



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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**Mid-Maine Waste Action Corporation  
Androscoggin County  
Auburn, Maine  
A-378-70-B-R/A**

**Departmental  
Findings of Fact and Order  
Part 70 Air Emission License  
Renewal / Amendment**

**FINDINGS OF FACT**

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

**I. REGISTRATION**

A. Introduction

FACILITY	Mid-Maine Waste Action Corporation (MMWAC)
LICENSE TYPE	Part 70 License Renewal Part 70 Section 502(b)(10) Change
NAICS CODES	562213, 562920
NATURE OF BUSINESS	Refuse Systems: Municipal Waste Combustion and Materials Recovery
FACILITY LOCATION	110 Goldthwaite Road, Auburn, Maine

The Mid-Maine Waste Action Corporation (MMWAC) was created by twelve area municipalities in 1986 to process and dispose of residential and commercial waste. The waste-to-energy process converts solid waste into an ash residue, which minimizes landfill reliance in the State and produces electricity from the fuel value of the trash. MMWAC produces its own electricity from the waste that is incinerated and sells excess power to the local power grid.

MMWAC has the potential to emit more than 100 tons per year (TPY) of nitrogen oxides (NO<sub>x</sub>); therefore, the source is a major source for this criteria pollutant. MMWAC has the potential to emit more than 10 TPY of a single hazardous air pollutant (HAP) and more than 25 TPY of combined HAP; therefore, the source is 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)**

<b>MSW Combustor</b>	<b>Max. Heat Input Capacity (each)</b>	<b>Max. Firing Rate (each)</b>	<b>Manuf. Date</b>	<b>Install. Date</b>	<b>Stack #</b>
Unit #1	47.7 MMBtu/hr firing waste*	125 tons/day municipal waste	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

\* (5200 Btu/lb x 9173 lb/hour)

**Diesel Generators and Engines**

<b>Equipment</b>	<b>Max. Heat Input Capacity (MMBtu/hr)*</b>	<b>Output</b>	<b>Fuel Type, % sulfur</b>	<b>Mfr. Date</b>	<b>Install. Date</b>
Emergency Diesel Generator	3.2	456 hp (300 kW)	Diesel, 0.05% **	1991	1991
Fire Pump Engine	1.7	244 hp		11/1990	1991

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

\*\* Prior to January 1, 2016, or by the date otherwise stated in 38 MRSA §603-A(2)(A)(3), the distillate fuel oil fired at the facility shall be ASTM D396 compliant #2 fuel oil (maximum sulfur content of 0.5% by weight). Per 38 MRSA §603-A(2)(A)(3), beginning January 1, 2016, or on the date specified in the statute, the distillate fuel oil fired at the facility shall have a maximum sulfur content limit of 0.005% by weight (50 ppm); and beginning January 1, 2018, or on the date specified in the statute, the distillate fuel oil fired at the facility shall have a maximum sulfur content limit of 0.0015% by weight (15 ppm). The specific dates contained in this paragraph reflect the current dates in the statute as of the effective date of this license; however, if the statute is revised, the facility shall comply with the revised dates upon promulgation of the statute revision.

Diesel fuel sulfur content shall not exceed 0.05% by weight until 12/31/2015; shall not exceed 0.005% by weight from 1/1/2016 until 12/31/2017; and shall not exceed 0.0015% by weight on and after 1/1/2018, or as otherwise specified in 38 MRSA §603-A(2)(A)(3).

**Process Equipment**

<b>Equipment</b>	<b>Maximum Process Rate</b>	<b>Pollution Control Method</b>
Ash Handling Conveyor and Truck Loading Conveyor	54 ton/day (approximately)	Water conditioning

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 CMR 140 (as amended).

