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

DEPARTMENT ORDER

Mid-Maine Waste Action Corporation **Androscoggin County** **Auburn, Maine** **A-378-70-F-R**	**Departmental** **Findings of Fact and Order** **Part 70 Air Emission License** **Renewal**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

FACILITY	Mid-Maine Waste Action Corporation (MMWAC)
LICENSE TYPE	Part 70 License Renewal
NAICS CODES	562213, 562920
NATURE OF BUSINESS	Refuse Systems: Municipal Waste Combustion and Materials Recovery
FACILITY LOCATION	110 Goldthwaite Rd, Auburn, Maine

The Mid-Maine Waste Action Corporation (MMWAC), which operates under the service mark *Maine Waste to Energy*, is a municipal solid waste combustion facility consisting of two municipal waste combustors, an emergency generator, a fire pump, and ash handling equipment. MMWAC was created by 12 area municipalities in 1986 to process and dispose of residential and commercial waste. The waste-to-energy process converts municipal solid waste (MSW) into ash residue, which minimizes landfill reliance in the State and produces electricity from the fuel value of the MSW. MMWAC produces its own electricity from the incineration of MSW and sells excess power to the power grid.

MMWAC has the potential to emit more than 100 tons per year (tpy) of nitrogen oxides (NO_x); therefore, the source is classified as a major source for criteria pollutants. MMWAC has the potential to emit 10 tpy or more of a single hazardous air pollutant (HAP) and more than 25 tpy of combined HAP; therefore, the source is classified as a major source for HAP.

B. Emission Equipment

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

Municipal Solid Waste Combustors (MSW Combustors)

MSW Combustor	Max Heat Input (each)	Max. Firing Rate (each)	Manuf. Date	Install. Date	Stack #
Unit #1	47.7 MMBtu/hr firing MSW*	125 tons/day MSW	1991	1992	Stack 1, Flue 1
Unit #2	17.0 MMBtu/hr firing natural gas	16,190 scf/hr natural gas (auxiliary burners)			Stack 1, Flue 2

* 5,200 Btu/lb x 9,173 lb/hr

Generators and Engines

Equipment	Max. Heat Input Capacity (MMBtu/hr)*	Max. Firing Rate (gal/hr)	Output (hp)	Fuel Type	Mfr. Date	Install. Date
Emergency Diesel Generator	3.2	23.4	465	Distillate fuel	1991	1991
Fire Pump Engine	1.7	12.5	244	Distillate fuel	11/1990	1991

* Assuming 35% efficiency, based on the rated hp values

Process Equipment

Equipment	Maximum Process Rate	Pollution Control Method
Ash Handling Conveyor and Truck Loading Conveyor	54 ton/day (approximately	Water conditioning
Lime Silo	--	Baghouse

MMWAC operates an aqueous-based parts washer. Since the cleaning solution contains less than 5% VOC, it does not meet the definition of solvent cleaning machine, and there are no applicable requirements in *Solvent Cleaners,* 06-096 C.M.R. ch. 130. Therefore, it is considered an insignificant activity and mentioned for completeness purposes only.

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

C. Acronyms and Units of Measure

ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BPT	Best Practical Treatment
C.F.R.	Code of Federal Regulations
C.M.R.	Code of Maine Rules
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CMS	Continuous Monitoring System
CO	carbon monoxide
CO_2	carbon dioxide
COMS	Continuous Opacity Monitoring System
CPMS	Continuous Parameter Monitoring System
EPA or US EPA	United States Environmental Protection Agency
gal/hr	gallon per hour
GHG	greenhouse gases
gr/dscf	grains per dry standard cubic feet
HAP	Hazardous Air Pollutants
HCl	hydrogen chloride or hydrochloric acid
Hg	mercury
lb	pound
lb/hr	pounds per hour
lb/MMBtu	pounds per million British thermal units
M.R.S.	Maine Revised Statutes
MMBtu	million British thermal units
MMBtu/hr	million British thermal units per hour
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	nitrogen oxides
NSPS	New Source Performance Standards
NSR	New Source Review
O_2	oxygen
PM	particulate matter less than 100 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppmdv	parts per million on a dry volume basis
RACT	Reasonably Available Control Technology
RICE	reciprocating internal combustion engine
SO_2	sulfur dioxide
tpy	ton per year
VOC	volatile organic compounds

D. Definitions

Distillate Fuel means the following:

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

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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

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

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

E. Application Classification

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

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

F. **Facility Description**

MMWAC's waste-to-energy plant has two identical process trains, each with a capacity of up to 125 tons per day of municipal solid waste. The plant operates 7 days/week and 365 days/year. The following description references numbered units and locations on Figure 1 below.

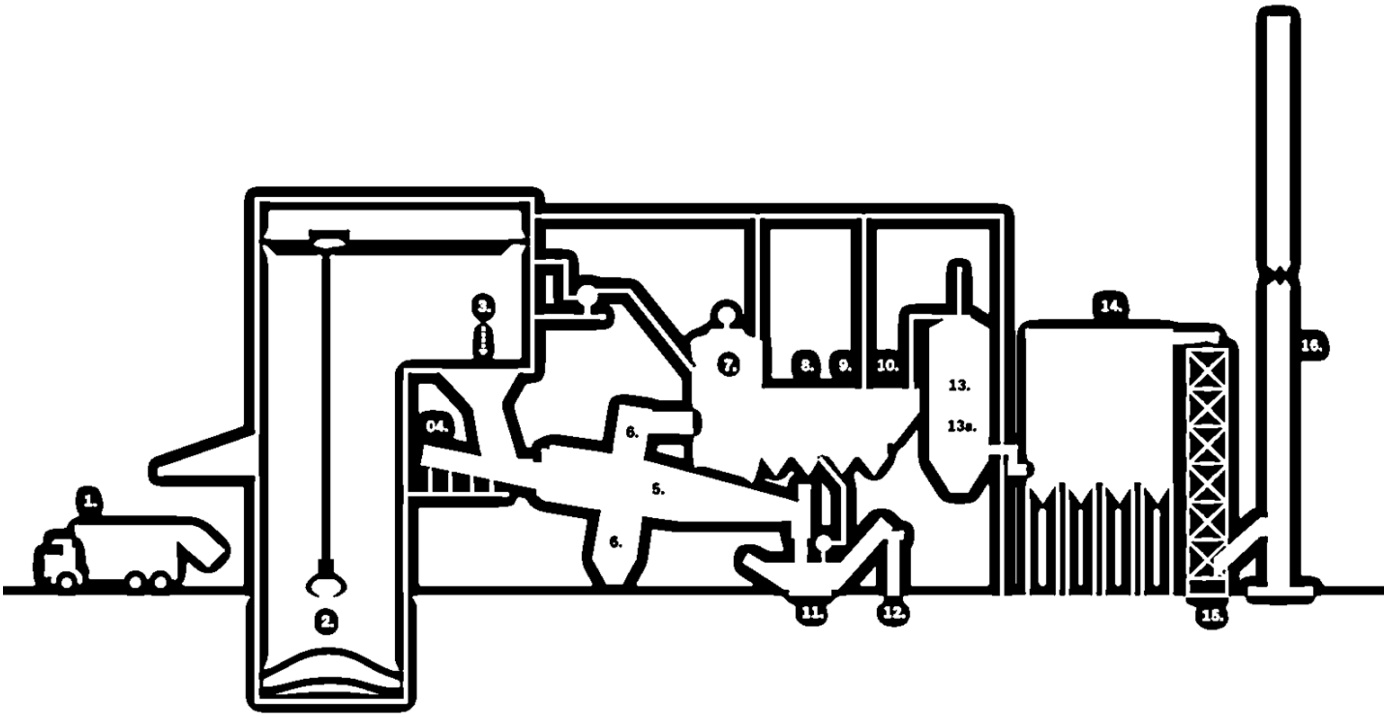

Figure 1. Diagram of the MMWAC Facility[1]

Trucks carrying solid waste from participating municipalities are weighed at the scale house before entering a covered tipping area (1). MMWAC ensures that all waste is acceptable to process before unloading. Trucks unload MSW into a pit (2) large enough to hold approximately 1,000 tons of solid waste. An overhead crane, or grapple, transfers the MSW into a chute, or feed hopper (3), that feeds the furnace. The grapple is also used to remove any unacceptable material from the plant that has accidentally been dumped into the pit. The MSW is metered into the furnace by a hydraulic ram feeder (4).

Figure 2, below, provides a cross-section of the combustion process in the units. During combustion, the entire furnace, or combustor, (5) oscillates within a 210 degree arc, causing the MSW to tumble some forty times during the typical one-hour combustion cycle to assure complete combustion. Large combustion air fans draw air into the plant from the tipping area and pit and into the furnace. This causes a negative pressure inside the pit and

[1] https://www.mainewastenergy.com/our-process/#interactive-infographic

tipping area, which minimizes the escape of odors and dust. Combustion occurs in the furnace (5) and the tranquilization chamber (6), where temperatures are maintained at approximately 1,750 °F to minimize generated odors and organic compounds.

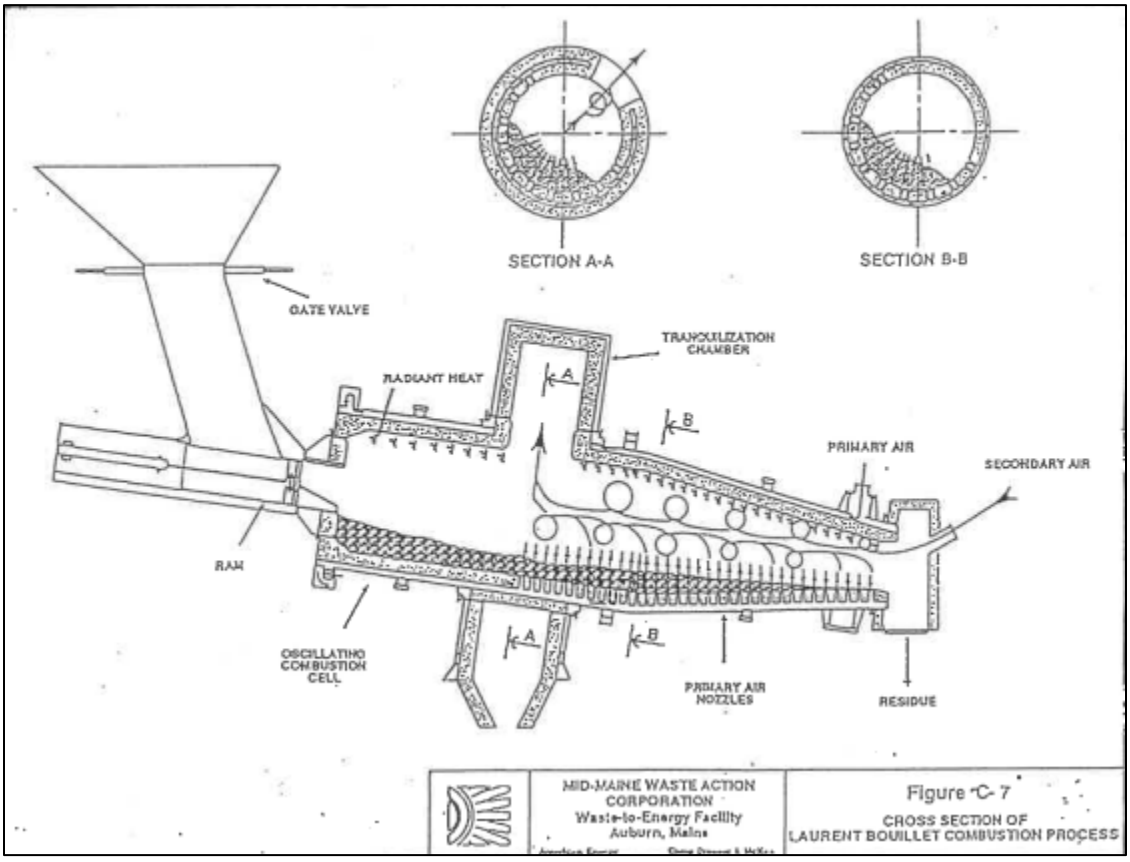

Figure 2. Cross Section of the Laurent Bouillet Combustion Process

The 1,750 °F combustion gases in the tranquilization chamber (6) flow through several boiler sections, where heat is extracted to convert water to steam. The water-to-steam loop is contained within numerous parallel boiler tubes. The first section where this occurs is in the radiant section of the waterwall boiler (7), followed by the superheater (8), then the evaporator (9), and finally the economizer (10). The steam that is produced in this process is approximately 750 °F at a pressure of 650 pounds per square inch (psi).

This high temperature/high pressure steam flows through a turbine generator, producing up to 3.6 megawatts of electric power. Some of this power is used to run plant machinery, and the remainder is sold to the power grid. The turbine extracts much of the energy from the steam, causing it to condense back into water in a section called the air-cooled condenser. This section utilizes large, 12-foot diameter fans to cool the water in the condenser tubes.

The combustion process reduces the MSW volume by about 90% by reducing it to ash. Ash residue from combustion is transported to a vibrating conveyor (11), which removes any recyclable material. The remaining ash is conveyed to a container for transport to a secure landfill (12), which uses a liner system that prevents contaminated liquid runoff.

Once heat energy has been extracted, exhaust gases are passed through air pollution control equipment before being released to the atmosphere. Dioxins and furans are removed by a dry spray scrubber (13) using a lime/water mixture as the scrubbing medium. Activated carbon (13A) is injected into the scrubber to remove mercury and dioxin. The gases are next drawn through a baghouse (14) which contains hundreds of fabric filter bags. Particles (fly ash) captured by the filters are collected at the bottom of the unit and mixed with the furnace ash residue for landfilling. An induced draft fan (15) exhausts the cleaned gases to the 213-foot tall stack (16).

G. General Facility Requirements

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

Citation	Requirement Title
06-096 C.M.R. ch. 101	Visible Emissions Regulation
06-096 C.M.R. ch. 103	Fuel Burning Equipment Particulate Emission Standard
06-096 C.M.R. ch. 104	Incinerator Particulate Emission Standard
06-096 C.M.R. ch. 106	Low Sulfur Fuel Regulation
06-096 C.M.R. ch. 110	Ambient Air Quality Standards
06-096 C.M.R. ch. 117	Source Surveillance – Emissions Monitoring
06-096 C.M.R. ch. 137	Emission Statements
06-096 C.M.R. ch. 138	Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides
06-096 C.M.R. ch. 140	Part 70 Air Emission License Regulations
40 C.F.R. Part 60, Subpart BBBB	Emissions Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1994
40 C.F.R. Part 63, Subpart ZZZZ	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
40 C.F.R. Part 70	State Operating Permit Programs

Note: C.M.R. = Code of Maine Regulations
C.F.R. = Code of Federal Regulations

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

A. Introduction

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

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

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

B. NO_x RACT (Reasonably Available Control Technology)

Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides, 06-096 C.M.R. ch. 138 (NO_x RACT) is applicable to sources that have the potential to emit quantities of NO_X equal to or greater than 100 tons/year.

