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

DEPARTMENT ORDER

EME Biofuels LLC **Penobscot County** **Millinocket, Maine** **A-1189-71-A-N**	**Departmental** **Findings of Fact and Order** **Air Emission License**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

EME Biofuels LLC (EME) has applied for an Air Emission License for the operation of emission sources associated with their renewable fuel oil production facility.

The equipment addressed in this license is located at 1 Katahdin Avenue, Millinocket, Maine.

B. Title, Right, or Interest

In their application, EME submitted copies of a lease demonstrating interest in the facility. EME has provided sufficient evidence of title, right, or interest in the facility for purposes of this air emission license.

C. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Date of Manuf.	Date of Install.	Stack #
Heat Integration Furnace	6.02	491 lb/hr	RTP* Filter Cake	TBD	TBD	1
	8.39	633 lb/hr	RTP* Char			
	42.85	10,076 lb/hr	Product gas, non-condensable			
	10.8	2,688 lb/hr	Biomass			
RTP* Burner (4)	14.4 (each)	128 gal/hr (each)	Propane			

* Rapid Thermal Process Technology (RTP®)

Stationary Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW or HP)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #1	3.29	350 kW	Distillate fuel	24	TBD	TBD

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

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

Process Equipment

Equipment	Production Rate	Pollution Control Equipment	Stack
Belt Dryers	36,750 bone-dry lb/hr	None	Dryer 1-1 Stack, Dryer 1-2 Stack, Dryer 2-1 Stack, Dryer 2-2 Stack
Grinders A&B	2,150 lb/hr @ 55% moisture	Cyclone	Grinders
HM-A1	33,975 lb/hr @ 55% moisture	Cyclone	HM-A1-A3
HM-A2			
HM-A3			
HM-A4	4,886 lb/hr @ 6% moisture	Cyclone and Baghouse	HM-A4-A5
HM-A5			
HM-B1	33,975 lb/hr @ 55% moisture	Cyclone	HM-B1-B3
HM-B2			
HM-B3			
HM-B4	4,886 lb/hr @ 6% moisture	Cyclone and Baghouse	HM-B4-B5
HM-B5			
Product Loading	20 MMGal/yr	Vapor Collection	Product Loading

Note: HM designates Hammermill units.

Storage Tanks

Equipment	Capacity (gallons)	Pollution Control Equipment	Date of Manuf.	Date of Install.
RFO Filter Tank #1	45,000	Heat Integration Furnace	TBD	TBD
RFO Filter Tank #2	45,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #1	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #2	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #3	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #4	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #5	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #6	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #7	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #8	70,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #9	830,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #10	830,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #11	830,000	Heat Integration Furnace	TBD	TBD
RFO Storage Tank #12	830,000	Heat Integration Furnace	TBD	TBD

EME will also operate a cooling tower to provide cooling water required by the RTP process. The cooling tower will process exclusively noncontact cooling water to which EME will not add VOC or HAP in excess of the levels in 06-096 C.M.R. ch. 115, Appendix B(C), and is therefore considered an insignificant activity according to 06-096 C.M.R. ch. 115, Appendix B(A)(99).

D. Definitions

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

Distillate Fuel means the following:

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

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

Shutdown means the period in which cessation of operation of a boiler is initiated for any purpose. Shutdown begins when the boiler no longer supplies useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or generates electricity, or when no fuel is being fed to the boiler, whichever is earlier. Shutdown ends when the boiler no longer supplies useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or generates electricity, and no fuel is being combusted in the boiler.

Startup means:

- Either the first-ever firing of fuel in a boiler for the purpose of supplying useful thermal energy (such as steam or hot water) for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy (such as steam or hot water) from the boiler is supplied for heating and/or producing electricity, or for any other purpose, or
- The period in which operation of a boiler is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler for the purpose of supplying useful thermal energy (such as steam or hot water) for heating, cooling or process purposes or producing electricity, or the firing of fuel in a boiler for any purpose after a shutdown event. Startup ends 4 hours after when the boiler supplies useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or generates electricity, whichever is earlier.

E. Application Classification

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

A new source is considered a major source based on whether or not total licensed annual emissions exceed the "Significant Emissions" levels as defined in the Department's *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100.

Pollutant	Total Licensed Annual Emissions (tpy)	Significant Emissions Levels
PM	20.8	100
PM_{10}	10.8	100
$PM_{2.5}$	10.8	100
SO_2	2.0	100
NO_x	92.3	100
CO	9.3	100
VOC	41.9	100

The Department has determined the facility is a minor source, and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115.

F. Facility Classification

With the requirement that EME operate an ESP for control of PM emissions from the Heat Integration Furnace, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because EME is subject to license restrictions that keep facility emissions below major source thresholds for PM; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

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

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

B. Process Description

EME plans to construct and operate a bio-refinery for the production of Renewable Fuel Oil (RFO) from biomass (wood chips). The facility will include feedstock receiving, storage, comminution, heat integration and drying systems, components for Ensyn's patented Rapid Thermal Process Technology (RTP®), biocrude conditioning and storage, pollution abatement equipment, and utilities.

Green biomass will enter the facility via truck and be screened to remove any grossly oversized pieces (overs). The accepted material is then conveyed to separate covered green chip storage areas that can accommodate approximately eight days' worth of material. The material will then be transferred by frontend loader to reclaim bins, from which the material will be conveyed to gyrator screeners. The overs will be directed to the primary grinder and recirculated back to the screener. Correctly sized material will be routed to a destoning and magnet system to remove any small stones or metal before passing through the primary hammermill for size reduction. The material exiting the hammermill, along with undersized pieces from the screeners, will be conveyed to covered intermediate storage areas that will accommodate approximately four days' worth of combined storage. Material will then be transferred by a frontend loader to an indirect-heated belt dryer system.

An indirect-heated belt dryer is a low-temperature drying system consisting of a woven mesh conveyor belt, induced draft fans, and finned hot water heat exchangers to heat the incoming air. Wet biomass containing approximately 50% moisture will be distributed onto the slow-moving mesh belt where air, heated to approximately 180 °F, flows down through the biomass to evaporate moisture before being exhausted through a series of stacks. The dried biomass containing approximately 6% moisture will be screened to ¼" minus, with overs directed to a set of secondary hammermills and recirculated back to the screeners. The material is then conveyed to storage silos which feed the RTP process.

The dry biomass is converted in the RTP process to three products:
1. A liquid fuel product known as fast pyrolysis bio-oil (FPBO);
2. A pyrolysis gas byproduct used to provide heat to the dryer; and
3. A char product that is consumed in the RTP process to generate the necessary heat for the process and drying the biomass.

The FPBO liquid, also called RFO, is collected in a tank before being filtered to remove any fine solid material. The filtered liquid is stored in a set of tanks from which its quality can be determined. The liquid can then be loaded into tanker trucks or rail tankers for shipping. The filtered solids (filter cake) are used as a fuel in the heat integration system to provide energy for drying the biomass.

The heat integration system will have a reciprocating grate section for combustion of solids including the filter cake and supplemental biomass fuel. The combustion gases will then pass to a suspension burner section where the RTP char and RTP byproduct gas will be introduced into a secondary combustion zone. This secondary combustion zone will include additional air inlets and is designed for approximately two seconds of retention time at approximately 1,600 °F. The staged combustion will ensure complete combustion of organics and carbon monoxide from the RTP process. The Heat Integration Furnace will also serve as a control device for the RTP process tanks and finished product storage tanks via a vapor collection system that feeds into the RTP byproduct gas before the Heat Integration Furnace.

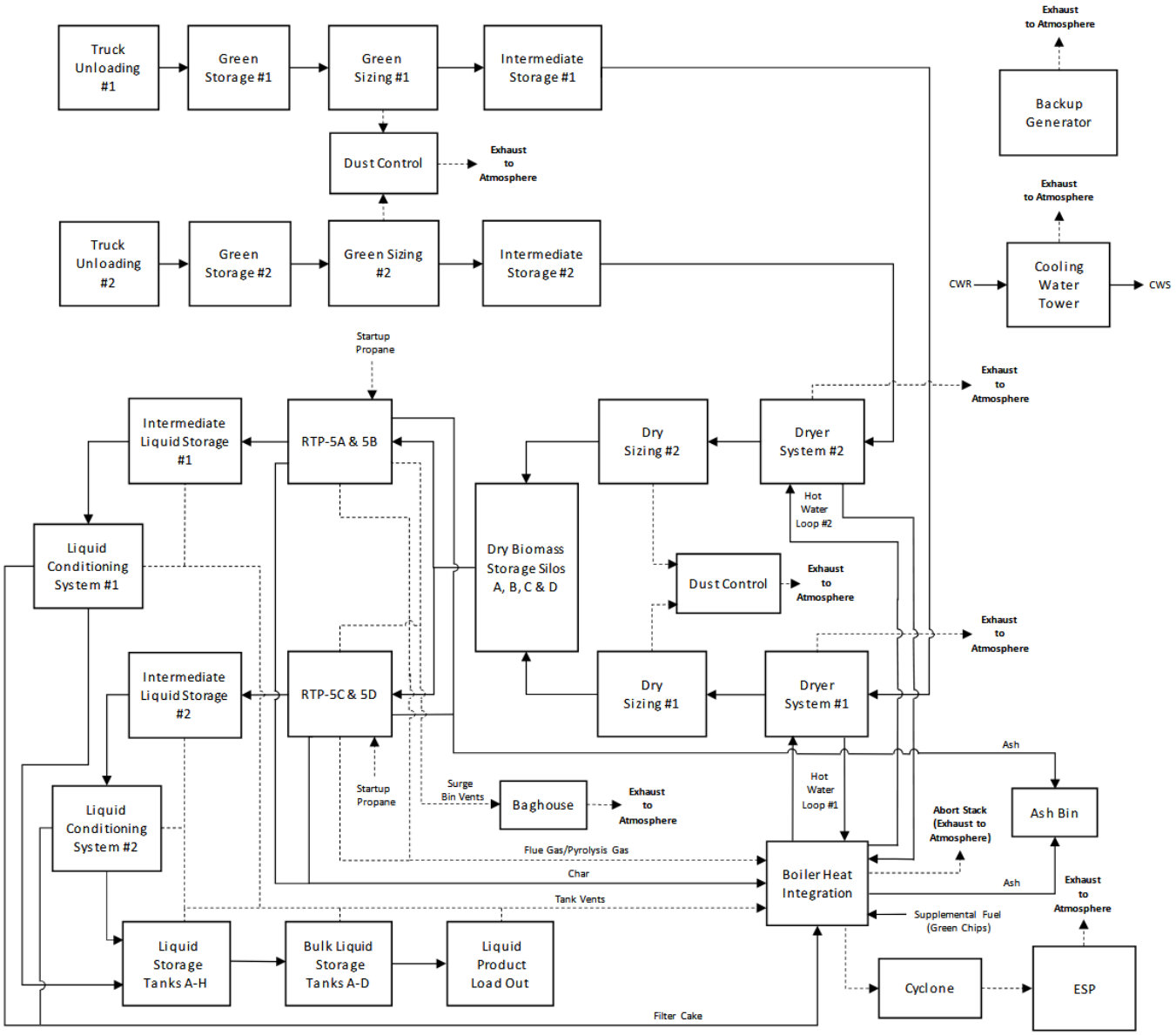
The RTP byproduct gas provides approximately 42.85 MMBtu/hr of thermal energy as combustible organics and carbon monoxide generated in the reaction vessel. This RTP Product Gas will be combusted in the Heat Integration Furnace. Some byproduct char will be combusted internally in the RTP process providing approximately 22.7 MMBtu/hr of thermal energy. This hot RTP flue gas will then be injected into the Heat Integration Furnace as additional sensible heat.