**C. Application Classification**

The application for MMWAC is for the renewal of their existing Part 70 Air Emission License. MMWAC has also requested the amendment of their Part 70 license to include operational changes allowed under the Clean Air Act, Section 502 (b)(10). These operational changes requested include four parts, as follows:

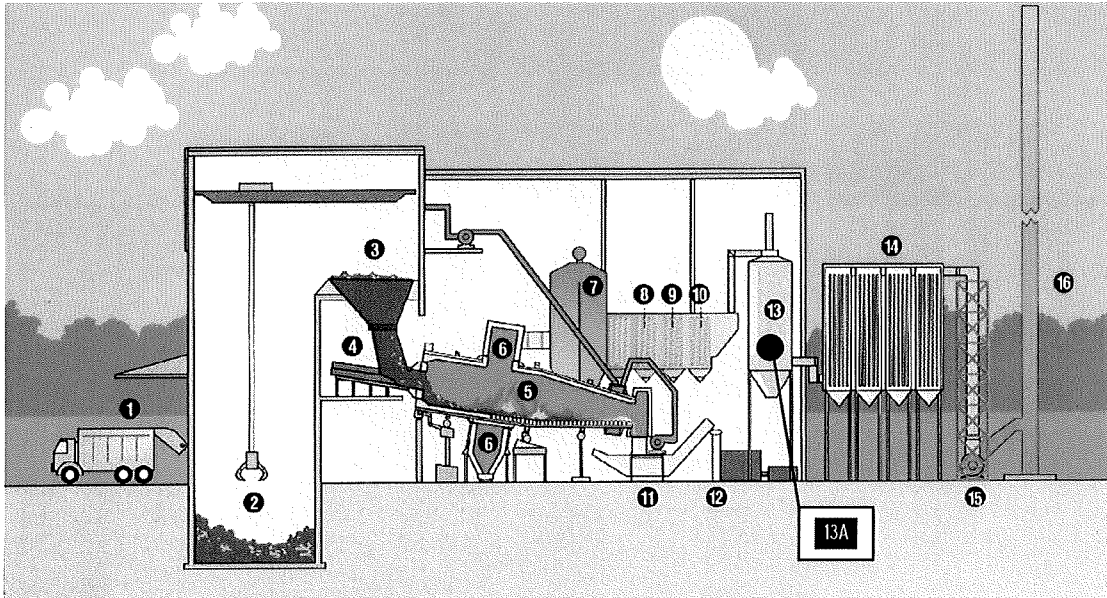
1. Elimination of the 1800°F minimum temperature requirement;
2. Changing required PM stack test frequency;
3. Revision of the tonnage throughput provision; and
4. To allow smoke vents and pit doors to be open at certain times.

These requests do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements. Therefore, this license is a Part 70 License renewal, which includes Part 70 Section 502 (b)(10) Changes issued under *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (as amended).

**D. Facility Description**

The following description references numbered units and locations on the accompanying diagram of the MMWAC facility. 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.

Trucks carrying solid waste from participating municipalities are weighed at the scale house before entering a covered tipping area (1). Trucks unload garbage into a pit (2) large enough to hold approximately 600 tons of solid waste, which is equal to three days' supply for the furnaces. An overhead crane, or grapple, (2) transfers the garbage into a chute, or feed hopper (3), that feeds the furnace. The grapple is also used to remove any unacceptable waste from the plant that has accidentally been dumped into the pit. The waste is metered into the furnace by a ram feeder (4).



During combustion, the entire furnace, or combustor, (5) oscillates within a 210 degree arc, causing the trash to tumble some 40 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 then into the furnace. This causes a negative pressure inside the pit and tipping area, which minimizes the escaping of odors and dust. Combustion occurs in the furnace (5) and the tranquilization chamber (6), where temperatures are maintained at approximately 1800 °F to minimize generated odors and organic compounds.

The combustion process reduces the refuse volume by about 90% by reducing it to ash. Hot ash residue falls from the bottom of the furnace into a water-filled tank, where it is “quenched”. This area is called the ash extractor (11) and is the beginning of the ash conveyor system (12), which transports the ash residue to a metal scalper, which removes recyclable material. Fly ash (ash removed from the gaseous emissions from the combustion process) is conditioned with water to minimize dusting, and then the combined ash streams are conveyed to a container for transport to a secure landfill.