Air Emission License Amendment A-378-71-E-A, issued to the facility on October 16, 1996, addressed NO_x RACT requirements. MMWAC is subject to Section 3(G) of 06-096 C.M.R. ch. 138; however, the facility opted to comply with the Alternate RACT Determination according to Section 3(I) of 06-096 C.M.R. ch. 138. Control technologies evaluated were found to be economically infeasible. Units #1 and #2 were determined to be meeting NO_x RACT via optimum combustion practices. RACT emission rates for NO_x from the two combustors were determined and established in the 1996 license amendment.

The Emergency Diesel Generator and Fire Pump Engine are each limited to 100 hour per year of operation, on a 12-month rolling total basis, which keeps NO_x emissions under 10 tons/year per unit and thus exempt per 06-096 C.M.R. ch. 138 § 1(B)(1).

The NO_x RACT requirements are incorporated in this renewal.

C. VOC RACT (Reasonably Available Control Technology)

Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds, 06-096 C.M.R. ch. 134 (VOC RACT) is applicable to sources that have the potential to emit quantities of VOC equal to or greater than 40 tons/year from non-exempt equipment. MMWAC is exempt from VOC RACT requirements according

to 06-096 C.M.R. ch. 134 § 1(C)(4), because the VOC emitted are from incomplete combustion only.

D. **Mandatory Greenhouse Gas (GHG) Reporting**

Federal regulation *Mandatory Greenhouse Gas Reporting,* 40 C.F.R. Part 98, is applicable to some facilities as addressed in 40 C.F.R. § 98.2. These are not considered "applicable requirements" for the purposes of Part 70 licenses. Therefore, this information is presented for informational purposes only.

E. **Compliance Assurance Monitoring (CAM)**

Compliance Assurance Monitoring, 40 C.F.R. Part 64 is applicable to units at major sources if the unit has emission limits, a control device to meet the limits, and pre-control emissions greater than 100 tons/year for any pollutant. For emissions from MSW Combustor Units #1 and #2, emissions of PM are controlled with a fabric filter, and emissions of SO_2 are controlled through the use of spray dryer absorber technology with lime/water as the spray medium. Since both of these pollutants have pre-control emission potentials greater than 100 tons/year, these two pollutants meet the applicability criteria for CAM requirements.

This regulation's 40 C.F.R. § 64.2(b)(1)(vi) specifies the exemption from specific CAM requirements for any emission unit subject to emission limitations or standards for which a Part 70 air emission license specifies a continuous compliance determination method. Furthermore, 40 C.F.R. § 64.2(b)(1)(i) specifies the exemption from specific CAM requirements for any emission unit subject to emission limitations or standards in a NSPS or NESHAP regulation proposed by the Administrator after November 15, 1990. Because MSW Combustor Units #1 and #2 are subject to the PM and SO_2 emissions standards contained in 40 C.F.R. Part 60, Subpart BBBB (from December 6, 2000, under the authority of section 111 of the CAA), these units are exempt from 40 C.F.R. Part 64 CAM requirements. [40 C.F.R. Part 64 § 64.2(b)] Therefore, there are no units at this facility subject to CAM requirements.

F. **Fuel Sulfur Content Requirements**

MMWAC is licensed to fire distillate fuel. With limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use at this facility shall not exceed 0.0015% by weight (15 ppm).

G. MSW Combustor Units #1 and #2

MSW Combustor Units #1 and #2 (individually "the Combustor" and collectively "the Combustors") are identical in size and configuration, including all add-on control systems. The units were manufactured by Laurent Bouillet with a maximum design operating capacity of 25,200 lb steam/hour firing up to 125 tons per day MSW each.

Waste class types 0, 1, 2, 3, 5, and 6 are fired in the Combustors; biomedical and Resource Conservation and Recovery Act (RCRA) hazardous wastes are excluded. The Combustors are refractory-lined incinerators, manufactured in 1991 and installed in 1992, with 210-degree oscillation. Each Combustor also has a natural gas-fired auxiliary burner with a maximum design heat input rate of 17 MMBtu/hr each.

Emissions from the Combustors exhaust through separate control equipment and then to a common stack with two flues, each of which has an inside diameter of 48 inches and an above ground level (AGL) height of 213 feet.

1. Control Equipment

   Exhaust gases from each of the MSW Combustor Units #1 and #2 are vented through a spray dryer absorber and fabric filters before exiting the stack. The spray dryer absorbers, manufactured by Joy Technologies, Inc., use lime slurry to remove acid gases from the exhaust gases. The carbon injection systems, manufactured by Norit, are to control emissions of mercury and dioxins/furans. Carbon is injected into the sprayer dryer, where it contacts the flue gases and continues to react with the mercury, dioxins, and furans on the baghouse filters, which remove the spent carbon and contaminants along with the fly ash. The fabric filters from Joy Technologies, Inc. control PM, PM_{10}, $PM_{2.5}$, and metals particulate emissions.

2. Fuel Use

   Natural gas fired into each Combustor is monitored by a fuel totalizer operated in accordance with the manufacturer's specifications. Natural gas use during any calendar year shall be limited to a combined annual capacity factor of 10% or less. The annual capacity factor means the ratio between the actual heat input to the Combustors from the natural gas during a period of 12 consecutive calendar months and the potential heat input to the Combustors from natural gas if the units operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. For Combustor Units #1 and #2, which have a firing rate of 16,505 scf/hr each, 10% of the annual capacity factor is 28.9 MMscf/yr for both units combined. [A-378-70-A-I, July 1, 2002, BPT]

3. Visible Emissions

   a. 06-096 C.M.R. ch. 101

      Visible emissions from the Combustors shall each not exceed 20% opacity on a six-minute block average basis for 95% of all six-minute block averages on a quarterly basis. The remaining 5% of all six-minute block averages on a quarterly basis shall be no greater than 45% opacity. Periods of startup, shutdown, and malfunctions are included for the purpose of calculating block averages. Periods when neither unit is operating are not included for the purpose of calculating block averages. [06-096 C.M.R. ch. 101 § 4(A)(8)]

   b. 40 C.F.R. Part 60, Subpart BBBB, § 60.1705 and *Emission Limitations and Emission Testing of Resource Recovery Facilities*, 06-096 C.M.R. ch. 121, § 7(A)(2)

      Visible emissions from the Combustors shall not exceed 10% opacity on a six-minute block average basis. [40 C.F.R 40 C.F.R. § 60.1705 and Table 4; and 06-096 C.M.R. ch. 121, § 7(A)(2)]

   c. Streamlining

      The Department has determined that the Subpart BBBB and ch.121 visible emissions standard is more stringent than that of ch. 101 listed above. Therefore, the visible emissions limits have been streamlined to the more stringent visible emissions limit. and only the more stringent limit is included in the Order of this air emission license.

   d. Visible Emissions Monitoring

      Visible emissions from the Combustors shall be continuously monitored by the continuous opacity monitoring system (COMS) installed on each unit, in accordance with 40 C.F.R. Part 60, Appendix B.

4. New Source Performance Standards (NSPS)

   The Combustors were manufactured after August 17, 1971, and are designed to handle less than 125 ton/day of MSW each. Therefore, they are subject to *Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before Aust 30, 1999*, 40 C.F.R. Part 60, Subpart BBBB (Subpart BBBB). These units are categorized as Class II units. Per 40 C.F.R. Part 60, § 60.1940, *Class II units* means “small municipal combustion units subject to this subpart that are located at municipal waste combustion plants with aggregate plant combustion capacity less than

or equal to 250 tons per day of municipal solid waste." The Combustors are subject to the requirements in the following table, which are addressed in this air emission license.

Requirement	**Source**
Operator training and manual requirements	40 C.F.R. §§ 60.1645, 60.1650, 60.1655, 60.1660, 60.1665, and 60.1670
Operator certification requirements	40 C.F.R. §§ 60.1675, 60.1680, and 60.1685
Operating requirements	40 C.F.R. § 60.1690
Startup, shutdown, malfunction requirements	40 C.F.R. §§ 60.1695 and 60.1710
Emission limits	40 C.F.R. §§ 60.1700 and 60.1705
Continuous emission monitoring requirements	40 C.F.R. § 60.1715
Stack testing requirements	40 C.F.R. §§ 60.1775, 60.1785, and 60.1795
Parameter monitoring requirements	40 C.F.R. §§ 60.1805, 60.1810, 60.1815, 60.1820, 60.1825
Recordkeeping requirements	40 C.F.R. §§ 60.1830, 60.1850, 60.1855
Reporting requirements	40 C.F.R. §§ 60.1860, 60.1885

The Combustors were manufactured after June 9, 1989, and each have a maximum design heat input capacity between 10 MMBtu/hr and 100 MMBtu/hr. Therefore, they meet the applicability criteria of *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc (Subpart Dc). However, since MMWAC is subject to NSPS Subpart BBBB, they are not subject to Subpart Dc. [40 C.F.R. § 60.40c (a) and (g)]

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

   There are no NESHAP requirements applicable to the Combustors.

6. Emission Limits – Natural Gas

   The emission limits for firing natural gas in the Combustors are based on the following:

   $PM/PM_{10}/PM_{2.5}$ – 0.05 lb/MMBtu based on 06-096 C.M.R. ch. 140, BPT
   SO_2 – 0.6 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
   NO_x – 100 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
   CO – 84 lb/MMscf based on AP-42 Table 1.4-1 dated 7/98
   VOC – 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98

The emission limits for firing natural gas in the Combustors are the following [06-096 C.M.R. ch. 140, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
MSW Combustor Units #1 and #2 – *Natural gas*	0.85	0.85	0.85	0.01	1.65	1.39	0.09

7. Emission Limits and Streamlining – Municipal Solid Waste

MMWAC accepts streamlining for PM, PM_{10}, $PM_{2.5}$, SO_2, HCl, CO, Cd, Hg, Pb, and visible emissions requirements. The table below lists the applicable emission standards for the Combustors, the origin and authority of each standard, and the applicable emission limits and associated averaging periods after streamlining, as appropriate. The origin and authority of the most stringent limit upon which the final, streamlined emission limit is based is presented in bold type in the table below.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.08 gr/dscf, 2-hr sampling period, corrected to 12% CO_2, w/o CO_2 from auxiliary fuel	06-096 C.M.R. ch. 104 (2)(c)	22.88 mg/dscm (equal to 0.010 gr/dscf) @ 7% O_2, based on the average of three 1-hour test runs
	0.20 lb/MMBtu (9.54 lb/hr)	06-096 C.M.R. ch. 103 (2)(B)(2)(b)	
	23 mg/dscm @ 7% O_2	06-096 C.M.R. ch. 121 § 7(A)(1)(b)	
	70 mg/dscm @ 7% O_2	40 C.F.R. Part 60, Subpart BBBB, Table 4	
	22.88 mg/dscm (equal to 0.010 gr/dscf) @ 7% O_2	**A-378-72-B-A (July 27, 1990), BACT**	
	1.83 lb/hr	**A-378-72-B-A (July 27, 1990), BACT**	1.83 lb/hr, 1-hour basis
PM_{10}	1.83 lb/hr	**A-378-72-B-A (July 27, 1990), BACT**	1.83 lb/hr, 1-hour basis
$PM_{2.5}$	1.83 lb/hr	**A-378-72-B-A (July 27, 1990), BACT**	1.83 lb/hr, 1-hour basis
SO_2	30 ppmv or 80% reduction by weight or volume @ 7% O_2, whichever is less stringent; 24-hr daily geometric mean	**06-096 C.M.R. 121 (7)(A)(4) and A-378-72-B-A (July 27, 1990), BACT**	30 ppmv or 80% reduction by weight or volume @ 7% O_2, whichever is less stringent; based on 24-hr daily geometric mean
	80 ppmv or 50% reduction of potential sulfur dioxides emissions	40 C.F.R. Part 60, Subpart BBBB Table 4	

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
	6.97 lb/hr	**A-378-70-A-I (July 1, 2002), BPT**	6.97 lb/hr, 1-hour basis
NO_x	315 ppmv @ 7% O_2 (summer) and 330 ppmv @7% O_2 (winter); 24-hr daily block arithmetic avg. basis	**A-378-72-E-A (October 16, 1996) and 06-096 C.M.R. 138, NOx RACT**	315 ppmv @ 7% O_2 (summer) and 330 ppmv @7% O2 (winter); 24-hr daily block arithmetic avg. basis
	315-330 ppmv @ 7% O_2	06-096 C.M.R. ch. 121 (7)(A)(3)(a)	
	52.62 lb/hr (summer)	**A-378-70-A-I (July 1, 2002), BPT**	52.62 lb/hr (summer), 1-hour basis
	54.87 (winter)	**A-378-70-A-I (July 1, 2002), BPT**	54.87 (winter), 1-hour basis
CO	100 ppmdv @ 7% O_2, 24-hr block arithmetic avg. basis[2]	**A-378-70-A-I (July 1, 2002), BPT**	100 ppmdv @ 7% O_2, based on 24-hr block arithmetic average basis
	100 ppmdv @ 7% O_2, 8-hr running average	06-096 C.M.R. 121 (7)(A)(6)	
	10.17 lb/hr	**A-378-70-A-I (July 1, 2002), BPT**	10.17 lb/hr, 1-hour basis
VOC	20 ppmdv @ 7% O_2	**A-378-70-A-I (July 1, 2002), BPT**	20 ppmdv @ 7% O_2, 1-hour basis
	1.16 lb/hr		1.16 lb/hr, 1-hour basis
Hydrogen Chloride (HCl)	250 ppmv or 50% reduction of potential HCl emissions	40 C.F.R. Part 60, Subpart BBBB Table 4	25 ppmvd @ 7% O_2 or a minimum control efficiency of 90% reduction by weight, whichever is less stringent; on the basis of a 3-run average, minimum run duration is 1 hour
	30 ppmv or 95% reduction of potential HCl emissions @ 7% O_2, whichever is less stringent	A-378-72-B-A (July 27, 1990), BACT	
	25 ppmv or 95% reduction of potential HCl emissions @ 7% O_2, whichever is less stringent	**06-096 C.M.R. 121 (7)(A)(5)**	