In addition to RTP Product Gas, other RTP byproducts combusted in the Heat Integration Furnace include char and filter cake. During the highest heating demand periods, expected to be in March and April when the biomass being fed to the dryer is coldest and wettest, EME will supplement the furnace with biomass fuel to provide additional heat. Biomass will also be combusted during startup of the RTP process. The total heat input from fuel combusted in the furnace will be up to 68.1 MMBtu/hr. Biomass will be burned at a rate

of approximately 10.8 MMBtu/hr. Although the total heat input will be 90.8 MMBtu/hr, the heat input capacity from combustion of fuels in the furnace will be 68.1 MMBtu/hr with the remainder of the heat input coming from the RTP flue gas. Exhaust from the Heat Integration Furnace will be treated by a cyclone followed by an electrostatic precipitator.

Cooling water that is required by the RTP process and filtration system will be supplied by a wet forced-draft evaporative cooling tower. The cooling tower will have a low-drift design to minimize PM emissions from entrainment of water droplets with dissolved solids. The cooling tower is considered an insignificant activity according to 06-096 C.M.R. ch. 115, Appendix A.99.

EME is also proposing to operate an emergency generator to provide short-term power to allow safe shutdown of the equipment during any power interruptions. The generator will be rated at 350 kW electrical output.



C. Heat Integration Furnace and RTP System

The Heat Integration Furnace and RTP System is comprised of a reciprocating step grate furnace for combustion of solid and gaseous fuels. RTP char and byproduct gas will be directed to the Heat Integration Furnace to provide additional thermal energy. This system is followed by a heat recovery boiler for generating hot water for the belt drying process.

1. BACT Findings

EME submitted a BACT analysis for control of emissions from the Heat Integration Furnace and RTP System.

a. Particulate Matter (PM, PM_{10}, $PM_{2.5}$)

Filterable and condensable particulate matter emissions from the Heat Integration Furnace and RTP System may be formed from noncombustible constituents in the fuel or combustion air or may be the products of incomplete combustion. PM emissions from the Heat Integration Furnace and RTP System include emissions associated with the flue gas from the RTP process and the combustion of pyrolysis gas, filter cake, char, and green wood chips within the furnace.

EME considered several control strategies for the control of $PM/PM_{10}/PM_{2.5}$ including baghouses, multicyclones, electrostatic precipitators (ESPs), and wet scrubbers.

Baghouses consist of a number of fabric bags placed in parallel that collect particulate matter on the surface of the filter bags as the exhaust stream passes through the fabric membrane. The collected particulate is periodically dislodged from the bags' surface to collection hoppers via short blasts of high-pressure air, physical agitation of the bags, or by reversing the gas flow. Baghouses have been identified as a technically and economically feasible control option for control of $PM/PM_{10}/PM_{2.5}$ from the Heat Integration Furnace and RTP System.

Cyclones use centrifugal forces to separate particulate matter from a gas stream. The temperature, humidity, and flow rate from the Heat Integration Furnace is well suited to the use of cyclones as initial pre-treatment for downstream control equipment. Cyclones have been identified as a technically and economically feasible control option for control of $PM/PM_{10}/PM_{2.5}$ from the Heat Integration Furnace. EME has proposed the use of a cyclone as BACT for control of particulate matter.

ESPs work by charging particles in the exhaust stream with a high voltage, oppositely charging a collection surface where the particles accumulate, removing the collected dust by a rapping process, and collecting the dust in hoppers. An ESP has been identified as a technically and economically feasible control option for control of $PM/PM_{10}/PM_{2.5}$ from the Heat Integration Furnace and RTP System. EME has proposed the use of an ESP as BACT for control of particulate matter.

Wet scrubbers remove PM from gas streams primarily through impaction and, to a lesser extent, other mechanisms such as interception and diffusion. A scrubbing liquid (typically water) is sprayed countercurrent to the exhaust gas stream. Contact between the larger scrubbing liquid droplets and the suspended particulates removes the PM from the gas stream. Entrained liquid droplets then pass through a mist eliminator (coalescing filter) which causes the droplets to become heavier and fall out of the exhaust stream. EME conducted a control cost analysis and estimates the cost of a wet scrubber on the Heat Integration Furnace to be greater than

$21,000/ton of PM removed per year. Therefore, a wet scrubber is not considered to be an economically feasible control option.

BACT for $PM/PM_{10}/PM_{2.5}$ emissions from the Heat Integration Furnace and RTP System is the use of a cyclone, ESP, and oxygen trim systems, and the emission limits listed in the tables below.

b. Sulfur Dioxide (SO_2)
EME has proposed to fire propane for startup and to fire RTP filter cake, flue gas, and process gas for normal operations. The use of these fuels results in minimal emissions of SO_2, and additional add-on pollution controls are not economically feasible.

BACT for SO_2 emissions from the RTP and Heat Integration Furnace and RTP System is the emission limits listed in the tables below.

c. Nitrogen Oxides (NO_x)
Nitrogen oxide emissions can result from operation of the RTP units and Heat Integration Furnace. During normal operation, flue gas from the combustion of char in the RTP system will be the primary source of NO_x due to the fuel bound nitrogen that is present in the biomass feedstock. Char combustion in the RTP system occurs at significantly lower process temperatures at which thermal NO_x is unlikely to form.

During normal operation, the main fuel for the Heat Integration Furnace will be the RTP by-products in the form of pyrolysis gas, filter cake, and char, with green woodchips being used as a supplemental fuel as required. Pyrolysis gas combustion occurs at lower temperatures than propane or natural gas due to the water content and presence of inert gases which reduces the potential for thermal NO_x.

NO_x formation from filter cake combustion will also result from both fuel-bound nitrogen and the creation of thermal NO_x. The Heat Integration Furnace used for the combustion of the filter cake, char, and green wood chips will incorporate staged combustion air and exhaust gas recirculation to limit the formation of thermal NO_x. Low NO_x burners will be used for startup of the RTP units.

BACT for NO_x emissions from the Heat Integration Furnace and RTP System is the use of use of low NO_x propane burners, oxygen trim systems, and the emission limits listed in the tables below.

d. Carbon Monoxide (CO) and Volatile Organic Compounds (VOC)
The Heat Integration Furnace will be designed with a furnace section where all flue gas streams are blended at temperatures over 1,634 °F (890 °C) with residence times over two seconds for maximum CO conversion and VOC and HAP destruction. Manufacturer specifications suggest control efficiencies for CO, VOC,

and HAPs will be similar to that of a thermal oxidizer. VOC and HAP emissions associated with the product storage tank venting and product loading operation will also be directed to the Heat Integration Furnace for destruction.

BACT for CO and VOC emissions from the Heat Integration Furnace and RTP System is the use of oxygen trim systems and the emission limits listed in the tables below.

e. Emission Limits

The BACT emission limits for the Heat Integration Furnace and RTP System were based on combined emission factors from the RTP flue gas, by-product pyrolysis gas combustion, filter cake and char combustion, biomass combustion, and control of tank venting and product loading operations.

Unit	Pollutant	lb/MMBtu
Heat Integration Furnace and RTP System	PM	0.03

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Heat Integration Furnace and RTP System	0.33	0.82	0.82	0.45	20.90	2.09	0.19

2. Visible Emissions

Visible emissions from the Heat Integration Furnace and RTP System shall not exceed 20% opacity on a six-minute block average basis, except for one 6-minute period per hour of not more than 27% opacity.
[06-096 C.M.R. ch. 115, BACT and 40 C.F.R. § 60.43c(c)]

3. Periodic Monitoring

Periodic monitoring for the Heat Integration Furnace and RTP System shall include recordkeeping to document fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the quantity and type of each fuel used.

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

Due to its size, the Heat Integration Furnace is subject to *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 C.F.R. Part 60, Subpart Dc for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

EME shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to the Heat Integration Furnace including, but not limited to, the following:

a. Notifications

EME shall submit notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up. This notification shall include the design heat input capacity of the Heat Integration Furnace and the types of fuel to be combusted. [40 C.F.R. § 60.48c(a)]

b. Standards

(1) Particulate Matter (PM)
The Heat Integration Furnace shall not exceed an emission limit of 0.10 lb/MMBtu. [40 C.F.R. § 60.43c(e)(3)] Note that 40 C.F.R. Part 63, Subpart JJJJJJ includes a more stringent PM emission limit of 0.03 lb/MMBtu. The PM emission limit from the Heat Integration Furnace will be streamlined to this lower limit.

(2) Opacity
Visible emissions from the Heat Integration Furnace shall not exceed 20% opacity on a 6-minute block average basis, except for one 6-minute period per hour of not more than 27% opacity. [40 C.F.R. § 60.43c(c)]

c. Initial Compliance Requirements

EME shall perform the following within 60 days after achieving the maximum production rate at which the Heat Integration Furnace will be operated but not later than 180 days after the initial start-up of the boiler:

(1) Conduct an initial performance test for PM in accordance with 40 C.F.R. § 60.45c.

(2) Conduct an initial performance test for opacity using 40 C.F.R. Part 60, Appendix A, Method 9 in accordance with 40 C.F.R. § 60.45c.

d. Monitoring Requirements

EME shall comply with monitoring requirements in accordance with one of the two options listed below.

(1) Option 1

EME shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) on the Heat Integration Furnace and record the output of the system. [40 C.F.R. § 60.47c(a)]

(2) Option 2

(i) EME shall use an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in 40 C.F.R. § 60.48Da [40 C.F.R. § 60.47c(f)(2)]

(ii) Except as provided in paragraph (iv) below, EME shall conduct performance tests on the Heat Integration Furnace for opacity using 40 C.F.R. Part 60, Appendix A, Method 9 according to the following schedule:
[40 C.F.R. § 60.47c(a)]

- If no visible emissions were observed in the most recent Method 9 performance test, the next performance test shall be completed within 12 calendar months.

- If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was less than or equal to 5% opacity, the next performance test shall be completed within 6 calendar months.

- If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was greater than 5% but less than or equal to 10% opacity, the next performance test shall be completed within 3 calendar months.

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

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

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

1. EME shall conduct 10-minute observations each operating day using Method 22.

2. If no visible emissions are observed for 10 operating days, EME may reduce observations to once every 7 operating days. If any visible emissions are observed, daily observations shall be resumed.
3. If the sum of the occurrence of any visible emissions is greater than 30 seconds per 10-minute observation, EME shall immediately conduct a 30-minute observation.
4. If the sum of the occurrence of any visible emissions is greater than 90 seconds per 30-minute observation, EME shall either document the adjustments made to the Heat Integration Furnace and demonstrate within 24 hours that the sum of the occurrence of any visible emissions is not greater than 90 seconds per 30-minute observation or conduct a Method 9 performance test within 45 days.

e. Reporting and Recordkeeping

(1) EME shall maintain records of the amounts of each fuel combusted during each calendar month. [40 C.F.R. § 60.48c(g)]

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

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

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

(i) Calendar dates covered in the reporting period; [40 C.F.R. § 60.48c(e)(1)]
(ii) Records of fuel supplier certifications; [40 C.F.R. § 60.48c(e)(11)] and
(iii) Any instances of excess emissions (including opacity) from the Heat Integration Furnace. [40 C.F.R. § 60.48c(c)]

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

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

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

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

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

The Heat Integration Furnace is subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ. The unit is considered a new biomass boiler. [40 C.F.R. §§ 63.11193 and 63.11195]

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

a. Standards

(1) Except during periods of startup and shutdown, the Heat Integration Furnace shall meet an emission limit for filterable PM of no more than 0.03 lb/MMBtu. [40 C.F.R. § 63.11201(a) and Table 1]

(2) EME shall either maintain an opacity from the Heat Integration Furnace of less than or equal to 10% on a daily block average or maintain the 30-day rolling average total secondary electric power of the ESP at or above the minimum total secondary electric power as defined in 40 C.F.R. § 63.11237. [40 C.F.R. § 63.11201(c) and Table 3]

If EME elects to demonstrate compliance by maintaining the 10% opacity limit, EME shall install, operate, certify, and maintain a continuous opacity monitoring system (COMS) according to the procedures in 40 C.F.R. § 63.11224(e).