The 1800 °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 and 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.

Once heat energy has been extracted, exhaust gases are passed through air pollution control equipment before being released to the atmosphere. Acid gases 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 large fabric filters (14) located in the baghouse which contains hundreds of fabric filter bags. Particles captured by the filters (fly ash) 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 stack (16).

E. General Facility Requirements

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

<b>Citation</b>	<b>Requirement Title</b>
06-096 CMR 101	Visible Emissions
06-096 CMR 102	Open Burning
06-096 CMR 103	Fuel Burning Equipment Particulate Emission Standard
06-096 CMR 106	Low Sulfur Fuel
06-096 CMR 110	Ambient Air Quality Standard
06-096 CMR 116	Prohibited Dispersion Techniques
06-096 CMR 117	Source Surveillance
06-096 CMR 130	Solvent Degreasers
06-096 CMR 137	Emission Statements
06-096 CMR 138	Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides
06-096 CMR 140	Part 70 Air Emission License Regulations
40 CFR Part 60, Subpart BBBB	Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999
40 CFR Part 63, Subpart ZZZZ	NESHAPs for Stationary Reciprocating Internal Combustion Engines
40 CFR Part 64	Compliance Assurance Monitoring
40 CFR Part 70	State Operating Permit Programs

Note: CMR = Code of Maine Regulations  
CFR = Code of Federal Regulations

F. Units of Measurement

The following units of measurement are used in this license:

g/s	grams per second
m/s	meters per second
gr/dscf	grains per dry standard cubic foot
mg/dscm	milligrams per dry standard cubic meter
ng/dscm	nanograms per dry standard cubic meter
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
ppm	parts per million
lb/hr	pounds per hour
lb/MMBtu	pounds per million British Thermal Units
lb/ton	pounds per ton
MMBtu/hr	million British Thermal Units per hour
MW	megawatt
tons/day	tons per day
tpy	tons per year

II. **BEST PRACTICAL TREATMENT (BPT) and EMISSION STANDARDS**

A. Introduction to BPT

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 06-096 CMR 100 (as amended). 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 following:

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

B. NO<sub>x</sub> Reasonably Available Control Technology (RACT)

*Reasonably Available Control Technology for Facilities that Emit Nitrogen Oxides*, 06-096 CMR 138 (as amended) is applicable to sources that have the potential to emit quantities of NO<sub>x</sub> equal to or greater than 100 tons/year.

Amendment A-378-72-E-A, issued to the facility on October 16, 1996, addressed NO<sub>x</sub> RACT requirements. MMWAC is subject to Section 3(G) of 06-096 CMR 138; however, the facility opted to comply with the Alternate RACT Determination according to Section 3(I) of 06-096 CMR 138. Control technologies evaluated were found to be economically unfeasible. Units #1 and

#2 were determined to be meeting NO<sub>x</sub> RACT via optimum combustion practices. RACT emission rates for NO<sub>x</sub> from the two combustors were determined and established in the 1996 license amendment.

The emergency diesel units at the facility are each limited to 500 hours per year of operation, on a 12-month rolling total basis, to keep NO<sub>x</sub> emissions under 10 tons/year per unit and thus exempt per 06-096 CMR 138 (1)(B)(1).

The NO<sub>x</sub> RACT requirements for MMWAC are incorporated into this renewal.

C. VOC Reasonably Available Control Technology (RACT)

*Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds*, 06-096 CMR 134 (as amended) is applicable to sources that have the potential to emit quantities of VOC equal to or greater than 40 tons/year. MMWAC is exempt from VOC RACT requirements according to 06-096 CMR 134 (1)(C)(4), because the VOCs emitted are from incomplete combustion only.

D. Compliance Assurance Monitoring (CAM)

40 CFR Part 64, *Compliance Assurance Monitoring*, 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<sub>2</sub> are controlled through the use of spray dryer absorber technology with lime/water as the spray. 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.