[2] In Air Emission License Amendment A-378-70-D-A (July 24, 2014), it was determined that the MMWAC Oscillating Combustor technology most closely aligns with the "Mass Burn Rotary Waterwall" technology listed in Subpart BBBB, which identifies a CO emission limit of 250 ppmdv at 7% O_2, using a 24-hour block arithmetic average basis in Table 5 of Subpart BBBB. However, MMWAC has a long operating history complying with a CO emission limit of 100 ppmdv at 7% O_2 on a 24-hour average basis. Therefore, the CO emission limit in the facility's initial part 70 license shall remain as the limit for the Combustors.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
Dioxins/ Furans (PCDD/PCDF, total mass basis)	125 ng/dscm @ 7% O_2	40 C.F.R. Part 60, Subpart BBBB Table 4	25 ng/dscm @ 7% O_2
	25 ng/dscm @ 7% O_2	**06-096 C.M.R. 121 (7)(A)(3)(b)**	
Cadmium (Cd)	0.10 mg/dscm @ 7% O_2	40 C.F.R. Part 60, Subpart BBBB Table 4	0.03 mg/dscm @ 7% O_2, 3-run average
	30 µg/dscm (equal to 0.03 mg/dscm) @ 7% O_2	06-096 C.M.R. 121 (7)(A)(3)(a)	
	0.03 mg/dscm @ 7% O_2	**A-378-70-B-R/A (August 13, 2013), BPT**	
Mercury (Hg)[3]	0.08 mg/dscm @ 7% O_2 or 85% reduction of potential Hg emissions	40 C.F.R. Part 60, Subpart BBBB Table 4	0.028 mg/dscm @ 7% O_2 or a minimum control efficiency of 85% reduction by weight, whichever is less stringent; 3-run average
	28 µg/dscm (equal to 0.028 mg/dscm) @ 7% O_2 or 85% reduction of Hg emissions by weight	06-096 C.M.R. 121 (7)(A)(3)(a)	
	0.028 mg/dscm @ 7% O_2 or 85% reduction of Hg emissions	**A-378-70-A-I (July 1, 2002), BPT**	
Lead (Pb)	1.6 mg/dscm @ 7% O_2	40 C.F.R. Part 60, Subpart BBBB Table 4	0.66 mg/dscm @ 7% O_2, 3-run average
	660 µg/dscm (equal to 0.66 mg/dscm) @ 7% O_2	06-096 C.M.R. 121 (7)(A)(3)(a)	
	0.66 mg/dscm (0.0007 gr/dscf) @ 7% O_2	**A-378-70-B-R/A (August 13, 2013), BPT**	

[3] Total mercury emissions from the facility shall not exceed 25 pounds per year. [38 M.R.S. § 585-B]

Emissions from each Combustor on a lb/hr basis shall not exceed the following:

Pollutant	lb/hr (1-hour average basis)	Origin and Authority
Antimony (Sb)	9.17×10^{-4}	**A-378-72-B-A (July 27, 1990), BACT**
Arsenic (As)	1.45×10^{-3}	
Beryllium (Be)	9.42×10^{-6}	
Chromium (Cr) (Hexavalent)	2.42×10^{-4}	
Chromium (Cr) (Total)	2.42×10^{-2}	
Copper (Cu)	8.25×10^{-3}	
Fluorides (as HF)	0.128	
Formaldehyde	0.0733	
Nickel (Ni)	1.95×10^{-2}	
Selenium (Se)	7.02×10^{-4}	
Sulfuric Acid Mist	0.693	
Zinc (Zn)	8.25×10^{-2}	

MMWAC shall demonstrate compliance with the above lb/hour emission limits by stack testing when requested by the Department.

8. Emission Limit Compliance Methods

Compliance with the criteria pollutant emission limits associated with the Combustors shall be demonstrated in accordance with the methods and frequencies indicated in the table below or other methods or frequencies as approved by the Department. [06-096 C.M.R. ch. 140, BPT]

Pollutant	Units of Measure	Compliance Method	Frequency
PM	mg/dscm @ 7% O_2	40 C.F.R. Part 60, App. A, Method 5	Once every three years
	lb/hr		
PM_{10}	lb/hr	40 C.F.R. Part 60, App. A, Method 5, or EPA Test Method 201 or 201A	As requested
$PM_{2.5}$	lb/hr	40 C.F.R. Part 60, App. A, Method 5, or EPA Test Method 201A or 202	As requested
SO_2	ppmv or 80% reduction by weight or volume @ 7% O_2	SO_2 CEMS or 40 C.F.R. Part 60, App. A, Method 6	Continuously (in accordance with 40 C.F.R. Part 60, Appendix B)
	lb/hr		
NO_x	ppmv @ 7% O_2; 24-hr daily block arithmetic avg. basis	NO_x CEMS on a 24-hour block average basis; midnight-to-midnight	Continuously (in accordance with 40 C.F.R. Part 60, Appendix B)
	lb/hr	40 C.F.R. Part 60, App. A, Method 7	

Pollutant	Units of Measure	Compliance Method	Frequency
CO	ppmdv @ 7% O_2; 24-hr block arithmetic avg. basis	CO CEMS or 40 C.F.R. Part 60, App. A, Method 10	Continuously (in accordance with 40 C.F.R. Part 60, Appendix B)
	lb/hr		
VOC	ppmdv @ 7% O_2	40 C.F.R. Part 60, App. A, Method 25 or 25A	As requested
	lb/hr		

9. Periodic Monitoring

MMWAC shall monitor and record parameters for the Combustors and their associated air pollution control equipment as indicated in the following table.

To Be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
MSW Combustion Rate	Tons	Tipping Floor Records	Annually
Natural gas use	scf	Fuel flow meter	Monthly and 12-month rolling total basis
Operating time	Hours	Boiler control system (DCS)	Daily, monthly, and annually (calendar year)

10. Parameter Monitoring

a. MMWAC shall monitor and record parameters for the Combustors and their associated air pollution control equipment as indicated in the following table whenever the equipment is operating. [40 C.F.R. § 60.1805]

Parameter	Units of Measure	Monitoring Tool/Method	Frequency
Unit load level as steam flow[ii]	lb/hour	Steam flow meter	Continuously[i]
Baghouse inlet temperature[ii]	°F	Thermocouple	
Carbon injection rate [ii]	lb/hour	Determined based on Screw feeder speed	

i. For the purpose of this license, "continuously" is defined as a minimum of two points in a one-hour period.

ii. MMWAC is exempt from limits on load level, temperature at the inlet of the baghouse, and carbon feed rate during any of the following five situations [40 C.F.R. § 60.1690(e)]:
(1) During annual tests for dioxins/furans (PCDD/PCDF).
(2) During annual mercury tests (for carbon feed rate requirements only).
(3) During the two weeks preceding annual tests for PCDD/PCDF.
(4) During the two weeks preceding annual mercury tests (for carbon feed rate requirements only).

(5) Whenever the Department permits MMWAC to do any of the following five actions:

- Evaluate system performance.
- Test new technology or control technologies.
- Perform diagnostic testing.
- Perform other activities to improve performance of the Combustors.
- Perform other activities to advance the state of the art for emissions control for the Combustors.

b. Load Level

MMWAC shall install, calibrate, maintain, and operate a steam flow meter on each unit and meet the following:

i. Continuously measure and record the measurements of steam flow in pounds per hour. Calculate the steam flow in 1-hour arithmetic averages, and obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Valid 1-hour averages must be obtained for at least 75% of the operating hours per day for 90% of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel. If the facility does not obtain the minimum data as specified here, the facility will be considered in violation of the data collection requirement of 40 C.F.R. § 60.1825 and must notify the Department according to § 60.1885(e). [40 C.F.R. §§ 60.1810 and 60.1825]

ii. Calculate the steam flow rate using methods in "ASME Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)," Section 4. [40 C.F.R. § 60.1810]

iii. Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in "ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters," 6th Edition (1971). [40 C.F.R. § 60.1810]

iv. Two weeks prior to each PCDD/PCDF stack test or at least once per year, calibrate all signal conversion elements associated with steam flow measurements according to the manufacturer instructions. [40 C.F.R. § 60.1810]

v. The maximum demonstrated combustor unit load shall be determined during each subsequent annual performance test during which compliance with the PCDD/PCDF emission limit is achieved. The maximum demonstrated combustor unit load shall be the highest 4-hour arithmetic average load achieved during four consecutive hours during the most recent test during which compliance with the PCDD/PCDF emission limit was achieved. [40 C.F.R. §§ 60.1845 and 60.1940]

c. Baghouse Inlet Temperature
MMWAC shall install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of the baghouse. [40 C.F.R. § 60.1815]

Calculate the flue gas stream temperature at the inlet of the baghouse in 1-hour arithmetic averages, and obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Valid 1-hour averages must be obtained for at least 75% of the operating hours per day for 90% of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel. If the facility does not obtain the minimum data as specified here, the facility will be considered in violation of the data collection requirement of 40 C.F.R. § 60.1825, and must notify the Department according to § 60.1885(e). [40 C.F.R. § 60.1825]

The maximum demonstrated particulate matter control device temperature shall be determined during each subsequent annual performance test, during which compliance with the PCDD/PCDF emission limit is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved. At no time shall the temperature of the flue gas stream at the inlet of the baghouse exceed 450 °F. [40 C.F.R. §§ 60.1845 and 60.1940]

d. Carbon Feed Rate
Carbon injection is used to control emissions of PCDD/PCDF and mercury. MMWAC shall meet the following requirements for the carbon injection system:

i. Subpart BBBB requires that the facility select a carbon injection system operating parameter that can be used to calculate carbon feed rate. MMWAC has selected the screw feeder speed and has established a relationship, regularly calibrated, between the screw feeder speed and the carbon feed rate in order to calculate the carbon feed rate from the monitor screw feeder speed level.

ii. During each dioxins/furans and mercury stack test, MMWAC has and shall continue to determine the average carbon feed rate in pounds per hour for that test. The facility shall also identify the average carbon screw feeder speed that correlates to the carbon feed rate at which dioxins/furans and mercury emissions test in compliance with emission limits. Each subsequent, successful stack test will establish the new standard for the

carbon feed rate (the screw feeder speed) until a subsequent stack test changes the value.

iii. MMWAC shall continuously (see definition below) monitor the carbon screw feeder speed during all periods when the unit is operating and combusting waste, and calculate the 8-hour block average carbon feed rate in pounds per hour, based on the screw feeder speed. When calculating the 8-hour block average, MMWAC shall exclude hours when the unit is not operating and include hours when the unit is operating but the carbon feed system is not working correctly. This information and supporting calculations shall be included in the records kept by the facility.

[40 C.F.R. § 60.1820]

Continuously shall mean that the facility determines the carbon screw feeder speed in 1-hour arithmetic averages and obtain at least two data points per hour to calculate a valid 1-hour arithmetic average. Valid 1-hour averages must be obtained for at least 75% of the operating hours per day for 90% of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel. If the facility does not obtain the minimum data as specified here, the facility will be considered in violation of the data collection requirement of Subpart BBBB, § 60.1825, and must notify the Department according to § 60.1885(e). [40 C.F.R. § 60.1825]

11. Operating Training and Certification [40 C.F.R. §§ 60.1675, 60.1680]

a. Each chief facility operator and shift supervisor must obtain and maintain a current provisional operator certification QRO-1-1994 through the ASME or a current provisional operator certification through a State approved program. [40 C.F.R. § 60.1675]

b. At least one fully certified chief facility operator, fully certified shift supervisor, or a provisionally certified chief facility operator or provisionally certified shift supervisor who is scheduled to take the full certification exam, must be at the facility during operations by the timetable set forth in 40 C.F.R. § 60.1675. If one of the above persons leaves the facility during their operating shift, a provisionally certified control room operator who is on-site at the facility may fulfill the above requirements. [40 C.F.R. § 60.1680]

c. MMWAC shall establish a program in accordance with 40 C.F.R. § 60.1660 to review the operating manual with each person who has responsibilities affecting the operation of the units, including but not limited to chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. Initial training shall be conducted prior to the day the person

assumes responsibilities affecting Unit operation. Training is required annually following the initial training. [40 C.F.R. § 60.1660]

d. MMWAC must have a site-specific operating manual, as required by the timetable set forth in 40 C.F.R. § 60.1660, which shall be updated and reviewed annually, and all persons who responsibilities affect the operation of the facility must be familiar with this document. The manual shall contain the following: [40 C.F.R. §§ 60.1660 and 60.1665]
   i. A summary of the applicable standards in the facility's air emission license;
   ii. A description of basic combustion principles applicable to the Combustors;
   iii. Procedures for receiving, handling, and feeding municipal solid waste;
   iv. Procedures to be followed during periods of startup, shutdown, and malfunction of the Combustors;
   v. Procedures for maintaining proper combustion air supply levels;
   vi. Procedures for operating the Combustors within the standards established in the air emission license;
   vii. Procedures for responding to periodic upset or off-specification conditions;
   viii. Procedures for minimizing particulate matter carryover;
   ix. Procedures for handling ash;
   x. Procedures for monitoring Combustors' emissions; and
   xi. Reporting and recordkeeping procedures.

e. The operating manual shall be kept in a readily accessible location for all persons required to undergo training. The operating manual and records of training shall be available for inspection by the Department or the EPA. [40 C.F.R. § 60.1670]

12. Operating Practices

Each Combustor shall meet the following operating practice standards: [40 C.F.R. §§ 60.1690 and 60.1940]

a. On a four-hour block average basis, each Combustor operating load level shall not exceed 110% of the maximum demonstrated Combustor load level, measured as steam flow or feed water flow and demonstrated during the most recent PCDD/PCDF testing. "Maximum demonstrated Combustor load" means the highest four-hour arithmetic average Combustor load achieved during four consecutive hours during the most recent PCDD/PCDF performance test demonstrating compliance with the applicable limit for PCDD/PCDF.

b. The four-hour block average fabric filter (baghouse) inlet temperature shall not exceed 17 °C above the maximum demonstrated baghouse inlet temperature as determined during PCDD/PCDF testing. "Maximum demonstrated baghouse inlet temperature" means the highest four-hour arithmetic average flue gas temperature measured at the baghouse inlet during four consecutive hours during the most

recent PCDD/PCDF performance test demonstrating compliance with the applicable limit for the PCDD/PCDF.

c. MMWAC shall maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent PCDD/PCDF test.