If EME elects to demonstrate compliance by maintaining a minimum total secondary power of the ESP, EME shall establish the minimum total secondary power (secondary voltage and secondary current) as operating limits during performance testing. [40 C.F.R. § 63.11211(b)(2)]

b. Performance Testing

(1) EME shall demonstrate compliance with applicable emission limits by conducting performance testing according to 40 C.F.R. § 63.11212 and Table 4. [40 C.F.R. § 63.11205(b)]

(2) Initial performance testing shall be conducted within 180 days after startup of the Heat Integration Furnace. [40 C.F.R. § 63.11210(d)]

(3) Subsequent performance testing shall be conducted on a triennial basis, except as specified in paragraph (4) below. Triennial performance tests must be completed no more than 37 months after the previous performance test. [40 C.F.R. § 63.11220(a)]

(4) If performance test results show PM emissions are equal to or less than half of the PM emission limit, EME may choose to conduct performance tests for PM every fifth year, but must continue to comply with all applicable operating limits and monitoring requirements and the following provisions:

(i) Each performance test must be conducted no more than 61 months after the previous performance test.
(ii) If a performance test shows that PM emissions are greater than half of the PM emission limit, EME must conduct subsequent performance tests on a triennial basis.

[40 C.F.R. § 63.11220(c)]

c. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]

(2) Boiler Tune-Up Program

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

(ii) The boiler will be equipped with an oxygen trim (O_2 trim) system and therefore tune-ups shall be conducted every five years. [40 C.F.R. § 63.11223(c) and Table 2]

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

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

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

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

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

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

(3) EME shall minimize the Heat Integration Furnace's startup and shutdown periods following the manufacturer's recommended procedures, if available. If manufacturer's recommended procedures are not available, EME shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. [40 C.F.R. § 63.11214(d)]

(4) Compliance Report

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

(i) Company name and address;

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

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

(iv) The following certifications, as applicable:

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

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

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

(5) EME shall submit Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin. [40 C.F.R. 63.11225(a)(3)]

(6) EME shall submit a Notification of Compliance Status within 60 days of completing the initial performance stack test. The Notification of Compliance Status must include the items contained in § 63.1125(a)(4)(i) through (vi), including the following:
[40 C.F.R. § 63.11225(a)(4)]

(i) The Methods used to determine compliance;
(ii) The methods that will be used for determining continuing compliance, including a description of the monitoring and reporting requirements and test methods;
(iii) A statement by the owner or operator as to whether the source has complied with the relevant standards or requirements;
(iv) The following certifications, as applicable:
1. "This facility complies with the requirements in § 63.11214 to conduct an initial tune-up of the boiler."
2. "No secondary materials that are solid waste were combusted in any affected unit."

(7) EME shall develop a site-specific monitoring plan for the use of any continuous monitoring system (CMS) used to demonstrate compliance with PM and/or opacity limits. This may include ESP parameters (total secondary power) or a COMS. The site-specific monitoring plan shall be developed according to the requirements of 40 C.F.R. § 63.11205(c), as applicable. [40 C.F.R. § 63.11205(c)]

(8) EME shall report each instance in which each applicable emission limit and operating limit were not met. Deviations must be reported according to the requirements in 40 C.F.R. § 63.11225. [40 C.F.R. § 63.11222(b)]

d. Recordkeeping

(1) EME shall keep records of the types and amounts of fuels burned in the Heat Integration Furnace. [40 C.F.R. § 63.11222(a)(2)]

(2) Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:
(i) Copies of notifications and reports with supporting compliance documentation;
(ii) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
(iii) Records of the occurrence and duration of each malfunction of each applicable boiler; and
(iv) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

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

EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [40 C.F.R. § 63.11225(a)(4)(vi)]

D. Generator #1

EME has proposed to install and operate one emergency generator. The emergency generator will be a generator set consisting of an engine and an electrical generator. The emergency generator will have an engine rated at 3.29 MMBtu/hr which fires distillate fuel.

1. BACT Findings

The BACT emission limits for Generator #1 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 103
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
CO	–	0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
VOC	–	0.35 lb/MMBtu from AP-42 Table 3.3-1 dated 4/25
Visible Emissions	–	06-096 C.M.R. ch. 101

The BACT emission limits for Generator #1 are the following:

Unit	Pollutant	lb/MMBtu
Generator #1	PM	0.12

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.39	0.39	0.39	0.01	14.51	3.13	1.18

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis.

BACT for Generator #1 includes recordkeeping of all maintenance conducted on engine.

2. Chapter 169

Stationary Generators, 06-096 C.M.R. ch. 169 (Chapter 169), is applicable to Generator #1. It is an emergency generator powered by an engine with a rated output of less than 1,000 brake horsepower (747 kW). Chapter 169 identifies emission standards for generator engines subject to this chapter and stack height requirements for certain generator engines subject to this chapter.

a. Chapter 169 Emission Standards Requirements

For Generator #1, EME shall comply with the emission standards for emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart IIII. [06-096 C.M.R. ch. 169, § 4(B)(1)]

b. Chapter 169 Stack Height Requirements

Chapter 169 identifies stack height requirements for any stack used to exhaust a generator engine or combination of generator engines with a combined rated output equal to or greater than 1,000 brake horsepower (747 kW). Individual generator engines with a maximum power capacity of less than 300 kW are not included in the assessment of the combined generator power capacity exhausted through a common stack. [06-096 C.M.R. ch. 169, § 6]

There are no stack height requirements in Chapter 169 applicable to Generator #1 because it exhausts through its own stack and its rated output is less than 1,000 brake horsepower (747 kilowatts). [06-096 C.M.R. ch. 169, § 6]

3. New Source Performance Standards

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII is applicable to the emergency engine listed above since the unit was ordered after July 11, 2005, and manufactured after April 1, 2006. [40 C.F.R. § 60.4200] By meeting the requirements of 40 C.F.R. Part 60, Subpart IIII, the unit also meets the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

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

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an **emergency** stationary ICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under 40 C.F.R. Part 60, Subpart IIII, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

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

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

(2) Non-Emergency Situation Operation

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

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

(ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are**

counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.

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

[40 C.F.R. §§ 60.4211(f) and 60.4219]

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

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

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

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

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

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

(5) Annual Time Limit for Maintenance and Testing
As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). [40 C.F.R. § 60.4211(f)]

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

(7) Recordkeeping

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

E. Belt Dryers

The Belt Dryers are low temperature, indirect drying systems consisting of a woven mesh conveyor belt, induced draft air fans, and finned hot water heat exchangers. The Belt Dryers will use hot water produced by the Heat Integration Furnace to heat air which will then be used to dry the biomass from approximately 50% to 6% moisture by weight. Combined throughput of the Belt Dryers will be 36,750 bone dry lb/hr. The primary pollutants expected to be emitted by the Belt Dryers are PM and VOC.

1. BACT Findings

EME submitted a BACT analysis for control of emissions from the Belt Dryers.

a. Particulate Matter (PM, PM_{10}, $PM_{2.5}$)

EME considered several control strategies for the control of PM/PM_{10}/$PM_{2.5}$ including baghouses, cyclones, multiclones, electrostatic precipitators (ESPs), and wet scrubbers.

Baghouses do not perform well in humid conditions where water vapor and VOC from the gas stream may condense on the fabric filters. This condensation can quickly cause blinding of the filters, requiring frequent maintenance and downtime. Due to the high moisture content of the dryer exhaust stream, a baghouse is not considered to be technically feasible for control of PM emissions from the Belt Dryers.

The low temperature and high humidity level of the dryer exhaust streams are not well suited to cyclone or multiclone operations. Water and organic compounds in the gas stream are likely to condense inside the cyclone or multiclone and eventually clog the equipment, requiring frequent maintenance and downtime. Therefore, the use of a cyclone or multiclone for PM control from the dryer system is not considered to be technically feasible for control of PM emissions from the Belt Dryers.

Due to the high humidity of the gas stream, a dry ESP is not considered technically feasible. Wet ESPs are specifically designed to treat humid air streams and are a technically feasible control strategy for the Belt Dryers. EME estimates the cost of

a wet ESP to be in excess of $114,000 per ton of pollutant controlled annually. Therefore, a wet ESP is not considered to be economically feasible.

Wet scrubbers are not generally used for fine PM abatement applications due to the high liquid to gas ratios that are required for effective separation of small particles. A wet scrubber is expected to produce large quantities of wastewater which EME does not have the infrastructure to treat prior to disposal. EME estimates the cost of a wet scrubber to be greater than $34,000 per ton of PM removed annually. Therefore, a wet scrubber is not considered to be economically feasible.

BACT for $PM/PM_{10}/PM_{2.5}$ emissions from the Belt Dryers is the emission limits listed in the tables below.

b. Volatile Organic Compounds (VOC)

EME considered several control strategies for the control of VOC including adsorption, biofiltration, electrostatic precipitators (ESPs), wet scrubbers, and thermal oxidation.

Activated carbon is less effective in situations where the gas stream has a high humidity as water will readily adsorb on to the carbon, hindering the filter's ability to remove other contaminants. The exhaust streams from the Belt Dryers will be heavily moisture-laden and near its dew point which may lead to condensation on an adsorption filter. Adsorption systems are not considered to be a technically feasible option for control of VOC from the Belt Dryers.

Downtime and maintenance are scheduled into the yearly operation of an RTP facility and cannot be avoided. With four separate RTP reactors and the variable nature of the feedstock, the composition and total VOC loading to a biofilter cannot be strictly controlled and will necessarily fluctuate with plant operation. The facility will be located where the cold winter climate may impact the operation, performance and maintenance of a biofilter system. Biofilters also require a large footprint which may not be available at the proposed site. For these reasons, a biofilter is not considered to be technically feasible for control of VOC from the Belt Dryers.

Wet ESPs and wet scrubbers only provide for incidental removal of water-soluble VOC through contact with the quench water. The ability of a wet ESP or wet scrubber to absorb VOC reduces as the quench liquid becomes saturated, requiring more frequent blowdowns and the generation of organics-laden wastewater. Given that any control of VOC will be incidental, a wet ESP or wet scrubber is not considered to be a technically feasible option for the dryer exhaust stream.

EME estimates the cost of a thermal oxidizer to be over $20,000 per ton of VOC controlled annually. The use of a thermal oxidizer would also necessitate the

addition of an ESP due to the expected particulate matter content, further increasing the cost of control. Therefore, a thermal oxidizer is not considered to be technically or economically feasible for control of VOC from the Belt Dryers.