However, 40 CFR Part 64, §64.2(b)(1)(i) exempts from 40 CFR Part 64 CAM requirements emission limitations or standards proposed after November 15, 1990, pursuant to Section 111 or 112 of the Clean Air Act (CAA). Because the MSW Combustor Units #1 and #2 are subject to the requirements of 40 CFR Part 60, Subpart BBBB (from December 6, 2000, under the authority of Section 111 of the CAA), these units are exempt from 40 CFR Part 64 CAM requirements.

E. MSW Combustor Unit #1 and Unit #2 Description

MSW Combustor Unit #1 and Unit #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 Municipal Solid Waste (MSW) each. Although the units have been previously licensed as firing 110 tons per day each, due to inherent

inaccuracies in determining tons of waste fired per day, and in order to remain subject to the NSPS and NESHAP requirements already applicable to the units, MMWAC has requested that the nominal capacity of the units be increased to 125 tons per day of MSW input on an annual average basis. This numerical change will not alter applicability of regulations and does not reflect a physical change in the equipment; rather, it allows the facility to operate as necessary and to use more accurate accounting procedures, on an annual average based on tipping floor records, to document actual MSW throughput.

Waste class types 0, 1, 2, 3, 5, and 6 are fired in the Combustors; biomedical and 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 maximum design heat input rate of 17 MMBtu/hour 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.

F. Operational Modifications: 502(b)(10) Changes

1. Elimination of the 1800°F minimum temperature requirement

MMWAC's Initial Part 70 License contains a carry-over provision from the original Air License requiring the temperature of gases leaving the combustor be at a minimum of 1800°F and subject to a one-second residence time. The intent of this requirement was to minimize emissions of dioxins and furans. Operational experience shows this requirement does not directly relate to the quality of the emissions, is difficult to measure, and has consequences that may actually prevent optimum emissions control. MMWAC proposes that this requirement be eliminated, and that the intent of the requirement be met through CO monitoring via the continuous emissions monitoring (CEM) system. CO is a better indicator of the completeness of combustion, including destruction of dioxins and furans, and MMWAC has an established record of adequate combustion via CO monitoring data. Additionally, a carbon injection system has been in use since 2000 that is highly efficient in organics (dioxins/furans) removal, as verified by subsequent stack tests. This change is also supported by baghouse inlet temperature requirements.

A negative consequence of the temperature requirement is that natural gas burners cycle on and off very frequently to maintain the designated minimum temperature. The physical arrangement of the combustor system is such that when the burners fire, there is a tendency for localized excessive temperatures that cause the fly ash to melt and build up on the walls as hard slag. As this condition worsens, CO can climb, which eventually leads to a shutdown so

that the slag can be removed. These additional, unplanned shutdowns and startups cause upsets in the process and the diversion of solid waste to landfills until the facility can resume combustion of MSW.

By eliminating the temperature and residence time provisions, MMWAC will be able to run more consistently, minimizing slagging and unplanned outages while monitoring sufficient combustion through CO CEM data. Regular stack testing to document compliance with related emission limits will still be required.

2. Stack Testing for Particulate Matter

The previous license contained the requirement to stack test Units #1 and #2 for particulate matter once every two years. Since the issuance of the initial Part 70 air emission license, the statutory requirement of 38 M.R.S.A. §589 §§2 was revised as follows:

“A person is not required to conduct stack tests for particulate matter on a source monitored by a continuous monitoring device for opacity as specified by 40 Code of Federal Regulations, Part 60, Appendix B, specification 1 or appropriate surrogate parameters as required by the Commissioner more frequently than once every 5 years unless visible emissions, operating parameters, or other information indicates the source may be operating out of compliance with any applicable emission standard or unless there are more stringent federal requirements. If visible emissions, operating parameters, or other information indicates potential noncompliance with an air emission standard, or if there are more stringent federal requirements, the Department may require additional stack tests.”