d. MMWAC shall evaluate the total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to the facility must be at or above the required quarterly usage of carbon. The required quarterly carbon usage may be evaluated on a per Combustor basis. Calculation of the required quarterly usage of carbon shall be performed in accordance with 40 C.F.R. § 60.1935(f), Equations 4 or 5.

e. MMWAC is exempt from the operating limits above during the two weeks prior to and during PCDD/PCDF and/or mercury testing, or if waived by the Department for purposes of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

f. Stack testing for PCDD/PCDF, cadmium, lead, hydrogen chloride, opacity, and particulate matter emission rates shall be performed in accordance with this license.

g. Records of natural gas use in each Combustor shall be maintained on a monthly and 12-month rolling total basis. [A-378-70-A-I, July 1, 2002, BPT]

13. Startup, Shutdown, and Malfunction

a. The operating requirements of Subpart BBBB apply at all times, except during periods of startup, shutdown, and malfunction. Startup, shutdown, or malfunction periods are limited to three hours per occurrence. A maximum of three hours of test data can be dismissed from compliance during periods of startups, shutdowns, and malfunctions. [40 C.F.R. §§ 60.1695 and 60.1710]

b. The stack O_2 levels during warm-up and startup that exceed 14.0% may be replaced with a value of 14.0%. MMWAC is licensed to recalculate the hourly ppmdv averages for SO_2, NO_x, and CO if the observed stack oxygen is greater than 14.0% during warmup and startup and to use the recalculated number for compliance purposes. Subsequent to startup, the use of actual O_2 readings will be resumed. Emission concentrations shall be corrected to 7.0% O_2 (dry basis). [06-096 C.M.R. ch. 140, BPT]

c. Startup, Shutdown, and Malfunction Plan [A-378-70-A-I, July 1, 2002, BPT]

i. MMWAC shall keep their written startup, shutdown, and malfunction plan on record and shall make it available for review to EPA or the Department upon request. In addition, if the startup, shutdown, and malfunction plan is revised, MMWAC shall keep previous versions of the plan on record and made available for inspection upon request.

ii. MMWAC shall include in the operating manual a written startup, shutdown, and malfunction plan that describes detailed procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process equipment and/or malfunctioning air pollution control equipment used to comply with the relevant standards. The plan shall identify all routine or otherwise predictable continuous monitoring system malfunctions. This plan shall be developed by MMWAC by the timetable set forth in 40 C.F.R. § 60.1660.

iii. During periods of startup, shutdown, and malfunction, MMWAC shall operate and maintain each Combustor (including associated air pollution control equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan.

iv. When actions taken during a startup, shutdown, or malfunction are consistent with the procedures specified in the startup, shutdown, and malfunction plan, MMWAC shall maintain records for that even if that demonstrates that the procedures specified in the plan were followed. These records shall include records of occurrence and duration for each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment.

v. If an action taken during a startup, shutdown, or malfunction is not consistent with the procedures specified in the startup, shutdown, or malfunction plan, MMWAC shall record the actions taken for that event and shall report such actions to the Department within two working days after commencing actions inconsistent with the plan, followed by a letter to the Department within seven working days after the end of the event.

vi. If the startup, shutdown, and malfunction plan fails to address an event that meets the characteristics of a malfunction but was not included in the plan at the time it was developed, MMWAC shall revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control equipment.

14. Continuous Emissions Monitoring (CEM) [40 C.F.R. § 60.1715]

For MSW Combustor Units #1 and #2, the following table lists the required continuous emission monitoring systems (CEMS) and the continuous opacity monitoring systems (COMS).

To Continuously Monitor	Units of Measurement	Origin and Authority
NO_x	ppm and lb/hr	06-096 C.M.R. ch. 117 and 06-096 C.M.R. ch. 138
SO_2	ppm and lb/hr	06-096 C.M.R. ch. 117
O_2	ppm	
CO	ppm and lb/hr	
Opacity	%	

a. Performance Specifications

All CEMS and COMS shall meet the sampling and performance criteria specified in 40 C.F.R. Part 51, Appendix P, and shall be operated in accordance with 40 C.F.R. Part 60, Appendices B and F, and 06-096 C.M.R. ch. 117 at all times each Combustor is in operation.

i. If a CEMS is recording accurate and reliable data less than 90% of the source-operating time within any quarter of a calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the CEMS was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions. [06-096 C.M.R. ch. 117 § 5(A)]

ii. If a COMS is recording accurate and reliable data less than 95% of the source-operating time within any quarter of a calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the COMS was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions. [06-096 C.M.R. ch. 117 § 5(B)]

iii. Conduct RATA and/or Performance Audits in accordance with 06-096 C.M.R. ch. 117. [06-096 C.M.R. ch. 117 § 4]

iv. MMWAC shall develop and maintain an updated quality assurance plan for all CEMS and COMS in accordance with 40 C.F.R. Part 60, Appendix F and 06-096 C.M.R. ch. 117. [06-096 C.M.R. ch. 117 § 4]

b. Recordkeeping [06-096 C.M.R. ch. 117 § 6 and A-378-70-A-I, July 1, 2002, BPT]

For all of the CEMS, COMS, equipment parameter monitoring, and recording required by this license, MMWAC shall maintain records of the most current six year period. The records shall include the following information:

i. Documentation which shows monitor operational status during all source operating time, including specifics for calibration and audits; and

ii. A complete data set of all monitored parameters as specified in this license. All parameter records shall be made available to the Department upon request.

iii. For all CEMS and COMS, the records shall include the following:

- Documentation that all CEMS and COMS are continuously accurate, reliable, and operated in accordance with applicable provisions of 06-096 C.M.R. ch. 117, 40 C.F.R. Part 60, Subpart BBBB, 40 C.F.R. Part 51, Appendix P, and 40 C.F.R. Part 60, Appendices B and F;
- Records of emission measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS and COMS, as required by 40 C.F.R. Part 51, Appendix P;
- Upon the written request by the Department, a report or other data indicative of compliance with the applicable emission standard for those periods when the CEMS or COMS were not in operation or produced invalid data. Evidence indicating normal operations shall constitute such reports or other data indicative of compliance with applicable emission standards. In the event the Department does not concur with MMWAC's compliance determination, MMWAC shall, at the Department's request, provide additional data and shall have the burden of demonstrating that the data are indicative of compliance with the applicable standard; and
- A 24-hour block average shall be calculated as the arithmetic average of not more than 24 one-hour block periods. Only one 24-hour block average shall be calculated for one day, beginning at midnight. A valid 24-hour block average must contain at least 12 hours during which operation occurred. Hours in which no operation occurs shall not be included in the 24-hour block average calculation.

15. Stack Testing Requirements [06-096 C.M.R. ch. 121 and 40 C.F.R. § 60.1775]

a. Compliance with the limits in this air emission license shall be demonstrated by stack testing in accordance with the following:

Pollutant	Units of Limits	Method[i]	Schedule	Enforceability
PM	mg/dscm @ 7% O_2	Method 5	Every three years	--
PM_{10}	lb/hr	Method 5, Method 201, or Method 201A, and Method 202	When requested by the Department[ii]	**Enforceable by State-only**
$PM_{2.5}$	lb/hr	Method 5 or Method 201A and Method 202	When requested by the Department	
SO_2	ppmdv @ 7% O_2	Method 6	When requested by the Department	
NO_x		Method 7		
CO	ppmdv @ 7% O_2	Method 10	When request by the Department	**Enforceable by State-Only**
VOC		Method 25A		
HCl		Method 26		
PCDD/PCDF	ng/dscm @ 7% O_2	Method 23	Annually[iii]	--
Cd	mg/dscm @ 7% O_2	Method 29		
Hg				
Pb				
Sb, As, Be, Cr (hex), Cr (total), Cu, Fluorides (as HF), Formaldehyde, Ni, Se, and Zn	lb/hr	Method 29	When requested by the Department	**Enforceable by State-only**
Sulfur acid mist		Method 8		

i. Test Methods are in accordance with 40 C.F.R. Part 60, Appendix A or as approved by the Department [06-096 C.M.R. ch. 121]

ii. MMWAC shall conduct an emissions test for PM_{10} if emissions test results for PM show that the emissions are greater than 80% of the licensed limit. [A-378-70-A-I, July 1, 2002, BPT]

iii. See item (e) below for alternate testing schedules.

b. For Combustor Units #1 and 2, MMWAC shall conduct performance testing on each effluent, or the combined effluent, as applicable. [06-096 C.M.R. ch. 121 § 5(D)(2)]

c. The procedures and test methods used to determine compliance with the emission limits for particulate matter, cadmium, lead, opacity, fugitive ash, mercury,

PCDD/PCDF, and hydrogen chloride shall be in accordance with 06-096 C.M.R. ch. 121 and Subpart BBBB. [40 C.F.R. § 60.1785]

d. MMWAC shall conduct a performance test for compliance with the emission limits for particulate matter, cadmium, lead, mercury, PCDD/PCDF, and hydrogen chloride on an annual basis (no later than 13 calendar months following the previous performance test). [40 C.F.R. § 60.1785]

e. If stack tests for a given pollutant over three consecutive years show the facility in compliance with the emission limit, stack testing for that pollutant is not required for the next two years. However, another stack test must be completed within 36 months of the anniversary date of the third consecutive stack test that demonstrated compliance with the emission limit. This provision applies to all pollutants subject to stack testing requirements: PCDD/PCDF, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

   If a stack test shows noncompliance with an emission limit, annual stack testing for that pollutant must be performed until stack tests for three consecutive years show compliance with the emission limit for that pollutant.

   [40 C.F.R. § 60.1795(a)]

f. When determining percent reductions for mercury and hydrogen chloride emission, both inlet and outlet concentrations of the control device shall be measured during stack testing. [06-096 C.M.R. ch. 121 § 7(A)]

g. Stack test results shall be submitted to the Department in accordance with the requirements of 06-096 C.M.R. ch. 121. [06-096 C.M.R. ch. 121 § 7(C)]

16. Performance Test Protocol

For any performance testing required by this license, MMWAC 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. 140, BPT]

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

17. Recordkeeping and Reporting
[06-096 C.M.R. ch. 117 and 40 C.F.R. §§ 60.1830 and 60.1860]

a. MMWAC shall collect the minimum amount of monitoring data required in accordance with 40 C.F.R. § 60.1825, as specified in the applicable sections above.

b. The facility shall maintain additional carbon feed rates records, as specified here: [40 C.F.R. §60.1855]

i. *Records of Average Carbon Feed Rate*
Document five items:
(1) Average carbon feed rate in pounds per hour during all stack tests for PCDD/PCDF and mercury emissions. Include supporting calculations in the records.
(2) Average operating level during all stack tests for PCDD/PCDF and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.
(3) All 8-hour block average carbon feed rates in pounds per hour calculated from the monitored operating parameter.
(4) Total carbon purchased and delivered to the MMWAC for each calendar quarter. If MMWAC chooses to evaluate total carbon purchased and delivered per Combustor, MMWAC shall record the total carbon purchased and delivered for each Combustor. Include supporting documentation.
(5) Required quarterly usage of carbon for MMWAC, calculated using equation 4 or 5 in § 60.1935(f). If MMWAC chooses to evaluate required quarterly usage for carbon Combustor, MMWAC shall record the required quarterly usage for Combustor. Include supporting calculations.

ii. *Records of Low Carbon Feed Rates*
Document three items:
(1) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for PCDD/PCDF or mercury emissions (whichever has a higher feed rate).
(2) Reasons for the low carbon feed rates.
(3) Corrective actions taken or being taken to meet the 8-hour average carbon feed rate requirement.

iii. *Records of Minimum Carbon Feed Rate Data*
Document three items:
(1) Calendar dates for which the minimum amount of carbon feed rate data required under § 60.1825 was not collected.
(2) Reasons the minimum data was not collected.
(3) Corrective actions taken or being taken to get the required amount of data.

iv. *Records of Exclusions*
Document each time data was excluded from the calculation of average carbon feed rates and the reasons the data were excluded.

v. *Records of Calendar Dates*
Include the calendar date on each record.

c. MMWAC shall maintain records of the following information for each emission unit for a period of at least six years [06-096 C.M.R. ch. 117 § 6 and Subpart BBBB]:

i. The calendar date of each record.
ii. The emission concentrations and parameters measured using continuous monitoring systems as required by this license.

d. The following measurements shall be recorded and be available for submittal to the Department or review on-site by an inspector or Department representative. [40 C.F.R. § 60.1850(a)]

i. All six-minute average opacity levels
ii. All one-hour average SO_2 emission concentrations
iii. All one-hour average NO_x emission concentrations
iv. All one-hour average CO emission concentrations
v. All one-hour average load levels of each Combustor
vi. All one-hour average flue gas temperatures at the inlet of the fabric filter

e. The average concentrations and percent reductions, as applicable, specified in the following paragraphs shall be computed, recorded, and available for submittal to the Department or review on-site by a Department representative. [40 C.F.R. § 60.1850(b)]

i. All 24-hour daily block geometric average SO_2 emission concentrations or all 24-hour daily geometric average percent reductions of sulfur dioxide emissions.
ii. All 24-hour daily block arithmetic average NO_x emission concentrations.
iii. All 4-hour block or 24-hour daily arithmetic average CO emission concentrations.
iv. All 4-hour block arithmetic average load levels for each Combustor.
v. All 4-hour block arithmetic average flue gas temperature at the inlet of the fabric filter.

f. MMWAC shall maintain documentation of identification of the calendar dates and averaging periods when any of the average emission concentrations, percent reductions, operating parameters recorded, or opacity levels recorded are above the applicable limits, with reasons for such exceedances and a description of the corrective action taken. [40 C.F.R. § 60.1850(c)]

g. MMWAC shall maintain documentation of identification of the calendar dates for which the minimum number of hours of any of the following information has not been obtained, reasons for not obtaining the minimum quantity of data, and a description of corrective actions taken: [40 C.F.R. § 60.1850(d)]

i. SO_2 emissions data
ii. NO_x emissions data
iii. CO emissions data
iv. Combustor load level data
v. Flue gas temperature at the inlet to the fabric filter

h. MMWAC shall maintain documentation of each time that data was excluded from the calculation of averages for any of the following: [40 C.F.R. § 60.1850(e)]

i. SO_2 emissions data
ii. NO_x emissions data
iii. CO emissions data
iv. Combustor load level data
v. Flue gas temperature at the inlet to the fabric filter

i. MMWAC shall maintain documentation of the results of daily drift tests and quarterly accuracy determinations (in accordance with 40 C.F.R. Part 60, Appendix F, Procedure 1) for SO_2, NO_x, and CO continuous emissions monitoring systems. [40 C.F.R. § 60.1850(f)]

j. MMWAC shall submit annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits specified in *Emission Limits and Streamlining* above (section 7 of part G). [40 C.F.R. § 60.1860]

k. MMWAC shall submit the annual report no later than February 1 of each year that follows the calendar year in which the emissions data was collected. [40 C.F.R. § 60.1880] Standard Condition (13) requires that the report be submitted to the Department and EPA by January 31. Therefore, January 31 shall be the deadline for the annual report.

l. MMWAC shall include a summary of the data collected for all pollutants and parameters regulated in Subpart BBBB in the annual report, as well as the items listed in 40 C.F.R. § 60.1885. [40 C.F.R. § 60.1885]

H. Ash Handling System

The ash handling system consists of quench tanks, conveyors, surge bins, conditioners, and the load-out area of the Combustors building utilized to collect ash from the combustion process and prepare it for disposal. All fly ash conveyors between the boiler building or

pollution control equipment and the fly ash conditioner are enclosed. Bottom ash and fly ash are each conditioned with water to render the product dustless prior to discharge onto open conveyors and into open containers. All ash from the Combustors shall be transported in covered containers so as to prevent fugitive emissions.