BACT for VOC emissions from the Belt Dryers is the emission limits listed in the tables below.

c. Emission Limits

The BACT emission limits for the Belt Dryers are based on the following:

PM	–	0.24 lb/ODT from manufacturer's guarantee
PM_{10}	–	0.09 lb/ODT from AP-42 Table 10.6.1-1 dated 3/02
$PM_{2.5}$	–	0.09 lb/ODT from AP-42 Table 10.6.1-1 dated 3/02
VOC	–	0.51 lb/ODT from AP-42 Table 10.6.1-3 dated 3/02
Visible Emissions	–	06-096 C.M.R. ch. 101

The BACT emission limits for the Belt Dryers are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	VOC (lb/hr)
Belt Dryers	4.41	1.65	1.65	9.37

Visible emissions from the Belt Dryers shall not exceed 20% opacity on a six-minute block average basis.

F. Grinders and Hammermills

The Grinders and Hammermills will be used to resize incoming biomass as necessary both before and after the drying process. Grinders and Hammermills processing material before it is dried will be vented to cyclones for control of PM emissions. Hammermills processing material after it has been dried will be vented to a cyclone and baghouse for control of PM emissions. Emissions are expected to be minimal and unquantifiable.

Visible emissions from the cyclone exhausts associated with the Grinders A & B, and Hammermills, HM-A1, HM-A2, HM-A3, HM-B1, HM-B2, and HM-B3, shall not exceed 20 percent opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(B)(4)]

Visible emissions from the baghouse exhausts associated with Hammermills HM-A4, HM-A5, HM-B4, and HM-B5, shall not exceed 10 percent opacity on a six-minute block average basis.
[06-096 C.M.R. ch. 101, § 3(B)(3)]

G. Process and Storage Tanks

EME will utilize several storage tanks for the processing and storage of RFO.

- RFO Filter Tanks: The two RFO Filter Tanks will each be a 45,000-gallon, fixed-roof, stainless steel tank used to store RFO liquid before it is filtered.
- RFO Storage Tanks: EME will operate 12 RFO Storage Tanks. RFO Storage Tanks #1-#8 will each be a 70,000-gallon, fixed-roof, stainless steel tank. RFO Storage Tanks #9-#12 will each be a 830,000-gallon, fixed-roof, stainless steel tank.

As material is added to each of the tanks, headspace gases will vent to and be treated by the Heat Integration Furnace which has an expected control efficiency of 95%, or greater for VOC emissions.

1. BACT Findings

   a. EME shall conduct routine visual inspections of the tanks and associated transfer piping and fittings at least once every month and shall maintain records documenting any detected leaks and the corrective action taken.

   b. VOC emissions from the RFO Filter Tanks and RFO Storage Tanks shall be controlled by routing gases from the tank headspace to the Heat Integration Furnace. The Heat Integration Furnace shall be in operation at all times that RFO is being produced in the RTP reactors.

   c. The vapor collection system shall be designed and operated to maintain the pressure in the storage tanks below the tank venting pressure. As a backup during periods of Heat Integration Furnace downtime, EME will use an activated carbon adsorber system to capture emissions from the vapor collection system pressure relief device. EME will develop methodology for monitoring the carbon canister for breakthrough as part of the Site-Specific Monitoring Plan. Spent carbon from the canisters may be blended with the biomass fuel and combusted in the heat integration furnace.

2. New Source Performance Standards

   Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023, 40 C.F.R. Part 60, Subpart Kc is applicable to RFO Filter Tanks #1 and #2 and RFO Storage Tanks #1-#12 since each tank has a capacity greater than or equal to 20,000 gallons, is used to store volatile organic liquids (VOL), and commenced construction after October 4, 2023. [40 C.F.R. § 60.110c(a)]

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

a. EME shall submit an initial notification to the Administrator within 60 days after becoming subject to this subpart. The notification must be submitted through EPA's Compliance and Emissions Data Reporting Interface (CEDRI) website (https://www.epa.gov/electronic-reporting-air-emissions/cedri). For each affected storage vessel, the following information shall be included:

(1) General facility information, including facility name, facility physical address, and latitude and longitude of the facility's physical location.
(2) Information for the facility contact person, including name, mailing address, telephone number, and email address.
(3) Identification of the storage vessels subject to this subpart.
(4) Capacity, in gallons, of each storage vessel.
(5) The maximum true vapor pressure of the liquid stored in each storage vessel.
(6) Identification of the standards for which the storage vessel complies.
(7) If emissions are routed to a control device, specify the design of the storage vessel and closed vent system (*i.e.,* storage vessel designed according to 40 C.F.R. § 60.112c(d)(1)(i); or closed vent system designed according to 40 C.F.R. § 60.112c(d)(1)(ii)) and type of control device.
(8) If emissions are routed to a process, submit the information specified in 40 C.F.R. § 60.112c(d)(6)(ii) and (iii).
(9) If emissions are routed to a fuel gas system, as specified in 40 C.F.R. § 60.112c(d)(6)(iv), submit a statement that the emission stream is connected to the fuel gas system.

[40 C.F.R. § 60.116c(a)]

b. EME shall install on each storage vessel a closed vent system routed to a control device, fuel gas system, or process. [40 C.F.R. § 60.112c(a)(1)]

(1) The tanks must be designed and operated to be routed through a closed vent system to a control device, fuel gas system, or process at all times the storage vessel contains VOL without venting to atmosphere by meeting either of the following requirements: [40 C.F.R. § 60.112c(d)(1)]

(i) The tanks shall be designed to operate at a gauge pressure of no less than 1 psi greater than the maximum true vapor pressure of the stored liquid and any back pressure anticipated when the storage vessel is filled at its maximum rate without venting to atmosphere; or
(ii) The vapor recovery system shall be designed and operated to maintain the pressure in each tank below the venting pressure for that tank.

(2) Emissions from each pressure release device or vacuum breaking device shall either be routed through a closed vent system to a control device, process, or fuel gas system, or the pressure release device or vacuum breaking device must meet the following requirements: [40 C.F.R. § 60.112c(d)(1)(iii)]

(i) Identify the pressure released;
(ii) Record the time and duration of each pressure release; and
(iii) Notify operators immediately that a pressure release is occurring. The device or monitoring system must be either specific to the pressure relief device or vacuum breaking device itself or must be associated with each storage vessel to indicate a pressure release to the atmosphere. Examples of these types of devices and systems include, but are not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor.

(3) Except for closed vent systems operated and maintained under negative pressure, each closed vent system must meet the following requirements: [40 C.F.R. § 60.112c(d)(2)]

(i) The closed vent system must be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 parts per million by volume (ppmv) above background, as determined using Method 21 of 40 C.F.R. Part 60, appendix A-7, and as determined by observations for visible, audible, and olfactory indications of leaks. Visible, audible, and olfactory inspections must be performed quarterly and Method 21 of appendix A-7 instrument monitoring must be conducted at least annually.

(ii) Except for pressure relief devices and except for open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in 40 C.F.R. § 60.482-6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as § 60.482-6(a)(2), (b), and (c), EME must comply with the provisions of either of the below paragraphs for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere. [40 C.F.R. § 60.112c(d)(2)(ii)]

(a) Properly install, maintain, and operate a flow indicator that is capable of taking readings every 15 minutes. Install the flow indicator at the entrance to any bypass line; or,
(b) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

(4) The Heat Integration Furnace must be operating at all times when emissions from an affected storage vessel are routed to it. [40 C.F.R. § 60.112c(d)(6)(i)]

(5) If emissions from the tanks are routed to a fuel gas system, EME must submit a statement of connection for fuel gas systems including a design evaluation or engineering assessment that demonstrates the extent to which one or more of the following conditions are being met:

(i) The emissions are recycled and/or consumed in the same manner as a material that fulfills the same function in the process.
(ii) The emissions are transformed by chemical reaction into materials that are not regulated materials.
(iii) The emissions are incorporated into a product.
(iv) The emissions are recovered.

[40 C.F.R. §§ 60.112c(d)(6)(iv), 60.116c(a)(7), and 60.112c(d)(6)(ii) and (iii)]

(6) To the extent practical, routine maintenance on the Heat Integration Furnace should be conducted when the storage tanks are out of VOL service. By meeting the below provisions, EME may conduct maintenance on the Heat Integration Furnace while one or more of the storage tanks vented to it are storing VOL.

(i) The storage tanks storing VOL must be designed to operate above the maximum true vapor pressure of the stored VOL.
(ii) The Heat Integration Furnace must be isolated from the storage vessels using valves, blind flanges, or similar devices at the control device or in the closed vent system as near as practical to the control device. EME may purge the control device and downstream portion of the closed vent system to remove potentially explosive vapors and create a safe work environment only after the control device is isolated from the storage vessels.
(iii) EME shall continue to comply with the bypass and pressure relief device monitoring requirements as well as associated recordkeeping requirements.
(iv) During the routine maintenance period the affected storage vessels cannot be actively degassed. If the storage vessel is to be emptied and actively degassed, the planned maintenance activity must be conducted when the storage vessel is out of VOL service.

[40 C.F.R. § 660.112c(d)(7)]

c. EME shall meet the following requirements during emptying and degassing of a storage vessel until the vapor space concentration in the storage vessel is less than 10 percent of the LEL or, for nonflammable liquids, 5,000 ppmv as methane. EME must determine the LEL or methane concentration using process instrumentation or a portable measurement device and follow procedures for calibration and maintenance according to manufacturer's specifications. EME must check instrument calibration and check the instrumental offset response each day the instrument is used and prior to discontinuing controlled degassing to confirm the accuracy of the instrument's readings.

(1) Remove liquids from the storage vessel as much as practicable. Chemicals or a diluent such as a distillate fuel may be introduced into the storage vessel for the purpose of reducing vapor concentration before or during active degassing.
(2) Reduce VOC emissions by routing emissions to the Heat Integration Furnace as described above.
[40 C.F.R. § 60.112c(e)]

d. EME is not required to conduct a performance test for the control device because the emissions from the storage tanks are introduced to the Heat Integration Furnace with the primary fuel.
[40 C.F.R. § 60.113c(c)(1)(iii)(B)]

e. EME shall conduct instrument monitoring of the closed vent system according to the procedures in 40 C.F.R. §§ 60.113c(c)(2)(i) through (iii). Initial instrument monitoring must be conducted within 180 days of an affected facility being connected to the closed vent system. Subsequent instrument inspections must be conducted within 365 days of the previous inspection. Visual, audible, and olfactory inspections must be conducted quarterly. [40 C.F.R. § 60.113c(c)(2)]

f. Leaks, as indicated by an instrument reading greater than 500 ppmv or emissions detected by visible, audible, and olfactory methods, shall be repaired as soon as practical. A first attempt at repair shall be made no later than 5 days after the leak is detected. Repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical.

[40 C.F.R. § 60.113c(c)(3)]

g. EME shall develop a monitoring plan that covers each CMS used to demonstrate continuous compliance for the control device. The monitoring plan must contain the following information:

(1) The parameter to be monitored and the operating limit for the parameter.

(2) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements.

(3) Description of the monitoring system specifications, including the detector signal analyzer, data acquisition, and calculations.

(4) Equipment performance checks, system accuracy audits, or other audit procedures, including the following:

(i) Conduct the CMS equipment performance checks, system accuracy audits, or other audit procedures specified in the monitoring plan at least once every 12 calendar months.
(ii) Conduct calibration checks following any period of more than 24 hours throughout which the sensor exceeded the manufacturer's specified maximum range.
(iii) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion, unless using a redundant CMS.
(iv) Daily checks for indications that the system is responding.