However, 40 CMR Part 60, Subpart BBBB requires that following three successive annual stack tests where a pollutant has been shown to meet the permit requirement, the facility is allowed to go to a three-year testing cycle.

The revised timeframe for PM stack testing is incorporated into this renewal for Units #1 and #2, since these units are required to monitor for opacity and NSPS regulations allow for less frequent testing. MMWAC shall conduct stack testing for particulate matter once every three years on MSW Combustor Unit #1 and Unit #2 unless otherwise directed by the Department. If visible emissions, operating parameters, or other information indicates potential noncompliance with an air emission standard, or if more stringent federal requirements become applicable, the Department may require additional stack tests.

3. Revision of the tonnage throughput provision

The facility has requested that the current throughput limitation of 110 tons per day per unit be modified to a 250 ton per day combined limit for both

units, calculated on an annual basis. This would be consistent with the maximum throughput under 40 CFR Part 60 for Small Municipal Waste Combustors. Daily throughput is difficult to measure and should be replaced with the steam load limitation based on the latest dioxin test. Steam load can be accurately measured. Conversely, the MSW tonnage throughput can only be estimated with load cells associated with the crane grapples. These load cells are safety devices to prevent the crane from being grossly overloaded and damaged; they were never intended to provide an accurate weight of each grapple load of waste delivered to the combustor. They are difficult to calibrate, and there is a consistent issue with repeatability when tested against a known weight.

Steam flow measured during dioxin stack testing is a better measure that can be more accurately measured and correlated with emissions. The 250 ton per day facility limit can be calculated on an annual basis based on scale house records of waste delivered to the pit, corrected according to pit inventory estimates at the start of each year. Shortening the period increases the likelihood and magnitude of error due to the necessity of estimating pit inventory.

4. To allow smoke vents and pit doors to be open at certain times

Previous license requirement and good operating practice call for the pit doors and the smoke vents on the pit roof to be closed. Pit doors are to be opened only as necessary to admit vehicles to dump. MMWAC proposes that the license specifically allow for pit doors and smoke vents on the pit roof to be in the open position to the extent necessary for performing testing and maintenance, and for limited times during maintenance outages.

The facility also requests an exception as necessary to allow for some of the doors and/or vents to be open when birds are accidentally admitted to the pit and have difficulty getting out. Capturing the birds is generally not feasible, and the roof of the pit is well above the tops of the doors, and the birds seem to have an aversion to flying down and out of the doors. The birds of concern are usually seagulls and occasionally raptors, both of which are protected classes. From the perspective of holistic environmental benefit, the Department concurs with the facility's logic and supports this request.

G. New Source Performance Standards (NSPS)

Each of MMWAC's Combustors was manufactured after August 17, 1971, and is designed to handle 125 ton/day of MSW. These units are subject to 40 CFR Part 60, Subpart BBBB, *Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999*. These are categorized as Class II units. Per 40 CFR Part 60, §60.1940, *Class II*

*units* mean 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. Subpart BBBB includes requirements for operator training (§ 60.1645), operator certification requirements (§ 60.1675), operating requirements (§ 60.1690), emission limits for eleven pollutants (§ 60.1700), continuous emission monitoring requirements (§ 60.1715), stack testing requirements (§ 60.1775), recordkeeping requirements (§ 60.1830), and reporting requirements (§ 60.1860). These NSPS requirements are addressed in this air emission license.

Federal Regulation 40 CFR Part 60, Subpart BBBB, Table 4 identifies emission limits for pollutants from Class II units. Emission limits from Subpart BBBB's Table 4 are addressed in this air emission license.

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

There are no NESHAP requirements applicable to MMWAC's MSW Combustor units.

I. Control Equipment

Exhaust gases from each of the MSW Combustor Unit #1 and Unit #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. The carbon is injected into the spray 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 flyash. The fabric filters from Joy Technologies, Inc. control PM, PM<sub>10</sub>, and metals particulate emissions.