1. New Source Performance Standards (NSPS)

   Visible emissions from the Ash Handling System are regulated by 40 C.F.R. Part 60, Subpart BBBB, listed in the table below.

2. Emission Limit and Streamlining for Visible Emissions

   MMWAC accepts streamlining for fugitive ash visible emissions requirements. For the fugitive ash visible emissions requirements of the Ash Handling System, the table below lists the applicable standards, the origin and authority of each standard, and the applicable emission limits and associated averaging periods after streamlining, as appropriate. The origin and authority of the most stringent limit upon which the final, streamlined emission limit is based is presented in bold type in the table below.

Applicable Standard	Origin and Authority	Licensed Limit
Visible emissions from the Ash Handling System shall not exceed 5% opacity (based on three one-hour observation periods).	**40 C.F.R. Part 60, Subpart BBBB, Table 4**	There shall be no visible emissions from the Ash Handling System for more than 5% of the observation period (i.e., 9 minutes in any 3-hour period). Visible emissions from the Ash Handling System shall not exceed 5% opacity (based on three one-hour observation periods).
Visible emissions from the Ash Handling System shall not exceed 20% opacity on a six-minute block average basis.	06-096 C.M.R. ch. 101 § 4(B)(4)	
There shall be no visible emissions from the Ash Handling System for more than 5% of the observation period (i.e., 9 minutes in any 3-hour period).	**06-096 C.M.R. ch. 121 § 7(A)(7)**	

3. Emission Limit Compliance Methods

   Compliance with the visible emissions emission limit for the Ash Handling System shall be demonstrated in accordance with the methods and frequencies indicated in the table below or other methods or frequencies as approved by the Department.

Pollutant	Compliance Method	Frequency
Visible Emissions	EPA Reference Method 22 in 40 C.F.R. Part 60, Appendix A (not applicable during maintenance and repair of Ash Handling System)	once every 2.5 years

Note: Though originally required to be conducted yearly [A-378-70-A-I, July 1, 2002, BPT], 06-096 C.M.R. ch. 121 (7)(D)(1)(b) allows the Department to determine the frequency of further testing based on previous test results, but in no case is the interval between tests to exceed three years.

Method 22 testing to fulfill this requirement shall be conducted on the Ash Handling System no sooner than 12 months after the most recent successful test and no later than 30 months after the most recent test, such that two tests are completed during each five-year period, consistent with the completion of two tests per license term.

[A-378-70-B-R/A, August 12, 2013, BPT]

4. Monitoring and Operational Practices

EPA Reference Method 22 shall be used on the ash load-out building for determining compliance with the fugitive ash visible emissions limit. The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring ash from the Combustors to the area where ash is stored or loaded into containers or trucks. The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. The average shall be used to determine compliance with the fugitive ash visible emissions limit.

I. Lime Silo

The Lime Silo stores hydrated lime before it is mixed with water to create lime slurry. A separate storage tank holds a lime slurry by-product. The two sources of slurry are combined in a mix tank and sprayed into the spray dryer absorber of the combustors. A small baghouse on top of the silo is used to control emissions during filling operations.

1. Visible Emissions

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

Note: In A-378-70-B-R/A (August 13, 2013), the more stringent visible emission limit was found to be the BPT opacity limit. However, 06-096 C.M.R. ch. 101 opacity limit is now equal to the BPT opacity limit and has been referenced instead of BPT.

2. Monitoring and Operational Practices

MMWAC shall maintain and operate a baghouse to control emissions during Lime Silo filling operations and shall not conduct filling operations without the proper use of the

baghouse. MMWAC shall maintain monthly records of the quantity of lime loaded to the silo. [A-378-70-A-I, July 1, 2002, BPT]

J. **Emergency Diesel Generator and Fire Pump Engine**

MMWAC operates the Emergency Diesel Generator, which is a generator set consisting of an engine and an electrical generator. The engine is rated at 3.2 MMBtu/hr and fires distillate fuel. The Emergency Diesel Generator was manufactured and installed in 1991.

MMWAC operates the Fire Pump Engine, which has an engine rated at 1.7 MMBtu/hr and fires distillate fuel. The Fire Pump Engine was manufactured in July 1990 and installed in 1991.

1. Visible Emissions

MMWAC's stationary engines are each subject to the following standards of 06-096 C.M.R. ch. 101.

Visible emissions from the Emergency Diesel Generator and the Fire Pump Engine shall not exceed 20% opacity on a six-minute block average basis, except during periods of startup. During periods of startup, the engine must meet the normal operating visible emissions standard or the or the following work practice standards and alternative visible emissions standard. Use of the following work practice standards and alternative visible emissions standard in lieu of the normal operating visible emissions standard is limited to no more than once per day.

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

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

2. *Stationary Generators*, 06-096 C.M.R. ch. 169

The Emergency Diesel Generator was licensed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169, and the Fire Pump Engine is not a generator. Therefore, the Emergency Diesel Generator and Fire Pump Engine are exempt from this rule pursuant to section 3(B).

3. New Source Performance Standards (NSPS)

Due to the dates of manufacture of the compression ignition emergency engines listed above, the engines are not subject to the New Source Performance Standards (NSPS)

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE), 40 C.F.R. Part 60, Subpart IIII since the Emergency Diesel Generator was manufactured prior to April 1, 2006, and the Fire Pump Engine was manufactured prior to July 1, 2006. [40 C.F.R. § 60.4200]

4. National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

a. Emergency Engine Designation and Operating Criteria

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

(1) Emergency Situation Operation (On-Site)

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

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

(2) Non-Emergency Situation Operation

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

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

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

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

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

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

(1) Operation and Maintenance Requirements
[40 C.F.R. § 63.6602 and Table 2(c)]

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

The engines shall be operated and maintained according to the manufacturer's emission-related written instructions, or MMWAC shall develop a maintenance plan which must provide to the extent practicable for the maintenance and

operation of the engines in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

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

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

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

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

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

For simplicity, the recordkeeping described above is streamlined with the more stringent recordkeeping required to demonstrate compliance with 06-096 C.M.R. ch. 169. The standards themselves are not being streamlined, only the recordkeeping required for compliance demonstration. Therefore, MMWAC shall maintain records of engine operating times on a 12-month rolling total basis. The 12-month rolling total encompassing January through December of each calendar year shall be used to demonstrate compliance with

the annual time limit for maintenance and testing pursuant to 40 C.F.R. § 63.6640(f) as described above.

5. Emission Limits

The emission limits for the Emergency Diesel Generator and Fire Pump Engine are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 103 (Emergency Diesel Generator), and A-378-70-B-R/A, (August 12, 2013), BPT (Fire Pump Engine)
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
CO	–	0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
VOC	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
Visible Emissions	–	06-096 C.M.R. ch. 101

The emission limits for the Emergency Diesel Generator and Fire Pump Engine are the following [A-378-70-B-R/A, August 12, 2013, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Emergency Diesel Generator	0.38	0.38	0.38	0.005	14.11	3.04	1.15
Fire Pump Engine	0.21	0.21	0.21	0.003	7.54	1.62	0.62

6. Emission Limit Compliance Methods

Compliance with the emission limits associated with the Emergency Diesel Generator and Fire Pump Engine shall be demonstrated in accordance with the appropriate test methods upon request of the Department.

7. Periodic Monitoring

MMWAC shall record data and maintain records for the following periodic monitoring values for the Emergency Diesel Generator and Fire Pump Engine as indicated in the following table.

Parameter	Units of Measure	Monitoring Tool/Method	Frequency	Authority
Fuel oil sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel is purchased	[06-096 C.M.R. ch. 137]
Operating time	Hours	Hour Meter	Monthly and calendar year total recorded as they occur	[40 C.F.R. § 63.6625(f)]

Parameter	Units of Measure	Monitoring Tool/Method	Frequency	Authority
Type of Operation (emergency, maintenance, etc.)	N/A	Recorded electronically or in logbook	As occurs	[40 C.F.R. § 63.6655(f)]

8. Parameter Monitors

   There are no Parameter Monitors required for the Emergency Diesel Generator and Fire Pump Engine.

9. CEMS and COMS

   There are no CEMS or COMS required for the Emergency Diesel Generator and Fire Pump Engine.

K. 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.

L. Fugitive Emissions

MMWAC 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.

MMWAC 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.

M. Emission Statements

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

1. The amount of municipal waste fired in MSW Combustor Units #1 and #2 (each) on an annual basis;

2. The amount of natural gas fired in MSW Combustor Units #1 and #2 (each) on a monthly and 12-month rolling total basis;
3. The amount of distillate fuel fired in the Emergency Diesel Generator and Fire Pump Engine (each) on a monthly basis;
4. The sulfur content of the distillate fuel fired in the Emergency Diesel Generator and Fire Pump Engine;
5. Hours each emission unit was active or operating on a monthly basis.

MMWAC shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). MMWAC 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). Reporting year 2026 is the next HAP emissions reporting year (due May 15, 2027). [38 M.R.S. § 353-A(1-A)]

N. **Facility Annual Emissions**

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility's annual air license fee 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:

- lb/hr emission limits for MSW Combustor Units #1 and #2 and 8,760 hours/year of operation of each unit; and
- Operating the Emergency Diesel Generator and Fire Pump Engine for 100 hr/yr (each).

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
MSW Combustor Units #1 and #2 – *Municipal solid waste*	16.0	16.0	16.0	61.0	480.6	89.0	10.2
MSW Combustor Units #1 and #2 – *Natural gas*	0.7	0.7	0.7	--	1.4	1.2	0.1
Emergency Diesel Generator	--	--	--	--	0.7	0.2	0.1
Fire Pump Engine	--	--	--	--	0.4	0.1	--
Total TPY	**16.7**	**16.7**	**16.7**	**61.0**	**483.1**	**90.5**	**10.4**

III. AMBIENT AIR QUALITY ANALYSIS

MMWAC previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards (see license A-378-72-B-A, issued July 27, 1990). An additional ambient air quality analysis is not required for this Part 70 License.

ORDER

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

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

The Department hereby grants the Part 70 License A-378-70-F-R pursuant to 06-096 C.M.R. ch. 140 and the preconstruction permitting requirements of 06-096 C.M.R. ch. 115 and subject to the standard and specific conditions below.

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

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

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

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

STANDARD STATEMENTS

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

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

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

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

(5) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 C.M.R. ch. 140]

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

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

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

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

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in their renewal application.

Permit Shield Table

Source	Citation	Description	Basis for Determination
MSW Combustors #1 and #2	40 C.F.R. Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Units are subject to 40 C.F.R. Part 60, Subpart BBBB and thus exempted per 40 C.F.R. Part 60, § 60.40c(g).
MSW Combustors #1 and #2	40 C.F.R. Part 64	Compliance Assurance Monitoring	Units are subject to 40 C.F.R. Part 60, Subpart BBBB and are thus exempted per 40 C.F.R. Part 64, § 64.2(b)(1)(i).
Storage Tanks	40 C.F.R. Part 68	Accidental Release Prevention	Chemicals stored on site are less than Threshold Quantities.
Facility	40 C.F.R. Parts 72 to 78	Federal Acid Rain Provisions	Facility is not subject to the provisions and does not choose to "opt-in" at this time.
Facility	40 C.F.R. Part 60, Subpart Ea	Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced after December 20, 1989, and On or Before September 20, 1994	This facility is smaller than the threshold capacity for applicability of this subpart.
Facility	06-096 C.M.R. ch. 130	Solvent Cleaners	Cleaning solution used in aqueous-based parts washer contains less than 5% VOC.
Facility	06-096 C.M.R. ch. 134	Reasonably Available Control Technology for Facilities That Emit Volatile Organic Compounds	VOC is from incomplete combustion only, exempt per Section 1(C)(4) of Ch. 134.
Emergency Diesel Generator, Fire Pump Engine	06-096 C.M.R. ch. 138	Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides	The Emergency Diesel Generator and Fire Pump Engine are each limited to 100 hour per year of operation, on a 12-month rolling total basis, which keeps NOx emissions under 10 tons/year
Emergency Diesel Generator, Fire Pump Engine	06-096 C.M.R. ch. 169	Stationary Generators	Emergency Diesel Generator was licensed prior to the effective date, and the Fire Pump Engine is not a generator.

[06-096 C.M.R. ch. 140]

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

A. Additional Applicable requirements under the CAA become applicable to a Part 70 major source with a remaining Part 70 license term of three or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to 06-096 C.M.R. ch. 140;

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

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

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

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

[06-096 C.M.R. ch. 140]

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

STANDARD CONDITIONS

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

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

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

description of the program to the Department upon request. [06-096 C.M.R. ch. 140] **Enforceable by State-only**

(4) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S. § 353-A. Payment of the annual air emission license fee for MMWAC is due by the end of August of each year. [38 M.R.S. § 353-A(3)]

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

(6) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. In addition, the licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license. [06-096 C.M.R. ch. 140]

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

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

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

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

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

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

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

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

[06-096 C.M.R. ch. 140] **Enforceable by State-only**

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

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

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

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

[06-096 C.M.R. ch. 140] **Enforceable by State-only**

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

A. The licensee shall notify the Commissioner within 48 hours of a violation of any emission standard and/or a malfunction or breakdown in any component part that causes a violation of any emission standard, and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;

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

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

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

[06-096 C.M.R. ch. 140]

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

(12) The licensee shall submit semiannual reports of any required periodic monitoring by January 31 and July 31 of each year, or on an equivalent schedule specified in the license. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official. [06-096 C.M.R. ch. 140]

(13) The licensee shall submit a compliance certification to the Department and EPA annually by January 31 of each year, or more frequently if specified in the applicable requirement or by the Department. The compliance certification shall include the following:

A. The identification of each term or condition of the Part 70 license that is the basis of the certification;
B. The compliance status;
C. Whether compliance was continuous or intermittent;
D. The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
E. Such other facts as the Department may require to determine the compliance status of the source.