(5) Description of how periods of data collected during CMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable), and high-level adjustments will be excluded from operating parameter averages.

(6) Ongoing operation and maintenance procedures.

(7) Ongoing recordkeeping procedures.

[40 C.F.R. § 60.113c(c)(4)]

h. For each affected storage vessel, EME shall determine the maximum true vapor pressure of the stored VOL according to the requirements specified in 40 C.F.R. §§ 60.113c(d)(1) and (2). [40 C.F.R. §§ 60.113c(d)]

i. Recordkeeping

EME shall keep the following records, as applicable:

(1) For each storage vessel, EME shall keep readily accessible records for the life of the source showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 C.F.R. § 60.115c(b)]

(2) The make and model of the backpressure regulator valve, date of installation, and inlet flow rating. Maintain records of the engineering evaluation and manufacturer specifications that identify the pressure set point corresponding to the minimum inlet gas flow rate, the annual confirmation that the

backpressure regulator valve set point is correct and consistent with the engineering evaluation and manufacturer specifications, and the annual confirmation that the backpressure regulator valve fully closes when not in open position. [40 C.F.R. § 60.115c(d)(3)(i)]

(3) The CMS monitoring plan required by 40 C.F.R. § 60.113c(c)(4), if the closed vent system is routed to a control device. Retain this plan for the life of the control equipment. [40 C.F.R. § 60.115c(d)(3)(ii)]

(4) Monitoring for the closed vent system conducted under 40 C.F.R. § 60.113c(c)(2), including the date of inspection. [40 C.F.R. § 60.115c(d)(3)(ii)]

(5) For each leak detected, record: the date the leak was detected; the location of the leak; the method used to detect the leak (Method 21 of appendix A-7 to this part or visible, audible, and olfactory methods); and the maximum concentration reading obtained by Method 21 of appendix A-7, if applicable. For each repair attempt, record: the date of each repair attempt; the actions taken to repair the leak during each repair attempt; and date the repair was completed. If the repair is delayed, you must record the reason for the delay and the date you expect to complete the repair. [40 C.F.R. § 60.115c(d)(3)(v)]

(6) For each bypass line, maintain a record of the following, as applicable: readings from the flow indicator; each inspection of the seal or closure mechanism; the date and time of each instance when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out. [40 C.F.R. § 60.115c(d)(3)(vi)]

(7) For each pressure relief device or vacuum breaking device on a storage vessel or closed vent system required to be monitored: the device type; the monitoring device or system used for the device; data from the device or system indicating whether a pressure release occurred; and the date, time, and duration of each pressure release, if applicable. [40 C.F.R. § 60.115c(d)(3)(vii)]

(8) Each performance test; all CMS performance checks, audits, maintenance, and repairs; the hourly values recorded by the CMS and all 3-hour rolling averages; and the periods when the CMS is not operational. [40 C.F.R. § 60.115c(d)(4)]

(9) Records necessary to demonstrate compliance with applicable degassing requirements including, if appropriate, records of existing standard site procedures used to empty and degas (deinventory) equipment for safety purposes. [40 C.F.R. § 60.115c(e)]

j. Semiannual report

EME shall submit to the Administrator semiannual reports by the methods and including the information as specified in 40 C.F.R. § 60.116c(c). The first semiannual report will cover the period starting with the date the source first becomes an affected facility subject to this subpart and ending June 30 or December 31, whichever date is earlier. Subsequent semiannual reports will cover subsequent 6 calendar month periods (January 1 through June 30 or July 1 through December 31, as applicable) with each report due on or before the last day of the month 2 months after the last date covered by the semiannual report (August 31 or February 28 or 29, as applicable). [40 C.F.R. §§ 60.116c(c) and (d)]

H. Product Loading

Product will be loaded into tanker trucks for transportation. Gaseous emissions displaced during the loading will be routed to a blending chamber in the Heat Integration Furnace where it will be held at a temperature of greater than 1,600 °F for over two seconds for control of VOC emissions. Emissions from product loading are included in the BACT emission limits for the Heat Integration Furnace.

BACT for product loading is the routing of emissions to the Heat Integration Furnace. EME will normally conduct Product Loading operations when the Heat Integration Furnace is operating. However, if product is loaded to trucks during HIF downtown, a vapor balance system shall be used to transfer the displaced tank truck headspace to the product storage tank. The vapor balance system shall be designed and operated to maintain the pressure in both the storage tank and the tank truck being loaded below the venting pressure for that tank.

I. General Process Emissions

Visible emissions from any general process source shall not exceed 20% opacity on a six-minute block average basis.

Visible emissions from any baghouse shall not exceed 10% on a six-minute block average basis.

J. Fugitive Emissions

EME shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

EME shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

K. Performance Test Protocol

For any performance testing required by this license, EME shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BPT]

The Department's Performance Testing Guidance is available online at: https://www.maine.gov/dep/air/emissions/testing.html

L. Emission Statements

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

1. The amount of distillate fuel fired in, or hours of operation of, Generator #1 on a monthly basis;
2. The sulfur content of the distillate fuel fired in Generator #1;
3. Calculations of the emissions from the RTP Process and Heat Integration Furnace on a 12-month rolling total basis;
4. Throughput of each of the RFO Filter Tanks and RFO Storage Tanks, and calculations of the annual emissions from the tanks; and
5. Hours each emission unit was active or operating on a monthly basis.

Every third year, or as requested by the Department, EME shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. EME shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

M. Annual Emissions

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee and establishing the facility's potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are

not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Operating the Heat Integration Furnace and RTP process for 8,760 hrs/yr;
- Operating Generator #1 for 100 hrs/yr of non-emergency operation;
- Approximately 22.92 million gal/yr of finished product throughput.

This information does not represent a comprehensive list of license restrictions or permissions. That information is provided in the Order section of this license.

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

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC
Heat Integration Furnace and RTP System	1.45	3.59	3.59	1.97	91.54	9.15	0.83
Belt Dryers	19.31	7.22	7.22	--	--	--	41.04
Generator #1	0.02	0.02	0.02	--	0.73	0.16	0.06
Total TPY	**20.8**	**10.8**	**10.8**	**2.0**	**92.3**	**9.3**	**41.9**

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. AMBIENT AIR QUALITY ANALYSIS

A. Overview

A refined modeling analysis was performed to show that emissions from EME, in conjunction with other sources, will not cause or contribute to violations of National Ambient Air Quality Standards (NAAQS) for SO_2, PM_{10}, $PM_{2.5}$, NO_2, or CO or to Class II increments for SO_2, PM_{10}, $PM_{2.5}$, or NO_2.

Since EME is classified as a new minor source, an assessment of Class I Air Quality Related Values (AQRVs) is not required.

B. Model Inputs

The AERMOD-PRIME refined model was used to address standards and increments in all areas. If applicable, the modeling analysis accounted for the potential of building wake and cavity effects on emissions from all modeled stacks that are below their calculated formula GEP stack heights.

All modeling was performed in accordance with all applicable requirements of the Maine Department of Environmental Protection, Bureau of Air Quality (MEDEP-BAQ) and the United States Environmental Protection Agency (USEPA).

A valid five-year hourly on-site meteorological database was used in the AERMOD-PRIME refined modeling analysis. The following parameters and their associated heights were collected at the Great Northern Paper meteorological monitoring site during the 5-year period 1990-1993 and July 1, 1994 – June 30, 1995:

TABLE III-1 : Meteorological Parameters and Collection Heights

Parameter	Sensor Height(s)
Wind Speed	10 meters, 90 meters
Wind Direction	10 meters, 90 meters
Standard Deviation of Wind Direction (Sigma A)	10 meters, 90 meters
Temperature	3 meters

Pursuant to USEPA guidance, any small gaps (two hours or less) of missing on-site data were filled in using linear interpolation. Larger gaps of missing data (three or more hours) were coded as missing.

In addition, hourly Bangor NWS data from the same time period were used to supplement the primary surface dataset for the required variables (cloud cover and ceiling height) that were not explicitly collected at the Great Northern Paper meteorological monitoring site. Concurrent upper-air data from the Caribou NWS site were also used in the analysis. Missing cloud cover and/or upper-air data values were interpolated or coded as missing, per USEPA guidance.

Surface meteorological data was combined with concurrent hourly cloud cover and upper-air data obtained from the Caribou National Weather Service (NWS). Missing cloud cover and/or upper-air data values were interpolated or coded as missing, per USEPA guidance.

All necessary representative micrometeorological surface variables for inclusion into AERMET (surface roughness, Bowen ratio and albedo) were calculated using the AERSURFACE utility program and from procedures recommended by USEPA.

Point-source parameters used in the modeling are listed in Table III-2.

Table III-2: Point Sources Stack Parameters

Stack	Stack Base Elevation (m)	Stack Height (m)	GEP Stack Height (m)	Stack Diameter (m)	UTM Easting NAD83 (m)	UTM Northing NAD83 (m)
CURRENT/PROPOSED						
EME Biofuels						
• Stack #1 (Heat Integration Furnace)	181.05	25.60	64.01	2.44	523,261	5,053,391
• Stack #2 (Dryer A, Stack 1)	181.05	7.01	64.01	2.00	523,186	5,053,502
• Stack #3 (Dryer A, Stack 2)	181.05	7.01	64.01	2.00	523,196	5,053,481
• Stack #4 (Dryer B, Stack 1)	181.05	7.01	64.01	2.00	523,132	5,053,476
• Stack #5 (Dryer B, Stack 2)	181.05	7.01	64.01	2.00	523,142	5,053,455
2010 BASELINE ($PM_{2.5}$ INCREMENT)						
• No EME sources existed in the 2010 baseline year; no baseline credit to be taken.						
1987 BASELINE (NO_2 INCREMENT)						
• No EME sources existed in the 1987 baseline year; no baseline credit to be taken.						
1977 BASELINE (SO_2/PM_{10} INCREMENT)						
• No EME sources existed in the 1977 baseline year; no baseline credit to be taken.						

Emission parameters for NAAQS and Class II increment modeling are listed in Table III-3. AERMOD modeling was performed for a range of EME operating scenarios that represented a range of four maximum, typical, and minimum boiler/equipment combinations.

For the purpose of determining maximum predicted impacts, the following assumptions were used:

- all NO_x emissions were conservatively assumed to convert to NO_2 (USEPA Tier I Method), and
- all particulate emissions were conservatively assumed to convert to PM_{10} and $PM_{2.5}$.

Table III-3: Stack Emission Parameters

Stack	Averaging Periods	SO_2 (g/s)	PM_{10} (g/s)	$PM_{2.5}$ (g/s)	NO_x (g/s)	CO (g/s)	Stack Temp (K)	Stack Velocity (m/s)
MAXIMUM LICENSE ALLOWED								
EME Biofuels								
• Stack #1 (HIF)	All	0.056	0.103	0.103	2.633	0.264	477.59	6.94
• Stack #2 (Dryer A, Stack 1)	All	-	0.052	0.052	-	-	320.93	7.69
• Stack #3 (Dryer A, Stack 2)	All	-	0.052	0.052	-	-	320.93	7.69
• Stack #4 (Dryer B, Stack 1)	All	-	0.052	0.052	-	-	320.93	7.69
• Stack #5 (Dryer B, Stack 2)	All	-	0.052	0.052	-	-	320.93	7.69
2010 BASELINE ($PM_{2.5}$ INCREMENT)								
• No EME sources existed in the 2010 baseline year; no baseline credit to be taken.								

