or annual throughput ever exceeds the initial applicability threshold of 10,000 gallon per month for the Stage I provisions of 06-096 CMR 118, JAX shall notify the Department of its applicability within thirty (30) days and install a Stage I Vapor Balance System in accordance with Section 3(B)(1) of the regulation, within sixty (60) days. Copies of these records shall be maintained for a minimum of three (3) years. These records shall be provided to the Department and/or EPA upon request. [06-096 CMR 118]

(24) **HAP Limit**

JAX shall not exceed a facility-wide emission limit of 1.0 ton per year for all HAPs combined, based on a 12-month rolling total. [06-096 CMR 115, BPT]

(25) **Annual Emission Statement**

In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of either:

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

The emission statement must be submitted as specified by the date in 06-096 CMR 137.

(26) JAX 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.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 24 DAY OF November , 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PATRICIA W. AHO, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 05/06/2014
Date of application acceptance: 05/08/2014

Date filed with the Board of Environmental Protection:

Filed
NOV 25 2014
State of Maine
Board of Environmental Protection

This Order prepared by N. Lynn Cornfield, Bureau of Air Quality.