[06-096 C.M.R. ch. 140]

SPECIFIC CONDITIONS

(14) **MSW Combustor Units #1 and #2**

A. Allowable Operations and Fuels

1. Each Combustor is licensed to fire municipal solid waste (MSW), with natural gas as an auxiliary fuel.

2. The aggregate facility-wide MSW combustion shall not exceed 250 tons MSW per day, calculated on an annual basis based on scale house records of waste delivered to the pit and corrected according to pit inventory estimates at the start and the end of each year.

3. MMWAC shall fire only waste types 0, 1, 2, 3, 5, and 6, as defined in 06-096 C.M.R. ch. 100. The following are unacceptable wastes and shall not be combusted in the units: waste classified as RCRA hazardous waste, low level radioactive waste, and red bag medical wastes. [A-378-70-A-I, July 1, 2002, BPT]

4. Natural gas use in the Combustors during any calendar year shall be limited to a combined annual capacity factor of 10% or less, or 28.9 MMscf/yr combined. [A-378-70-A-I, July 1, 2002, BPT]

5. Natural gas fired into each Combustor shall be monitored by a fuel totalizer operated in accordance with the manufacturer's specifications. [A-378-70-A-I, July 1, 2002, BPT] **Enforceable by State-Only**

6. Records of natural gas use in each Combustor shall be maintained on a monthly and 12-month rolling total basis. [A-378-70-A-I, July 1, 2002, BPT]

B. Visible emissions from the Combustors shall not exceed 10% opacity on a six minute block average basis. [40 C.F.R 40 C.F.R. § 60.1705 and Table 4; and 06 096 C.M.R. ch. 121, § 7(A)(2)]

C. Emissions from Combustion Unit #1 shall vent to Flue #1 of Stack #1. Emissions from Combustion Unit #2 shall vent to Flue #2 of Stack #1. Each flue shall be at least 213 feet AGL. [A-378-70-B-R/A, August 12, 2013, BPT]

D. Emissions from each Combustor shall not exceed the following:

Pollutant	Emission Limits for EACH Unit	Origin and Authority
PM	22.88 mg/dscm (equal to 0.010 gr/dscf) @ 7% O_2	A-378-72-B-A (July 27, 1990), BACT
	1.83 lb/hr	A-378-72-B-A (July 27, 1990), BACT
PM_{10}	1.83 lb/hr	A-378-72-B-A (July 27, 1990), BACT
$PM_{2.5}$	1.83 lb/hr	A-378-72-B-A (July 27, 1990), BACT
SO_2	30 ppmv or 80% reduction by weight or volume @ 7% O_2, whichever is less stringent; 24-hr daily geometric mean	06-096 C.M.R. 121 (7)(A)(4) and A-378-72-B-A (July 27, 1990), BACT
	6.97 lb/hr	A-378-70-A-I (July 1, 2002), BPT
NO_x	315 ppmv @ 7% O_2 (summer) and 330 ppmv @7% O_2 (winter); 24-hr daily block arithmetic avg. basis	A-378-72-E-A (October 16, 1996) and 06-096 C.M.R. 138, NOx RACT
	52.62 lb/hr (summer)	A-378-70-A-I (July 1, 2002), BPT
	54.87 (winter)	A-378-70-A-I (July 1, 2002), BPT
CO	100 ppmdv @ 7% O_2, 24-hr block arithmetic avg. basis	A-378-70-A-I (July 1, 2002), BPT
	10.17 lb/hr	A-378-70-A-I (July 1, 2002), BPT
VOC	20 ppmdv @ 7% O_2	A-378-70-A-I (July 1, 2002), BPT
	1.16 lb/hr	
Hydrogen Chloride (HCl)	25 ppmv or 95% reduction of potential HCl emissions @ 7% O_2, whichever is less stringent	06-096 C.M.R. 121 (7)(A)(5)
Dioxins/ Furans (PCDD/PCDF, total mass basis)	25 ng/dscm @ 7% O_2	06-096 C.M.R. 121 (7)(A)(3)(b)
Cadmium (Cd)	0.03 mg/dscm @ 7% O_2	A-378-70-B-R/A (August 13, 2013), BPT
Mercury (Hg)	0.028 mg/dscm @ 7% O_2 or 85% reduction of Hg emissions	A-378-70-A-I (July 1, 2002), BPT
Lead (Pb)	0.66 mg/dscm (0.0007 gr/dscf) @ 7% O_2	A-378-70-B-R/A (August 13, 2013), BPT

Emissions from each Combustor on a lb/hr basis shall not exceed the following:

Pollutant	lb/hr (1-hour average basis)	Origin and Authority
Antimony (Sb)	9.17×10^{-4}	**A-378-72-B-A (July 27, 1990), BACT**
Arsenic (As)	1.45×10^{-3}	
Beryllium (Be)	9.42×10^{-6}	
Chromium (Cr) (Hexavalent)	2.42×10^{-4}	

Pollutant	lb/hr (1-hour average basis)	Origin and Authority
Chromium (Cr) (Total)	2.42×10^{-2}	**A-378-72-B-A (July 27, 1990), BACT**
Copper (Cu)	8.25×10^{-3}	
Fluorides (as HF)	0.128	
Formaldehyde	0.0733	
Nickel (Ni)	1.95×10^{-2}	
Selenium (Se)	7.02×10^{-4}	
Sulfuric Acid Mist	0.693	
Zinc (Zn)	8.25×10^{-2}	

MMWAC shall demonstrate compliance with lb/hour emission limits by stack testing when requested by the Department.

E. Total mercury emissions from the facility shall not exceed 25 pounds per year. [38 M.R.S. § 585-B] **Enforceable by State-only**

F. Air Emission Control Equipment [A-378-70-A-I, July 1, 2002, BPT]

1. PM, PM_{10}, and $PM_{2.5}$ emissions from each Combustor shall be controlled by the operation and maintenance of a fabric filter. Logs shall be maintained documenting all fabric filter downtimes, including regular maintenance, failures, or malfunctions.
2. SO_2 and HCl emissions from each Combustor shall be controlled by a spray dryer absorber followed by a fabric filter.
3. Emissions of PCDD/PCDF, mercury, and other metals from each Combustor shall be controlled by a carbon injection system and the fabric filter.

G. Compliance Demonstration Methods

1. MMWAC shall maintain an SO_2 CEMS certified and installed downstream of the fabric filter in accordance with 06-096 C.M.R. ch. 117, 06-096 C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F. When demonstrating compliance with the 80% reduction in SO_2 emissions, MMWAC shall measure both inlet and outlet SO_2 concentrations of the control device with a CEMS. [06-096 C.M.R. ch. 117, 06-096 C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F]

2. MMWAC shall maintain a NO_x CEMS in accordance with applicable provisions of 06-096 C.M.R. ch. 117 06-096, C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F. [06-096 C.M.R. ch. 117, 06-096 C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F]

3. The CO CEMS shall be installed and certified downstream of the fabric filter. MMWAC shall maintain the CO CEMS in accordance with applicable provisions

of 06-096 C.M.R. ch. 117, C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F. [06-096 C.M.R. ch. 117, 06-096 C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F]

4. MMWAC shall install, calibrate, maintain, and operate a CEMS for O_2 at the outlet of the fabric filter. The O_2 concentration shall be monitored at each location where SO_2, CO, and NO_x are monitored. The monitoring system shall comply with 06-096 C.M.R. ch. 117, 06-096 C.M.R. ch. 121, and 40 C.F.R. Part 60, Subpart BBBB. [06-096 C.M.R. ch. 117, 06-096 C.M.R. ch. 121, and 40 C.F.R. § 60.1720]

5. Compliance with the visible emissions limit shall be demonstrated by means of a COMS. MMWAC shall maintain the COMS in accordance with applicable provisions of 06-096 C.M.R. ch. 117, C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F. [06-096 C.M.R. ch. 117, 06-096 C.M.R. ch. 121, and 40 C.F.R. Part 60, Appendices B and F]

6. Compliance shall be demonstrated in accordance with the methods and frequencies indicated in the table below, or other methods or frequencies as approved by the Department. [06-096 C.M.R. ch. 140, BPT]

Pollutant	Units of Measure	Compliance Method	Frequency
PM	mg/dscm @ 7% O_2	40 C.F.R. Part 60, App. A, Method 5	Once every three years
	lb/hr		
PM_{10}	lb/hr	40 C.F.R. Part 60, App. A, Method 5 or Method 201 or 201A, and Method 202	As requested
$PM_{2.5}$	lb/hr	40 C.F.R. Part 60, App. A, Method 5 or Method 201A, and Method 202	As requested
SO_2	ppmv or 80% reduction by weight or volume @ 7% O_2	SO_2 CEMS	Continuously (in accordance with 40 C.F.R. Part 60, Appendix B)
	lb/hr	40 C.F.R. Part 60, App. A, Method 6	As requested
NO_x	ppmv @ 7% O_2 24-hr daily block arithmetic avg. basis	NO_x CEMS on a 24-hour block average basis; midnight-to-midnight	Continuously (in accordance with 40 C.F.R. Part 60, Appendix B)
	lb/hr	40 C.F.R. Part 60, App. A, Method 7	As requested
CO	ppmdv @ 7% O_2; 24-hr block arithmetic avg. basis	CO CEMS	Continuously (in accordance with 40 C.F.R. Part 60, Appendix B)
	lb/hr	40 C.F.R. Part 60, App. A, Method 10	As requested

Pollutant	Units of Measure	Compliance Method	Frequency
VOC	ppmdv @ 7% O_2	40 C.F.R. Part 60, App. A, Method 25 or 25A	As requested
	lb/hr		

H. Periodic Monitoring

MMWAC shall monitor and record parameters for the Combustors and their associated air pollution control equipment as indicated in the following table. [06-096 C.M.R. ch. 140, BPT]

To Be Monitored	Units of Measure	Monitoring Tool/Method	Frequency
MSW Combustion Rate	Tons	Tipping Floor Records	Annually
Natural gas use	scf	Fuel flow meter	Monthly and 12-month rolling total basis
Operating time	Hours	Boiler control system (DCS)	Daily, monthly, and annually (calendar year)

I. Parameter Monitoring

1. MMWAC shall monitor and record parameters for the Combustors and their associated air pollution control equipment as indicated in the following table whenever the equipment is operating. [40 C.F.R. § 60.1805]

Parameter	Units of Measure	Monitoring Tool/Method	Frequency
Unit load level as steam flow[b]	lb/hour	Steam flow meter	Continuously[a]
Baghouse inlet temperature[b]	°F	Thermocouple	
Carbon injection rate [b]	lb/hour	Determined based on Screw feeder speed	

a. For the purpose of this license, "continuously" is defined as a minimum of two points in a one-hour period.
b. MMWAC is exempt from limits on load level, temperature at the inlet of the baghouse, and carbon feed rate during any of the following five situations [40 C.F.R. §60.1690(e)]:
   i. During annual tests for dioxins/furans (PCDD/PCDF).
   ii. During annual mercury tests (for carbon feed rate requirements only).
   iii. During the two weeks preceding annual tests for PCDD/PCDF.
   iv. During the two weeks preceding annual mercury tests (for carbon feed rate requirements only).

v. Whenever the Department permits MMWAC to do any of the following five actions:
- Evaluate system performance.
- Test new technology or control technologies.
- Perform diagnostic testing.
- Perform other activities to improve performance of the Combustors.
- Perform other activities to advance the state of the art for emissions control for the Combustors.

2. Load Level
MMWAC shall install, calibrate, maintain, and operate a steam flow meter on each unit and meet the following:

a. Continuously measure and record the measurements of steam flow in pounds per hour. Calculate the steam flow in 1-hour arithmetic averages, and obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Valid 1-hour averages must be obtained for a least 75% of the operating hours per day for 90% of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel. If the facility does not obtain the minimum data as specified here, the facility will be considered in violation of the data collection requirement of 40 C.F.R. § 60.1825, and must notify the Department according to § 60.1885(e). [40 C.F.R. §§ 60.1810 and 60.1825]
b. Calculate the steam flow rate using methods in "ASME Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991)," Section 4. [40 C.F.R. § 60.1810]
c. Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in "ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters," 6th Edition (1971). [40 C.F.R. 60.1810]
d. Two weeks prior to each PCDD/PCDF stack test, or at least once per year, calibrate all signal conversion elements associated with steam flow measurements according to the manufacturer instructions. [40 C.F.R. § 60.1810]
e. The maximum demonstrated combustor unit load shall be determined during each subsequent annual performance test during which compliance with the PCDD/PCDF emission limit is achieved. The maximum demonstrated combustor unit load shall be the highest 4-hour arithmetic average load achieved during four consecutive hours during the most recent test during which

compliance with the PCDD/PCDF emission limit was achieved. [40 C.F.R. §§ 60.1845 and 60.1940]

3. Baghouse Inlet Temperature
MMWAC shall install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of the baghouse. [40 C.F.R. § 60.1815]

Calculate the flue gas stream temperature at the inlet of the baghouse in 1-hour arithmetic averages, and obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. Valid 1-hour averages must be obtained for at least 75% of the operating hours per day for 90% of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel. If the facility does not obtain the minimum data as specified here, the facility will be considered in violation of the data collection requirement of 40 C.F.R. § 60.1825, and must notify the Department according to § 60.1885(e). [40 C.F.R. § 60.1825]

The maximum demonstrated particulate matter control device temperature shall be determined during each subsequent annual performance test, during which compliance with the PCDD/PCDF emission limit is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved. At no time shall the temperature of the flue gas stream at the inlet of the baghouse exceed 450 °F. [40 C.F.R. §§ 60.1845 and 60.1940]

4. Carbon Feed Rate
Carbon injection is used to control emissions of PCDD/PCDF and mercury. MMWAC shall meet the following requirements for the carbon injection system:

a. Subpart BBBB requires that the facility select a carbon injection system operating parameter that can be used to calculate carbon feed rate. MMWAC has selected the screw feeder speed and has established a relationship, regularly calibrated, between the screw feeder speed and the carbon feed rate in order to calculate the carbon feed rate from the monitored screw feeder speed level.
b. During each dioxins/furans and mercury stack test, MMWAC has and shall continue to determine the average carbon feed rate in pounds per hour for that test. The facility shall also identify the average carbon screw feeder speed that correlates to the carbon feed rate at which dioxins/furans and mercury emissions test in compliance with emission limits. Each subsequent, successful stack test

will establish the new standard for the carbon feed rate (the screw feeder speed) until a subsequent stack test changes the value.

c. MMWAC shall continuously (see definition below) monitor the carbon screw feeder speed during all periods when the unit is operating and combusting waste, and calculate the 8-hour block average carbon feed rate in pounds per hour, based on the screw feeder speed. When calculating the 8-hour block average, MMWAC shall exclude hours when the unit is not operating and include hours when the unit is operating but the carbon feed system is not working correctly. This information and supporting calculations shall be included in the records kept by the facility.