1987 BASELINE (NO_2 INCREMENT)
• No EME sources existed in the 1987 baseline year; no baseline credit to be taken.
1977 BASELINE (SO_2/PM_{10} INCREMENT)
• No EME sources existed in the 1977 baseline year; no baseline credit to be taken.

C. Single Source Modeling Impacts

The AERMOD model results for EME alone are shown in Table III-4. Maximum predicted impacts that exceed their respective significance level are indicated in boldface type. For comparison to the Class II significance levels, the impacts for all pollutants/averaging periods were conservatively based on the maximum High-1st-High predicted values. No additional refined modeling was required for pollutants that did not exceed their respective significance levels.

Table III-4: Maximum AERMOD Impacts from EME Alone

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (m)	Receptor UTM N (m)	Receptor Elevation (m)	Class II Significance Level ($\mu g/m^3$)
SO_2	1-hour	1.92	523,100	5,053,400	181.88	7.9
	3-hour	1.60	523,100	5,053,400	181.88	25
PM_{10}	24-hour	**11.82**	523,200	5,053,300	180.22	5
$PM_{2.5}$	24-hour	**11.82**	523,200	5,053,300	180.22	1.2
	Annual	**2.17**	523,300	5,053,400	177.62	0.2
NO_2	1-hour	**90.13**	523,100	5,053,400	181.88	7.5
	Annual	0.88	523,700	5,053,300	144.14	1
CO	1-hour	9.63	523,100	5,053,400	181.88	2,000
	8-hour	7.00	523,200	5,053,500	181.69	500

D. Secondary Formation of $PM_{2.5}$

Since EME's proposed NO_x emissions for this modification are greater than 40 TPY, a review of secondary impacts due to $PM_{2.5}$ precursor emissions (secondary $PM_{2.5}$) is required.

A $PM_{2.5}$ compliance demonstration must account for both primary $PM_{2.5}$ from a source's direct PM emissions, as well as secondarily formed $PM_{2.5}$ from a source's precursor emissions of NO_x and SO_2. The formation of secondary $PM_{2.5}$ is dependent on the concentrations of precursor and relative species, atmospheric conditions, and the interactions of precursors with other entities, such as particles, rain, fog, or cloud droplets.

Since the contribution from secondary formation of $PM_{2.5}$ cannot be explicitly accounted for in AERMOD, the impacts of secondarily formed $PM_{2.5}$ from EME was determined using a Tier I analysis following methodologies prescribed in USEPA's *Guidance on the*

Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and $PM_{2.5}$ under the PSD Permitting Program (April 2019).

For a Tier I secondary formation assessment, a source uses technically credible empirical relationships between precursor emissions and secondary impacts, based upon USEPA modeling. Specifically, USEPA has performed single-source photochemical modeling to examine the range of modeled estimated impacts of secondary $PM_{2.5}$ formation for different theoretical source types (based on pollutant, stack height, and location) for facilities in different geographical locations in the United States.

EME estimated the potential impact of its precursor emissions using Equation 2 from USEPA's MERPs guidance, in which a source's impacts is estimated as the product of the relevant hypothetical source air quality impacts relative to emissions, scaled either upwards or downwards to the emission rate of the project itself. Equation 2 is presented below:

$$\textit{Project Impact} = \textit{Project Emission Rate} \; X \; \frac{\textit{Modeled impact from hypothetical modeling}}{\textit{Modeled emission rate from hypothetical modeling}}$$

This procedure was followed for both NO_x and SO_2 precursors and the individual contributions summed to achieve a final estimated potential secondary $PM_{2.5}$ concentration, as shown in Table III-5.

Table III-5: Secondary $PM_{2.5}$ from NO_x and SO_2 Precursors

Pollutant	Potential Increase of Precursors (TPY)	Impact/Emissions Ratio ($\mu g/m^3$ / TPY)	Estimated Secondary $PM_{2.5}$ Impacts ($\mu g/m^3$)
NOx	91.52	0.130208	0.003775
SO_2	1.96	0.963076	0.023833
Total Estimated Secondary $PM_{2.5}$ from NO_x and SO_2 precursors			**0.0276**

Using this methodology, the total estimated secondary $PM_{2.5}$ impact due to EME's NO_x and SO_2 precursor emissions were predicted to be extremely low (~0.03 $\mu g/m^3$) and are not expected to contribute significantly to the $PM_{2.5}$ NAAQS or any Class II increment impacts.

E. Combined Source Modeling Impacts

As indicated in boldface type in Table III-4, other sources not explicitly included in the modeling analysis must be accounted for by using representative background concentrations for the area.

Background concentrations, listed in Table III-6, are derived from representative rural background data for use in the Northern Maine region.

Table III-6: Background Concentrations

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)	Site Name, Location
SO_2	1-hour	4	Mic Mac Site, Presque Isle
	3-hour	2	
PM_{10}	24-hour	37	CKP Site, Lewiston
$PM_{2.5}$	24-hour	12	DEP Site, Presque Isle
	Annual	4	
NO_2	1-hour	28	Mic Mac Site, Presque Isle
	Annual	3	
CO	1-hour	1102	Mic Mac Site, Presque Isle
	8-hour	789	

MEDEP examined other nearby sources to determine if any impacts would be significant in or near EME's significant impact area. Due to the location of EME, extent of the predicted significant impact area, and other nearby sources' emissions, MEDEP has determined that no other sources would be included in combined-source refined modeling.

The maximum combined-source AERMOD modeled impacts, which were explicitly normalized to the form of their respective NAAQS, were added with conservative rural background concentrations to demonstrate compliance with NAAQS, as shown in Table III-7.

As calculated in Section D, the total estimated secondarily-formed $PM_{2.5}$ due to EME's NO_x and SO_2 precursor emissions (~0.03 $\mu g/m^3$) was added to the maximum modeled impact to achieve a final value.

Because all pollutant/averaging period impacts using this method meet NAAQS, no further NAAQS modeling analyses need to be performed.

Table III-7: Maximum Combined Source Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (m)	Receptor UTM N (m)	Receptor Elevation (m)	Back-Ground ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)
SO_2	1-hour	1.63	523,100	5,053,400	181.88	4	5.63	196
	3-hour	1.50	523,100	5,053,400	181.88	2	3.50	1,300
PM_{10}	24-hour	9.76	523,200	5,053,300	180.22	37	46.76	150
$PM_{2.5}$	24-hour	6.81	523,300	5,053,400	177.62	12	18.84	35
	Annual	1.92	523,300	5,053,400	177.62	4	5.95	9
NO_2	1-hour	60.49	523,100	5,053,400	181.88	28	88.49	188
	Annual	0.95	523,700	5,053,300	144.14	3	3.95	100
CO	1-hour	9.25	523,100	5,053,400	181.88	1102	1,111.25	40,000
	8-hour	4.70	523,100	5,053,400	181.88	789	793.70	10,000

F. Class II Increment

The AERMOD model was used to predict maximum Class II increment impacts.

EME did not exist during the 1977, 1987, or 2010 baseline years, so their SO_2, PM_{10}, $PM_{2.5}$, and NO_x emissions are considered to be entirely increment consuming.

Results of the Class II increment analysis are shown in Tables III-7. All modeled maximum increment impacts were below all increment standards. Because all predicted increment impacts meet increment standards, no additional Class II SO_2, PM_{10}, $PM_{2.5}$, and NO_2 increment modeling needed to be performed.

As calculated in Section D, the total estimated secondarily-formed $PM_{2.5}$ due to EME's NO_x and SO_2 precursor emissions (~0.03 $\mu g/m^3$) was added to the maximum modeled $PM_{2.5}$ increment impact to achieve a final value.

Table III-8: Class II Increment Consumption

Pollutant	Averaging Period	Max Impact ($\mu g/m^3$)	Receptor UTM E (m)	Receptor UTM N (m)	Receptor Elevation (m)	Class II Increment ($\mu g/m^3$)
SO_2	3-hour	3.49	523,100	5,053,400	181.88	512
	24-Hour	0.61	523,200	5,053,500	181.69	91
	Annual	0.02	523,700	5,053,300	144.14	20
PM_{10}	24-Hour	9.73	523,200	5,053,300	180.22	30
	Annual	2.20	523,300	5,053,400	177.62	17
$PM_{2.5}$	24-Hour	8.30	523,200	5,053,300	180.22	9
	Annual	2.20	523,300	5,053,400	177.62	4
NO_2	Annual	0.95	523,700	5,053,300	144.14	25

G. Summary

In summary, it has been demonstrated that EME, in conjunction with other sources, will not cause or contribute to a violation of any SO_2, PM_{10}, $PM_{2.5}$, NO_2, or CO NAAQS or to Class II increments for SO_2, PM_{10}, $PM_{2.5}$, or NO_2.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed emission units. If the Department determines that any parameter (e.g., stack size, configuration, flow rate, emission rates, nearby structures, etc.) deviates from what was included in the application, the Department may require EME to submit additional information and may require additional ambient air quality impact analysis at that time.

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-1189-71-A-N subject to the following conditions.

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

STANDARD CONDITIONS

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

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

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]

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

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

(7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]

(8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
[06-096 C.M.R. ch. 115]

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
[06-096 C.M.R. ch. 115]

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

A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
   1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
   2. Pursuant to any other requirement of this license to perform stack testing.

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

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

[06-096 C.M.R. ch. 115]

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

A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and

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

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

[06-096 C.M.R. ch. 115]

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]

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

(15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 C.M.R. ch. 115]

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

SPECIFIC CONDITIONS

(17) **Heat Integration Furnace and RTP System**

A. EME shall install and operate a cyclone and ESP for control of PM emissions from the Heat Integration Furnace and RTP System. The cyclone and ESP shall be in operation at all times the Heat Integration Furnace and RTP System are operating. [06-096 C.M.R. ch. 115, BACT]

B. EME shall equip the RTP System with low NO_x propane burners. [06-096 C.M.R. ch. 115, BACT]

C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Heat Integration Furnace	PM	0.03	40 C.F.R. § 63.11201(a) and Table 1

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Heat Integration Furnace and RTP System	0.33	0.82	0.82	0.45	20.90	2.09	0.19

E. EME shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to The Heat Integration Furnace including, but not limited to, the following:

1. Notification

EME shall submit notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up. This notification shall include the design heat input capacity of the boiler and the type of fuel to be combusted. Notification of the date of construction shall be submitted no later than 30 days after such date. Notification of the actual date of initial startup shall be submitted within 15 days after such date. [40 C.F.R. §§ 60.48c(a) and 60.7(a)]

2. Standards

   a. Particulate Matter (PM)

      The Heat Integration Furnace shall not exceed an emission limit of 0.10 lb/MMBtu. [40 C.F.R. § 60.43c(e)(3)] Note that 40 C.F.R. Part 63, Subpart JJJJJJ includes a more stringent PM emission limit of 0.03 lb/MMBtu. The PM emission limit from the Heat Integration Furnace will be streamlined to this lower limit.

   b. Visible Emissions

      Visible emissions from the Heat Integration Furnace shall not exceed 20% opacity on a 6-minute block average basis, except for one 6-minute period per hour of not more than 27% opacity. [40 C.F.R. § 60.43c(c)]

3. Initial Compliance Requirements

   EME shall perform the following within 60 days after achieving the maximum production rate at which the Heat Integration Furnace will be operated but not later than 180 days after the initial start-up of the unit:

   a. EME shall conduct an initial performance test for PM in accordance with 40 C.F.R. § 60.45c.

   b. EME shall conduct an initial performance test for opacity using 40 C.F.R. Part 60, Appendix A, Method 9 in accordance with 40 C.F.R. § 60.45c.