[40 C.F.R. § 60.1820]

Continuously shall mean that the facility determines the carbon screw feeder speed in 1-hour arithmetic averages and obtain at least two data points per hour to calculate a valid 1-hour arithmetic average. Valid 1-hour averages must be obtained for at least 75% of the operating hours per day for 90% of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste or refuse-derived fuel. If the facility does not obtain the minimum data as specified here, the facility will be considered in violation of the data collection requirement of Subpart BBBB, § 60.1825, and must notify the Department according to § 60.1885(e). [40 C.F.R. § 60.1825]

J. Operator Training and Certification

1. Each chief facility operator and shift supervisor must obtain and maintain a current provisional operator certification QRO-1-1994 through the ASME or a current provisional operator certification through a State approved program. [40 C.F.R. § 60.1675]

2. At least one fully certified chief facility operator, fully certified shift supervisor, or a provisionally certified chief facility operator or provisionally certified shift supervisor who is scheduled to take the full certification exam, must be at the facility during operations by the timetable set forth in 40 C.F.R. § 60.1675. If one of the above persons leaves the facility during their operating shift, a provisionally certified control room operator who is on-site at the facility may fulfill the above requirements. [40 C.F.R. § 60.1680]

3. MMWAC shall establish a program in accordance with 40 C.F.R. § 60.1660 to review the operating manual with each person who has responsibilities affecting the operation of the units, including but not limited to chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers. Initial training shall be conducted prior to the day the person

assumes responsibilities affecting Unit operation. Training is required annually following the initial training. [40 C.F.R. § 60.1660]

4. MMWAC must have a site-specific operating manual, as required by the timetable set forth in 40 C.F.R. § 60.1660, which shall be updated and reviewed annually, and all persons who responsibilities affect the operation of the facility must be familiar with this document. The manual shall contain the following: [40 C.F.R. §§ 60.1660 and 60.1665]

   a. A summary of the applicable standards in the facility's air emission license;

   b. A description of basic combustion principles applicable to the Combustors;

   c. Procedures for receiving, handling, and feeding municipal solid waste;

   d. Procedures to be followed during periods of startup, shutdown, and malfunction of the Combustors;

   e. Procedures for maintaining proper combustion air supply levels;

   f. Procedures for operating the Combustors within the standards established in the air emission license;

   g. Procedures for responding to periodic upset or off-specification conditions;

   h. Procedures for minimizing particulate matter carryover;

   i. Procedures for handling ash;

   j. Procedures for monitoring Combustors' emissions; and

   k. Reporting and recordkeeping procedures.

5. The operating manual shall be kept in a readily accessible location for all persons required to undergo training. The operating manual and records of training shall be available for inspection by the Department or the EPA. [40 C.F.R. § 60.1670]

K. Operating Practices [40 C.F.R. §§ 60.1690 and 60.1940]

1. On a four-hour block average basis, each Combustor operating load level shall not exceed 110% of the maximum demonstrated Combustor load level, measured as steam flow or feed water flow and demonstrated during the most recent PCDD/PCDF testing. "Maximum demonstrated Combustor load" means the highest four-hour arithmetic average Combustor load achieved during four

consecutive hours during the most recent PCDD/PCDF performance test, demonstrating compliance with the applicable limit for PCDD/PCDF.

2. The four-hour block average fabric filter (baghouse) inlet temperature shall not exceed 17 °C above the maximum demonstrated baghouse inlet temperature as determined during PCDD/PCDF testing. "Maximum demonstrated baghouse inlet temperature" means the highest four-hour arithmetic average flue gas temperature measured at the baghouse inlet during four consecutive hours during the most recent PCDD/PCDF performance test demonstrating compliance with the applicable limit for the PCDD/PCDF.

3. MMWAC shall maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent PCDD/PCDF test.

4. MMWAC shall evaluate the total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to the facility must be at or above the required quarterly usage of carbon. The required quarterly carbon usage may be evaluated on a per Combustor basis. Calculation of the required quarterly usage of carbon shall be performed in accordance with 40 C.F.R. § 60.1935(f), Equations 4 or 5.

5. MMWAC is exempt from the operating limits above during the two weeks prior to and during PCDD/PCDF and/or mercury testing, or if waived by the Department for purposes of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

6. Pit Venting [A-378-70-A-I, July 1, 2002, BPT] **Enforceable by State-only**

   a. MMWAC shall operate primary and secondary fans to move air from the pit, and to provide combustion air and destroy odors emanating from the MSW. During periods when one or both of the Combustors are not in operation, the induced draft fans will continue to operate, allowing a slight negative pressure in the pit to vent some or all of the pit air through the primary and secondary ducts, through the Combustor, and out of the stack. However, during maintenance outages when the units are shut down, the induced draft fans may not always run, as may be required to facilitate specific maintenance activities. Such instances shall be documented, and such documentation shall be made available to the Department upon request.

b. During periods when MSW is not being received, the truck entry doors shall remain in the closed position except when operating conditions require that they be open to permit rolling stock or trailers to move into or out of the building, with the following allowed exceptions:

i. Pit doors and smoke vents on the pit roof may be in the open position to the extent necessary for performing testing and maintenance, and for limited times during maintenance outages.

ii. In addition, pit doors and smoke vents may be in the open position as necessary when birds are accidentally admitted to the pit and have difficulty getting out, to facilitate the freeing of the wildlife in as brief and effectual a manner as possible.

c. MMWAC shall not use the bunkers as a waste storage area during times of prolonged facility outages or maintenance. There shall be no outside storage of MSW.

7. Smoke Ventilators [A-378-70-A-I, July 1, 2002, BPT] **Enforceable by State-only**

a. MMWAC shall maintain three smoke ventilators at the facility in locations as have been deemed necessary by the Auburn Fire Department in case of an emergency.

b. For all smoke ventilators, MMWAC shall maintain the smoke ventilators in the weather-tight closed position at all times and operate only in the event of an emergency, except for the purposes as described in 6.b above.

L. Startup, Shutdown, and Malfunction

1. Compliance and performance testing standards apply at all times, except during periods of startup, shutdown, and malfunction. Startup, shutdown, or malfunction are limited to three hours per occurrence. A maximum of three hours of test data can be dismissed from compliance during periods of startups, shutdowns, and malfunctions. [40 C.F.R. §§ 60.1695 and 60.1710]

2. The stack O_2 levels during warmup and startup that exceed 14.0% may be replaced with a value of 14.0. MMWAC is licensed to recalculate the hourly ppmdv averages for SO_2, NO_x, and CO if the observed stack oxygen is greater than 14.0% during warmup and startup and to use the recalculated number for compliance purposes. Subsequent to startup, the use of actual O_2 readings will be resumed. Emission concentrations shall be corrected to 7.0% O_2 (dry basis). [A-378-70-A-I, July 1, 2002, BPT]

3. Startup, Shutdown, and Malfunction Plan [A-378-70-A-I, July 1, 2002, BPT]

   a. MMWAC shall keep their written startup, shutdown, and malfunction plan on record and shall make it available for review to EPA or the Department upon request. In addition, if the startup, shutdown, and malfunction plan is revised, MMWAC shall keep previous versions of the plan on record and made available for inspection upon request.

   b. MMWAC shall include in the operating manual a written startup, shutdown, and malfunction plan that describes detailed procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process equipment and/or malfunctioning air pollution control equipment used to comply with the relevant standards. The plan shall identify all routine or otherwise predictable continuous monitoring system malfunctions. This plan shall be developed by MMWAC by the timetable set forth in 40 C.F.R. § 60.1660.

   c. During periods of startup, shutdown, and malfunction, MMWAC shall operate and maintain each Combustor (including associated air pollution control equipment) in accordance with the procedures specified in the start-up, shutdown, and malfunction plan.

   d. When actions taken during a startup, shutdown, or malfunction are consistent with the procedures specified in the startup, shutdown, and malfunction plan, MMWAC shall maintain records for that even that demonstrates that the procedures specified in the plan were followed. These records shall include records of occurrence and duration for each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment.

   e. If an action taken during a startup, shutdown, or malfunction is not consistent with the procedures specified in the startup, shutdown, or malfunction plan, MMWAC shall record the actions taken for that event and shall report such actions to the Department within two working days after commencing actions inconsistent with the plan, followed by a letter to the Department within seven working days after the end of the event.

   f. If the startup, shutdown, and malfunction plan fails to address an event that meets the characteristics of a malfunction but was not included in the plan at the time it was developed, MMWAC shall revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and

a program of corrective action for similar malfunctions of process or air pollution control equipment.

M. Continuous Emissions Monitoring Systems (CEMS) and Continuous Opacity Monitoring Systems (COMS) [40 C.F.R. § 60.1715]

For MSW Combustor Units #1 and #2, the following table lists the required continuous emission monitoring systems (CEMS) and the continuous opacity monitoring systems (COMS).

To Continuously Monitor	Units of Measurement	Origin and Authority
NO_x	ppm and lb/hr	06-096 C.M.R. ch. 117 and 06-096 C.M.R. ch. 138
SO_2	ppm and lb/hr	06-096 C.M.R. ch. 117
O_2	ppm	
CO	ppm and lb/hr	
Opacity	%	

1. Performance Specifications

All CEMS and COMS shall meet the sampling and performance criteria specified in 40 C.F.R. Part 51, Appendix P, and shall be operated in accordance with 40 C.F.R. Part 60, Appendices B and F, and 06-096 C.M.R. ch. 117 at all times each Combustor is in operation.

a. If a CEMS is recording accurate and reliable data less than 90% of the source-operating time within any quarter of a calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the CEMS was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions. [06-096 C.M.R. ch. 117 § 5(A)]

b. If a COMS is recording accurate and reliable data less than 95% of the source-operating time within any quarter of a calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the COMS was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions. [06-096 C.M.R. ch. 117 § 5(B)]

c. Conduct RATA and/or Performance Audits in accordance with 06-096 C.M.R. ch. 117. [06-096 C.M.R. ch. 117 § 4]

d. MMWAC shall develop and maintain an updated quality assurance plan for all CEMS and COMS in accordance with 40 C.F.R. Part 60, Appendix F and 06-096 C.M.R. ch. 117. [06-096 C.M.R. ch. 117 § 4]

2. Recordkeeping [06-096 C.M.R. ch. 117 § 6 and A-378-70-A-I, July 1, 2002, BPT]

For all of the CEMS, COMS, equipment parameter monitoring, and recording required by this license, MMWAC shall maintain records of the most current six year period. The records shall include the following information:

a. Documentation which shows monitor operational status during all source operating time, including specifics for calibration and audits; and

b. A complete data set of all monitored parameters as specified in this license. All parameter records shall be made available to the Department upon request.

c. For all CEMS and COMS, the records shall include the following:
- Documentation that all CEMS and COMS are continuously accurate, reliable, and operated in accordance with applicable provisions of 06-096 C.M.R. ch. 117, 40 C.F.R. Part 60, Subpart BBBB, 40 C.F.R. Part 51, Appendix P, and 40 C.F.R. Part 60, Appendices B and F;
- Records of emission measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS and COMS, as required by 40 C.F.R. Part 51, Appendix P;
- Upon the written request by the Department, a report or other data indicative of compliance with the applicable emission standard for those periods when the CEMS or COMS were not in operation or produced invalid data. Evidence indicating normal operations shall constitute such reports or other data indicative of compliance with applicable emission standards. In the event the Department does not concur with MMWAC's compliance determination, MMWAC shall, at the Department's request, provide additional data and shall have the burden of demonstrating that the data are indicative of compliance with the applicable standard; and
- A 24-hour block average shall be calculated as the arithmetic average of not more than 24 one-hour block periods. Only one 24-hour block average shall be calculated for one day, beginning at midnight. A valid 24-hour block average must contain at least 12 hours during which operation occurred. Hours in which no operation occurs shall not be included in the 24-hour block average calculation.

N. Stack Testing Requirements

1. Compliance with the limits established in this air emission license shall be demonstrated by stack testing in accordance with the following:

Pollutant	Units of Limits	Method[a]	Schedule	Enforceability
PM	mg/dscm @ 7% O_2	Method 5	Every three years	--
PM_{10}	lb/hr	Method 5 or Method 201, and Method 202	When requested by the Department[b]	**Enforceable by State-only**
$PM_{2.5}$		Method 5, Method 201, or Method 201A, and Method 202		
SO_2	ppmdv @ 7% O_2	Method 6	When requested by the Department	
NO_x		Method 7		
CO	ppmdv @ 7% O_2	Method 10	When request by the Department	**Enforceable by State-Only**
VOC		Method 25A		
HCl		Method 26		
PCDD/PCDF	ng/dscm @ 7% O_2	Method 23	Annually[c]	--
Cd	mg/dscm @ 7% O_2	Method 29		
Hg				
Pb				
Sb, As, Be, Cr (hex), Cr (total), Cu, Fluorides (as HF), Formaldehyde, Ni, Se, and Zn	lb/hr	Method 29	When requested by the Department	**Enforceable by State-only**
Sulfur acid mist		Method 8		

a. Test Methods are in accordance with 40 C.F.R. Part 60, Appendix A or as approved by the Department [06-096 C.M.R. ch. 121]
b. MMWAC shall conduct an emissions test for PM_{10} if emissions test results for PM show that the emissions are greater than 80% of the licensed limit. [A-378-70-A-I, July 1, 2002, BPT]
c. See item 5 below for alternate testing schedules.