4. Monitoring Requirements

   EME shall comply with monitoring requirements in accordance with one of the two options listed below.

   a. Option 1

      EME shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) on the Heat Integration Furnace and record the output of the system. [40 C.F.R. § 60.47c(a)]

   b. Option 2

      (1) EME shall use an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in 40 C.F.R. § 60.48Da [40 C.F.R. § 60.47c(f)(2)]

(2) Except as provided in paragraph (4) below, EME shall conduct performance tests on the Heat Integration Furnace for opacity using 40 C.F.R. Part 60, Appendix A, Method 9 according to the following schedule:
[40 C.F.R. § 60.47c(a)]

(i) If no visible emissions were observed in the most recent Method 9 performance test, the next performance test shall be completed within 12 calendar months.
(ii) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was less than or equal to 5% opacity, the next performance test shall be completed within 6 calendar months.
(iii) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was greater than 5% but less than or equal to 10% opacity, the next performance test shall be completed within 3 calendar months.
(iv) If visible emissions were observed in the most recent Method 9 performance test, and the maximum 6-minute block average was greater than 10% opacity, the next performance test shall be completed within 45 days.

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

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

(i) EME shall conduct 10-minute observations each operating day.
(ii) If no visible emissions are observed for 10 operating days, EME may reduce observations to once every 7 operating days. If any visible emissions are observed, daily observations shall be resumed.
(iii) If the sum of the occurrence of any visible emissions is greater than 30 seconds per 10-minute observation, EME shall immediately conduct a 30-minute observation.
(iv) f the sum of the occurrence of any visible emissions is greater than 90 seconds per 30-minute observation, EME shall either document the adjustments made to the Heat Integration Furnace and demonstrate within 24 hours that the sum of the occurrence of any visible emissions is not greater than 90 seconds per 30-minute observation or conduct a Method 9 performance test within 45 days.

5. Reporting and Recordkeeping

   a. EME shall maintain records of the amounts of each fuel combusted during each calendar month. [40 C.F.R. § 60.48c(g)]

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

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

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

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

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

F. EME shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJJ applicable to the Heat Integration Furnace including, but not limited to, the following: [incorporated under 06-096 C.M.R. ch. 115, BACT]

   1. Except during periods of startup and shutdown, the Heat Integration Furnace shall meet an emission limit for filterable PM of no more than 0.03 lb/MMBtu. [40 C.F.R. § 63.11201(a) and Table 1]

   2. EME shall either maintain an opacity from the Heat Integration Furnace of less than or equal to 10% on a daily block average or maintain the 30-day rolling average total secondary electric power of the ESP at or above the minimum total secondary electric power as defined in 40 C.F.R. § 63.11237. [40 C.F.R. § 63.11201(c) and Table 3]

If EME elects to demonstrate compliance by maintaining the 10% opacity limit, EME shall install, operate, certify, and maintain a continuous opacity monitoring system (COMS) according to the procedures in 40 C.F.R. § 63.11224(e).

If EME elects to demonstrate compliance by maintaining a minimum total secondary power of the ESP EME shall establish the minimum total secondary power (secondary voltage and secondary current) as operating limits during performance testing. [40 C.F.R. § 63.11211(b)(2)]

3. Performance Testing

   a. EME shall demonstrate compliance with applicable emission limits by conducting performance testing according to 40 C.F.R. § 63.11212 and Table 4. [40 C.F.R. § 63.11205(b)]

   b. Initial performance testing shall be conducted within 180 days after startup of the Heat Integration Furnace. [40 C.F.R. § 63.11210(d)]

   c. Subsequent performance testing shall be conducted on a triennial basis, except as specified in paragraph (4) below. Triennial performance tests must be completed no more than 37 months after the previous performance test. [40 C.F.R. § 63.11220(a)]

   d. If performance test results show PM emissions are equal to or less than half of the PM emission limit, EME may choose to conduct performance tests for PM every fifth year, but must continue to comply with all applicable operating limits and monitoring requirements and the following provisions:

      (1) Each performance test must be conducted no more than 61 months after the previous performance test.

      (2) If a performance test shows that PM emissions are greater than half of the PM emission limit, EME must conduct subsequent performance tests on a triennial basis.

      [40 C.F.R. § 63.11220(c)]

   e. EME shall submit Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin. [40 C.F.R. 63.11225(a)(3)]

4. An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 C.F.R. § 63.11225(a)(2)]

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

   a. The boiler will be equipped with an oxygen trim (O_2 trim) system and therefore tune-ups shall be conducted every five years. [40 C.F.R. § 63.11223(c) and Table 2]

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

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

d. After conducting the initial boiler tune-up, a Notification of Compliance Status shall be submitted to EPA. [40 C.F.R. § 63.11225(a)(4) and 40 C.F.R. § 63.11214(b)]

6. EME shall minimize the Heat Integration Furnace's startup and shutdown periods following the manufacturer's recommended procedures, if available. If manufacturer's recommended procedures are not available, EME shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. [40 C.F.R. § 63.11214(d)]

7. Compliance Report

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

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

8. EME shall submit a Notification of Compliance Status within 60 days of completing the initial performance stack test. The Notification of Compliance Status must include the items contained in § 63.1125(a)(4)(i) through (vi), including the following: [40 C.F.R. § 63.11225(a)(4)]

    a. The Methods used to determine compliance;
    b. The methods that will be used for determining continuing compliance, including a description of the monitoring and reporting requirements and test methods;
    c. A statement by the owner or operator as to whether the source has complied with the relevant standards or requirements;
    d. The following certifications, as applicable:

        (1) "This facility complies with the requirements in § 63.11214 to conduct an initial tune-up of the boiler."
        (2) "No secondary materials that are solid waste were combusted in any affected unit."

9. EME shall develop a site-specific monitoring plan for the use of any continuous monitoring system (CMS) used to demonstrate compliance with PM and/or opacity limits. This may include ESP parameters (total secondary power) or a COMS. The site-specific monitoring plan shall be developed according to the requirements of 40 C.F.R. § 63.11205(c), as applicable. [40 C.F.R. § 63.11205(c)]

10. EME shall report each instance in which each applicable emission limit and operating limit were not met. Deviations must be reported according to the requirements in 40 C.F.R. § 63.11225. [40 C.F.R. § 63.11222(b)]

11. Recordkeeping

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

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

    b. Records shall be in a form suitable and readily available for expeditious review. Each record must be kept for 5 years following the date of each recorded action.

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

EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [40 C.F.R. § 63.11225(a)(4)(vi)]

(18) **Generator #1**

A. EME shall keep records of all maintenance conducted on the engine associated with Generator #1. [06-096 C.M.R. ch. 115, BACT]

B. Emissions shall not exceed the following:

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

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.39	0.39	0.39	0.01	14.51	3.13	1.18

D. Visible Emissions

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

E. Generator #1 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart IIII, including the following: [incorporated under 06-096 C.M.R. ch. 115, BACT]

1. Manufacturer Certification
The engine shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in § 60.4202. EME shall provide a copy of the certification to the Department.
[40 C.F.R. § 60.4205(b) and 06-096 C.M.R. ch. 115, BACT]

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

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

4. Annual Time Limit for Maintenance and Testing

   a. As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 C.F.R. § 60.4211(f) and 06-096 C.M.R. ch. 115, BACT]

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

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

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

(19) **Belt Dryers**

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	VOC (lb/hr)
Belt Dryers	4.41	1.65	1.65	9.37

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

(20) **Grinders and Hammermills**

A. Visible emissions from the cyclones associated with the Grinders A & B and Hammermills, HM-A1, HM-A2, HM-A3, HM-B1, HM-B2, and HM-B3 shall not exceed 20 percent opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(B)(4)]

B. Visible emissions from the baghouses associated with Hammermills HM-A4, HM-A5, HM-B4, and HM-B5 shall not exceed 10 percent opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 3(B)(3)]

(21) **Process and Storage Tanks**

A. EME shall conduct routine visual inspections of the tanks and associated transfer piping and fittings at least once every month and shall maintain records documenting any detected leaks and the corrective action taken. [06-096 C.M.R. ch. 115, BACT]

B. VOC emissions from the RFO Filter Tanks and RFO Storage Tanks shall be controlled by routing gases from the tank headspace to the Heat Integration Furnace. The Heat Integration Furnace shall be in operation at all times that RFO is being produced in the RTP Reactors. [06-096 C.M.R. ch. 115, BACT]

C. The vapor collection system shall be designed and operated to maintain the pressure in the storage tanks below the tank venting pressure. As a backup during periods of Heat Integration Furnace downtime, EME will use an activated carbon adsorber system to capture emissions from the vapor collection system pressure relief device. EME will develop methodology for monitoring the carbon canister for breakthrough as part of the Site-Specific Monitoring Plan. Spent carbon from the canisters may be blended with the biomass fuel and combusted in the heat integration furnace.

D. New Source Performance Standards

1. EME shall submit an initial notification to the Administrator within 60 days after becoming subject to this subpart. The notification must be submitted through EPA's

Compliance and Emissions Data Reporting Interface (CEDRI) website (https://www.epa.gov/electronic-reporting-air-emissions/cedri). For each affected storage vessel, the following information shall be included:

a. General facility information, including facility name, facility physical address, latitude and longitude of the facility's physical location.
b. Information for the facility contact person, including name, mailing address, telephone number, and email address.
c. Identification of the storage vessels subject to this subpart.
d. Capacity, in gallons, of each storage vessel.
e. The maximum true vapor pressure of the liquid stored in each storage vessel.
f. Identification of the standards for which the storage vessel complies.
g. If emissions are routed to a control device, specify the design of the storage vessel and closed vent system (*i.e.,* storage vessel designed according to 40 C.F.R. § 60.112c(d)(1)(i); or closed vent system designed according to 40 C.F.R. § 60.112c(d)(1)(ii)) and type of control device.
h. If emissions are routed to a process, submit the information specified in 40 C.F.R. § 60.112c(d)(6)(ii) and (iii).
i. If emissions are routed to a fuel gas system, as specified in 40 C.F.R. § 60.112c(d)(6)(iv), submit a statement that the emission stream is connected to the fuel gas system.

[40 C.F.R. § 60.116c(a)]

2. EME shall install on each storage vessel a closed vent system routed to a control device, fuel gas system, or process. [40 C.F.R. § 60.112c(a)(1)]

   a. The tanks must be designed and operated to be routed through a closed vent system to a control device, fuel gas system, or process at all times the storage vessel contains VOL without venting to atmosphere by meeting either the storage vessel design requirements or the vapor recovery system design requirements listed below: [40 C.F.R. § 60.112c(d)(1)]

      (1) The storage vessels shall be designed to operate at a gauge pressure of no less than 1 psi greater than the maximum true vapor pressure of the stored liquid and any back pressure anticipated when the storage vessel is filled at its maximum rate without venting to atmosphere; or
      (2) The vapor recovery system shall be designed and operated to maintain the pressure in each tank below the venting pressure for that tank.

   b. Emissions from each pressure release device or vacuum breaking device shall either be routed through a closed vent system to a control device, process, or fuel gas system, or the pressure release device or vacuum breaking device must meet the following requirements: [40 C.F.R. § 60.112c(d)(1)(iii)]
      (1) Identify the pressure released;

(2) Record the time and duration of each pressure release; and
(3) Notify operators immediately that a pressure release is occurring. The device or monitoring system must be either specific to the pressure relief device or vacuum breaking device itself or must be associated with each storage vessel to indicate a pressure release to the atmosphere. Examples of these types of devices and systems include, but are not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor.

c. Except for closed vent systems operated and maintained under negative pressure, each closed vent system must meet the following requirements: [40 C.F.R. § 60.112c(d)(2)]

(1) The closed vent system must be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 parts per million by volume (ppmv) above background, as determined using Method 21 of 40 C.F.R. Part 60, appendix A-7, and as determined by observations for visible, audible, and olfactory indications of leaks. Visible, audible, and olfactory inspections must be performed quarterly and Method 21 of appendix A-7 instrument monitoring must be conducted at least annually.

(2) Except for pressure relief devices and except for open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in 40 C.F.R. § 60.482-6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as § 60.482-6(a)(2), (b), and (c), EME must comply with the provisions of either of the below paragraphs for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere. [40 C.F.R. § 60.112c(d)(2)(ii)]

(i) Properly install, maintain, and operate a flow indicator that is capable of taking readings every 15 minutes. Install the flow indicator at the entrance to any bypass line; or,
(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

d. The Heat Integration Furnace must be operating at all times when emissions from an affected storage vessel are routed to it. [40 C.F.R. § 60.112c(d)(6)(i)]

e. If emissions from the tanks are routed to a fuel gas system, EME must submit a statement of connection for fuel gas systems including a design evaluation or engineering assessment that demonstrates the extent to which one or more of the following conditions are being met:

(1) The emissions are recycled and/or consumed in the same manner as a material that fulfills the same function in the process.

(2) The emissions are transformed by chemical reaction into materials that are not regulated materials.

(3) The emissions are incorporated into a product.

(4) The emissions are recovered.

[40 C.F.R. §§ 60.112c(d)(6)(iv), 60.116c(a)(7), and 60.112c(d)(6)(ii) and (iii)]

f. To the extent practical, routine maintenance on the Heat Integration Furnace should be conducted when the storage tanks are out of VOL service. By meeting the below provisions, EME may conduct maintenance on the Heat Integration Furnace while one or more of the storage tanks vented to it are storing VOL.

(1) The storage tanks storing VOL must be designed to operate above the maximum true vapor pressure of the stored VOL.

(2) The Heat Integration Furnace must be isolated from the storage vessels using valves, blind flanges, or similar devices at the control device or in the closed vent system as near as practical to the control device. EME may purge the control device and downstream portion of the closed vent system to remove potentially explosive vapors and create a safe work environment only after the control device is isolated from the storage vessels.

(3) EME shall continue to comply with the bypass and pressure relief device monitoring requirements as well as associated recordkeeping requirements.

(4) During the routine maintenance period the affected storage vessels cannot be actively degassed. If the storage vessel is to be emptied and actively degassed, the planned maintenance activity must be conducted when the storage vessel is out of VOL service.

[40 C.F.R. § 660.112c(d)(7)]

3. EME shall meet the following requirements during emptying and degassing of a storage vessel until the vapor space concentration in the storage vessel is less than 10 percent of the LEL or, for nonflammable liquids, 5,000 ppmv as methane. EME must determine the LEL or methane concentration using process instrumentation or a portable measurement device and follow procedures for calibration and maintenance according to manufacturer's specifications. EME must check instrument calibration and check the instrumental offset response each day the instrument is used and prior to discontinuing controlled degassing to confirm the accuracy of the instrument's readings.

a. Remove liquids from the storage vessel as much as practicable. Chemicals or a diluent such as a distillate fuel may be introduced into the storage vessel for the purpose of reducing vapor concentration before or during active degassing.

b. Reduce VOC emissions by routing emissions to the Heat Integration Furnace as described above.

[40 C.F.R. § 60.112c(e)]

4. EME shall conduct instrument monitoring of the closed vent system according to the procedures in 40 C.F.R. §§ 60.113c(c)(2)(i) through (iii). Initial instrument monitoring must be conducted within 180 days of an affected facility being connected to the closed vent system. Subsequent instrument inspections must be conducted within 365 days of the previous inspection. Visual, audible, and olfactory inspections must be conducted quarterly. [40 C.F.R. § 60.113c(c)(2)]

5. Leaks, as indicated by an instrument reading greater than 500 ppmv or emissions detected by visible, audible, and olfactory methods, shall be repaired as soon as practical. A first attempt at repair shall be made no later than 5 days after the leak is detected. Repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

   Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical.

   [40 C.F.R. § 60.113c(c)(3)]

6. EME shall develop a monitoring plan that covers each CMS used to demonstrate continuous compliance for the control device. The monitoring plan must contain the following information: [40 C.F.R. § 60.113c(c)(4)]

   a. The parameter to be monitored and the operating limit for the parameter.
   b. Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements.

   c. Description of the monitoring system specifications, including the detector signal analyzer, data acquisition, and calculations.

   d. Equipment performance checks, system accuracy audits, or other audit procedures, including the following:

(1) Conduct the CMS equipment performance checks, system accuracy audits, or other audit procedures specified in the monitoring plan at least once every 12 calendar months.

(2) Conduct calibration checks following any period of more than 24 hours throughout which the sensor exceeded the manufacturer's specified maximum range.

(3) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion, unless using a redundant CMS.

(4) Daily checks for indications that the system is responding.

e. Description of how periods of data collected during CMS breakdowns, out-of-control periods, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero (low-level), mid-level (if applicable), and high-level adjustments will be excluded from operating parameter averages.

f. Ongoing operation and maintenance procedures.

g. Ongoing recordkeeping procedures.

7. For each affected storage vessel, EME shall determine the maximum true vapor pressure of the stored VOL according to the requirements specified in 40 C.F.R. §§ 60.113c(d)(1) and (2). [40 C.F.R. §§ 60.113c(d)]

8. Recordkeeping

EME shall keep the following records, as applicable:

a. For each storage vessel, EME shall keep readily accessible records for the life of the source showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. [40 C.F.R. § 60.115c(b)]

b. The make and model of the backpressure regulator valve, date of installation, and inlet flow rating. Maintain records of the engineering evaluation and manufacturer specifications that identify the pressure set point corresponding to the minimum inlet gas flow rate, the annual confirmation that the backpressure regulator valve set point is correct and consistent with the engineering evaluation and manufacturer specifications, and the annual confirmation that the backpressure regulator valve fully closes when not in open position. [40 C.F.R. § 60.115c(d)(3)(i)]

c. The CMS monitoring plan required by 40 C.F.R. § 60.113c(c)(4), if the closed vent system is routed to a control device. Retain this plan for the life of the control equipment. [40 C.F.R. § 60.115c(d)(3)(ii)]

d. Monitoring for the closed vent system conducted under 40 C.F.R. § 60.113c(c)(2), including the date of inspection.
[40 C.F.R. § 60.115c(d)(3)(ii)]

e. For each leak detected, record: the date the leak was detected; the location of the leak; the method used to detect the leak (Method 21 of appendix A-7 to this part or visible, audible, and olfactory methods); and the maximum concentration reading obtained by Method 21 of appendix A-7, if applicable. For each repair attempt, record: the date of each repair attempt; the actions taken to repair the leak during each repair attempt; and date the repair was completed. If the repair is delayed, you must record the reason for the delay and the date you expect to complete the repair. [40 C.F.R. § 60.115c(d)(3)(v)]

f. For each bypass line, maintain a record of the following, as applicable: readings from the flow indicator; each inspection of the seal or closure mechanism; the date and time of each instance when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out. [40 C.F.R. § 60.115c(d)(3)(vi)]

g. For each pressure relief device or vacuum breaking device on a storage vessel or closed vent system required to be monitored: the device type; the monitoring device or system used for the device; data from the device or system indicating whether a pressure release occurred; and the date, time, and duration of each pressure release, if applicable. [40 C.F.R. § 60.115c(d)(3)(vii)]

h. Each performance test; all CMS performance checks, audits, maintenance, and repairs; the hourly values recorded by the CMS and all 3-hour rolling averages; and the periods when the CMS is not operational. [40 C.F.R. § 60.115c(d)(4)]

i. Records necessary to demonstrate compliance with applicable degassing requirements including, if appropriate, records of existing standard site procedures used to empty and degas (deinventory) equipment for safety purposes. [40 C.F.R. § 60.115c(e)]

9. Semiannual Report

EME shall submit to the Administrator semiannual reports by the methods and including the information as specified in 40 C.F.R. § 60.116c(c). The first semiannual report will cover the period starting with the date the source first becomes an affected facility subject to this subpart and ending June 30 or December 31, whichever date is earlier. Subsequent semiannual reports will cover subsequent

6 calendar month periods (January 1 through June 30 or July 1 through December 31, as applicable) with each report due on or before the last day of the month 2 months after the last date covered by the semiannual report (August 31 or February 28 or 29, as applicable). [40 C.F.R. §§ 60.116c(c) and (d)]

(22) **Product Loading**

Emissions generated by the product loading process shall be routed to the Heat Integration Furnace. EME will normally conduct Product Loading operations when the Heat Integration Furnace is operating. However, if product is loaded to trucks during HIF downtown, a vapor balance system shall be used to transfer the displaced tank truck headspace to the product storage tank. The vapor balance system shall be designed and operated to maintain the pressure in both the storage tank and the tank truck being loaded below the venting pressure for that tank. [06-096 C.M.R. ch. 115, BACT]

(23) **General Process Sources**

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

2. Visible emissions from any baghouse shall not exceed 10% on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(B)(3)]

(24) **Fugitive Emissions**

A. EME shall not cause emissions of any fugitive dust during any period of construction, reconstruction, or operation without taking reasonable precautions. Such reasonable precautions shall be included in the facility's continuing program of best management practices for suppression of fugitive particulate matter. See 06-096 C.M.R. ch. 101, § 4(C) for a list of potential reasonable precautions.

B. EME shall not cause or allow visible emissions within 20 feet of ground level, measured as any level of opacity and not including water vapor, beyond the legal boundary of the property on which such emissions occur. Compliance with this standard shall be determined pursuant to 40 C.F.R. Part 60, Appendix A, Method 22.

[06-096 C.M.R. ch. 101, § 4(C)]

(25) **Performance Test Protocol**

For any performance testing required by this license, EME shall submit to the Department for approval a performance test protocol, as outlined in the Department's Performance Testing Guidance, at least 30 days prior to the scheduled date of the performance test. [06-096 C.M.R. ch. 115, BACT]

(26) **Annual Emission Statements**

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

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

1. The amount of distillate fuel fired in Generator #1 on a monthly basis;
2. The sulfur content of the distillate fuel fired in Generator #1;
3. Calculations of the emissions from the RTP Process and Heat Integration Furnace on a 12-month rolling total basis;
4. Throughput of each of the RFO Filter Tanks and RFO Storage Tanks, and calculations of the annual emissions from the tanks; and
5. Hours each emission unit was active or operating on a monthly basis.

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

C. Every third year, or as requested by the Department, EME shall report to the Department emissions of hazardous air pollutants as required pursuant to 06-096 C.M.R. ch. 137, § (3)(C). The next report is due no later than May 15, 2027, for emissions occurring in calendar year 2026. EME shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3).
[38 M.R.S. § 353-A(1-A)]

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

DONE AND DATED IN AUGUSTA, MAINE THIS 14th DAY OF JANUARY, 2026.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for _____
MELANIE LOYZIM, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 25, 2025
Date of application acceptance: May 2, 2025

This Order prepared by Benjamin Goundie, Bureau of Air Quality.