2. For Combustor Units #1 and 2, MMWAC shall conduct performance testing on each effluent, or the combined effluent, as applicable. [06-096 C.M.R. ch. 121 § 5(D)(2)]

3. The procedures and test methods used to determine compliance with the emission limits for particulate matter, cadmium, lead, opacity, fugitive ash, mercury, PCDD/PCDF, and hydrogen chloride shall be in accordance with 06-096 C.M.R. ch. 121 and Subpart BBBB. [40 C.F.R. § 60.1785]

4. MMWAC shall conduct a performance test for compliance with the emission limits for particulate matter, cadmium, lead, mercury, PCDD/PCDF, and hydrogen chloride on an annual basis (no later than 13 calendar months following the previous performance test). [40 C.F.R. § 60.1785]

5. If stack tests for a given pollutant over three consecutive years show the facility in compliance with the emission limit, stack testing for that pollutant is not required for the next two years. However, another stack test must be completed within 36 months of the anniversary date of the third consecutive stack test that demonstrated compliance with the emission limit. This provision applies to all pollutants subject to stack testing requirements: PCDD/PCDF, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash.

   If a stack test shows noncompliance with an emission limit, annual stack testing for that pollutant must be performed until stack tests for three consecutive years show compliance with the emission limit for that pollutant.

   [40 C.F.R. § 60.1795(a)]

6. When determining percent reductions for mercury and hydrogen chloride emission, both inlet and outlet concentrations of the control device shall be measured during stack testing. [06-096 C.M.R. ch. 121 § 7(A)]

7. Stack test results shall be submitted to the Department in accordance with the requirements of 06-096 C.M.R. ch. 121. [06-096 C.M.R. ch. 121 § 7(C)]

O. Performance Test Protocol

For any performance testing required by this license, MMWAC 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. 140, BPT]

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

P. Recordkeeping and Reporting [06-096 C.M.R. ch. 117 and 40 C.F.R. §§ 60.1830 and 60.1860]

1. MMWAC shall collect the minimum amount of monitoring data required in accordance with 40 C.F.R. § 60.1825, as specified in the applicable sections above.

2. MMWAC shall maintain additional Carbon Feed Rates records, as specified here: [40 C.F.R. §60.1855]

   a. *Records of Average Carbon Feed Rate*
   Document five items:
      i. Average carbon feed rate in pounds per hour during all stack tests for PCDD/PCDF and mercury emissions. Include supporting calculations in the records.
      ii. Average operating level during all stack tests for PCDD/PCDF and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.
      iii. All 8-hour block average carbon feed rates in pounds per hour calculated from the monitored operating parameter.
      iv. Total carbon purchased and delivered to MMWAC for each calendar quarter. If MMWAC chooses to evaluate total carbon purchased and delivered per Combustor, MMWAC shall record the total carbon purchased and delivered for each Combustor. Include supporting documentation.
      v. Required quarterly usage of carbon for MMWAC, calculated using equation 4 or 5 in § 60.1935(f). If MMWAC chooses to evaluate required quarterly usage for carbon Combustor, MMWAC shall record the required quarterly usage for Combustor. Include supporting calculations.

   b. *Records of Low Carbon Feed Rates*
   Document three items:
      i. The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for PCDD/PCDF or mercury emissions (whichever has a higher feed rate).
      ii. Reasons for the low carbon feed rates.
      iii. Corrective actions taken or being taken to meet the 8-hour average carbon feed rate requirement.

   c. *Records of Minimum Carbon Feed Rate Data*
   Document three items:
      i. Calendar dates for which the minimum amount of carbon feed rate data required under § 60.1825 was not collected.
      ii. Reasons the minimum data was not collected.

iii. Corrective actions taken or being taken to get the required amount of data.

d. *Records of Exclusions*
Document each time data was excluded from the calculation of average carbon feed rates and the reasons the data were excluded.

e. *Records of Calendar Dates*
Include the calendar date on each record.

3. MMWAC shall maintain records of the following information, for each emission unit for a period of at least six years [06-096 C.M.R. ch. 117 § 6 and Subpart BBBB]:

a. The calendar date of each record.

b. The emission concentrations and parameters measured using continuous monitoring systems as required by this license.

4. The following measurements shall be recorded and be available for submittal to the Department or review on-site by inspector. [40 C.F.R. § 60.1850(a)]

a. All six-minute average opacity levels

b. All one-hour average SO_2 emission concentrations

c. All one-hour average NO_x emission concentrations

d. All one-hour average CO emission concentrations

e. All one-hour average load levels of each Combustor

f. All one-hour average flue gas temperatures at the inlet of the fabric filter

5. The average concentrations and percent reductions, as applicable, specified in the following paragraphs shall be computed, recorded, and available for submittal to the Department or review on-site by a Department representative. [40 C.F.R. § 60.1850(b)]

a. All 24-hour daily block geometric average SO_2 emission concentrations or all 24-hour daily geometric average percent reductions of sulfur dioxide emissions.

b. All 24-hour daily block arithmetic average NO_x emission concentrations.

c. All 4-hour block or 24-hour daily arithmetic average CO emission concentrations.

d. All 4-hour block arithmetic average load levels for each Combustor.

e. All 4-hour block arithmetic average flue gas temperature at the inlet of the fabric filter.

6. MMWAC shall maintain documentation of identification of the calendar dates and averaging periods when any of the average emission concentrations, percent reductions, operating parameters recorded, or opacity levels recorded are above the applicable limits, with reasons for such exceedances and a description of the corrective action taken. [40 C.F.R. § 60.1850(c)]

7. MMWAC shall maintain documentation of identification of the calendar dates for which the minimum number of hours of any of the following information has not been obtained, reasons for not obtaining the minimum quantity of data, and a description of corrective actions taken: [40 C.F.R. § 60.1850(d)]

   a. SO_2 emissions data

   b. NO_x emissions data

   c. CO emissions data

   d. Combustor load level data

   e. Flue gas temperature at the inlet to the fabric filter

8. MMWAC shall maintain documentation of each time that data was excluded from the calculation of averages for any of the following: [40 C.F.R. § 60.1850(e)]

   a. SO_2 emissions data

   b. NO_x emissions data

   c. CO emissions data

   d. Combustor load level data

   e. Flue gas temperature at the inlet to the fabric filter

9. MMWAC shall maintain documentation of the results of daily drift tests and quarterly accuracy determinations (in accordance with 40 C.F.R. Part 60,

Appendix F, Procedure 1) for SO_2, NO_x, and CO continuous emissions monitoring systems. [40 C.F.R. § 60.1850(f)]

10. MMWAC shall submit annual reports, plus semiannual reports for any emission or parameter level that does not meet the limits specified in section 5 of this part. [40 C.F.R. § 60.1860]

11. MMWAC shall submit the annual report no later than February 1 of each year the follows the calendar year in which the emissions data was collected. [40 C.F.R. § 60.1880] Standard Condition (13) requires that the report be submitted to the Department and EPA by January 31. Therefore, January 31 shall be the deadline for the annual report.

12. MMWAC shall include a summary of the data collected for all pollutants and parameters regulated in Subpart BBBB in the annual report, as well as the items listed in 40 C.F.R. § 60.1885. [40 C.F.R. § 60.1885]

(15) **Ash Handling System**

A. Visible Emission Limits

There shall be no visible emissions from the Ash Handling System for more than 5% of the observation period (i.e., 9 minutes in any 3-hour period) [06-096 C.M.R. ch. 121 § 7(A)(7)]

Visible emissions from the Ash Handling System shall not exceed 5% opacity (based on three, one-hour observation periods). [40 C.F.R. Part 60, Subpart BBBB, Table 4]

Compliance with the opacity emission limit for the Ash Handling System shall be demonstrated using EPA Reference Method 22 in 40 C.F.R. Part 60, Appendix A once every 2.5 years. The testing to the Ash Handling System shall be conducted no sooner than 12 months after the most recent successful test and no later than 30 months after the most recent test, such that two test are completed during each five-year period.

B. Monitoring and Operational Practices

EPA Reference Method 22 shall be used on the ash load-out building for determining compliance with the fugitive ash emission limit. The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring ash from the Combustors to the area where ash is stored or loaded into containers or trucks. The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. The average shall be used to determine compliance with the fugitive ash limit.

(16) **Lime Silo**

A. Visible Emissions

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

B. Monitoring and Operational Practices

MMWAC shall maintain and operate a baghouse to control emissions during lime silo filling operations and shall not conduct filling operations without the proper use of the baghouse. MMWAC shall maintain monthly records of the quantity of lime loaded to the silo. [A-378-70-A-I, July 1, 2002, BPT] **Enforceable by State-only**

(17) **Emergency Diesel Generator and Fire Pump Engine**

A. The Emergency Diesel Generator and the Fire Pump Engine are licensed to fire distillate fuel. [A-378-70-B-R/A (August 13, 2013), BPT]

B. Fuel Sulfur Content

1. The fuel oil sulfur content for the Emergency Diesel Generator and the Fire Pump Engine shall be limited to 0.0015% sulfur by weight. [38 M.R.S. § 603-A(2)(A)(3)]
2. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of fuel in the tank on-site. [06-096 C.M.R. ch. 140, BPT]

C. Emissions shall not exceed the following limits [A-378-70-B-R/A, August 12, 2013, BPT]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Emergency Diesel Generator	0.38	0.38	0.38	0.005	14.11	3.04	1.15
Fire Pump Engine	0.21	0.21	0.21	0.003	7.54	1.62	0.62

D. Visible Emissions

Visible emissions from the Emergency Diesel Generator and the Fire Pump Engine shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time MMWAC shall either meet the normal operating visible

emissions standard or the following work practice standards and alternative visible emissions standard.

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

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

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

[06-096 C.M.R. ch. 101, § 4(A)(4)]

E. The Emergency Diesel Generator and the Fire Pump Engine shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:

1. MMWAC shall meet the following operational limitations for each of the compression ignition emergency engines (Emergency Diesel Generator and Fire Pump Engine):

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

   Records shall be maintained documenting compliance with the operational limitations.

   [40 C.F.R. § 63.6602 and Table 2(c); and A-378-70-B-R/A, August 12, 2013, BPT]

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

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

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

   a. The engines shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and A-378-70-B-R/A, August 12, 2013, BPT]

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

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

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

(18) **General Process Sources**

A. 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)]

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

(19) **Fugitive Emissions**

A. MMWAC 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. MMWAC 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)]

(20) **CEMS Recordkeeping**

A. The licensee shall maintain records documenting that all CEMS and COMS are continuously accurate, reliable, and operated in accordance with 06-096 C.M.R. ch. 117; 40 C.F.R. Part 51, Appendix P; and 40 C.F.R. Part 60, Appendices B and F;

B. The licensee shall maintain records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS and COMS as required by 40 C.F.R. Part 51, Appendix P; and

C. The licensee shall maintain records of other data indicative of compliance with the applicable emission standards for those periods when the CEMS or COMS were not in operation or produced invalid data. In the event the Department does not concur with the licensee's compliance determination, the licensee shall, upon the Department's request, provide additional data, and shall have the burden of demonstrating that the data is indicative of compliance with the applicable standard.

[06-096 C.M.R. ch. 140] **Enforceable by State-only**

(21) **Quarterly Reporting**

The licensee shall submit a Quarterly Report to the Department within 30 days after the end of each calendar quarter, detailing the following for the control equipment, parameter monitors, Continuous Emission Monitoring Systems (CEMS), and Continuous Opacity Monitoring Systems (COMS) required by this license. [06-096 C.M.R. ch. 117]

A. All control equipment downtimes and malfunctions;
B. All CEMS or COMS downtimes and malfunctions;
C. All parameter monitor downtimes and malfunctions;

D. All excess events of emission and operational limitations set by this Order, Statute, state regulations, or federal regulations, as appropriate. The following information shall be reported for each excess event;
   1. Standard exceeded;
   2. Date, time, and duration of excess event;
   3. Amount of air contaminant emitted in excess of the applicable emission standard, expressed in the units of the standard;
   4. A description of what caused the excess event;
   5. The strategy employed to minimize the excess event; and
   6. The strategy employed to prevent reoccurrence.

E. A report certifying there were no excess emissions, if that is the case.

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

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

A. The licensee shall submit to the Department semiannual reports which are due on **January 31st** and **July 31st** of each year. The facility's designated responsible official must sign this report.
B. The semiannual report shall be considered on-time if the postmark of the submittal is on or before the due date or if the report is received by the Department within seven calendar days of the due date.
C. Each semiannual report shall include a summary of the periodic monitoring required by this license.
D. Each semiannual report shall include the annual capacity factor of Combustor Units #1 and #2 for each fuel.
E. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

(23) **Annual Compliance Certification**

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

The annual compliance certification shall be considered on-time if the postmark of the submittal is on or before the due date or if the report is received by the Department within seven calendar days of the due date. Certification of compliance is to be based on the stack testing or monitoring data required by this license. Where the license does not require such data, or the license requires such data upon request of the Department and the Department has not requested the testing or monitoring, compliance may be certified based upon other

reasonably available information such as the design of the equipment or applicable emission factors. [06-096 C.M.R. ch. 140]

(24) **Annual Emission Statements**

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

1. The amount of municipal waste fired in MSW Combustor Units #1 and #2 (each) on an annual basis;
2. The amount of natural gas fired in MSW Combustor Units #1 and #2 (each) on a monthly and 12-month rolling total basis;
3. The amount of distillate fuel fired in Emergency Diesel Generator and Fire Pump Engine (each) on a monthly basis;
4. The sulfur content of the distillate fuel fired in the Emergency Diesel Generator and the Fire Pump Engine;
5. Hours each emission unit was active or operating on a monthly basis.

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

C. MMWAC shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). MMWAC 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). Reporting year 2026 is the next HAP emissions reporting year (due May 15, 2027). [38 M.R.S. § 353-A(1-A)]

(25) **General Applicable State Regulations**

The licensee is subject to the State regulations listed below.

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

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

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

(27) **Asbestos Abatement**

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

(28) **Expiration of a Part 70 License**

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

B. Pursuant to Title 5 M.R.S. §10002, and 06-096 C.M.R. ch. 140, the Part 70 license shall not expire, and all terms and conditions shall remain in effect until the Department takes final action on the renewal application of the Part 70 license. An existing source submitting a complete renewal application under 06-096 C.M.R. ch. 140 prior to the expiration of the Part 70 license will not be in violation of operating without a Part 70 license. **Enforceable by State-only**

(29) **New Source Review**

MMWAC is subject to all previous New Source Review (NSR) requirements summarized in this Part 70 air emission license, and the NSR requirements remain in effect even if this 06-096 C.M.R. ch. 140 Air Emissions License, A-378-70-F-R, expires.

DONE AND DATED IN AUGUSTA, MAINE THIS 16th DAY OF APRIL, 2025.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for _____
MELANIE LOYZIM, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 12, 2018
Date of application acceptance: January 18, 2018

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