J. Emission Limits and Streamlining

1. Summary of Applicable Limits

MMWAC accepts streamlining for PM, PM<sub>10</sub>, SO<sub>2</sub>, HCl, CO, Cd, Hg, Pb, and visible emissions requirements. For Combustor Units #1 and #2, a listing of applicable emission standards, the origin and authority of each standard, and the applicable emission limits and associated averaging periods after streamlining, as appropriate, are presented here. 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.

<b>Pollutant</b>	<b>Applicable Emission Standards</b>	<b>Origin and Authority</b>	<b>Licensed Emission Limits for EACH Unit</b>
<b>PM</b>	180 mg/dscm @ 12% CO <sub>2</sub> , 2-hr sampling period w/o CO <sub>2</sub> from auxiliary fuel	06-096 CMR 104	22.88 mg/dscm (equal to 0.010 gr/dscf) @ 7%O <sub>2</sub> , based on the average of three 1-hour test runs
	180 mg/dscm (equal to 0.08 gr/dscf) @ 7% O <sub>2</sub>	06-096 CMR 121 (7)(A)(1)(b)	
	70 mg/dscm	40 CFR Part 60, Subpart BBBB	
	0.20 lb/MMBtu	06-096 CMR 103, §2(B)(2)(b)	
	22.88 mg/dscm (equal to 0.010 gr/dscf) @ 7%O <sub>2</sub>	<b>A-378-72-B-A (July 27, 1990) BACT</b>	
	1.83 lb/hr	<b>A-378-72-B-A (July 27, 1990) BACT</b>	1.83 lb/hr, 1-hour basis
<b>PM<sub>10</sub></b>	1.83 lb/hr	<b>06-096 CMR 140, BPT</b>	1.83lb/hr, 1-hour basis
<b>SO<sub>2</sub></b>	30 ppmv @ 7% O <sub>2</sub> -or- 80% reduction by weight or volume @ 7% O <sub>2</sub> , whichever is less stringent; 24-hr daily geometric mean	06-096 CMR 121 (7)(A)(4) and A-378-72-B-A (July 27, 1990) BACT	30 ppmv @ 7% O <sub>2</sub> or 80% reduction by weight or volume @ 7% O <sub>2</sub> , whichever is less stringent; based on 1-hour, 24-hour daily geometric mean
	77 ppmv -or- 50 percent reduction of potential sulfur dioxides emissions	40 CFR Part 60, Subpart BBBB	
	6.97 lb/hr	<b>A-378-70-A-I (July 1, 2002) BACT/BPT</b>	6.97 lb/hr, 1-hour basis
<b>NO<sub>x</sub></b>	315 ppmv @ 7% O <sub>2</sub> , 24-hr daily block arithmetic avg. basis (summer) -and- 330 ppmv @ 7% O <sub>2</sub> , 24-hr daily block arithmetic avg. basis (winter)	<b>A-378-72-E-A (October 16, 1996) and 06-096 CMR 138, NO<sub>x</sub> RACT</b>	315 ppmv @ 7% O <sub>2</sub> , 24-hr daily block arithmetic average basis (summer) and 330 ppmv @ 7% O <sub>2</sub> , 24-hr daily block arithmetic avg. basis (winter)
	52.62 lb/hr (summer)	<b>A-378-70-A-I (July 1, 2002) BACT/BPT</b>	52.62 lb/hr (summer), 1-hour basis
	54.87 lb/hr (winter)		54.87 lb/hr (winter), 1-hour basis
<b>CO</b>	10.17 lb/hr	<b>A-378-70-A-I (July 1, 2002) BACT/BPT</b>	10.17 lb/hr, 1-hour basis
	100 ppmv @ 7% O <sub>2</sub> , dry basis, 4-hr arithmetic mean		
	400 ppm, 8-hr running average, @ 7% O <sub>2</sub>	06-096 CMR 121 (7)(A)(6)	100 ppmv, based on 4-hr block average, arithmetic mean



<b>Pollutant</b>	<b>Applicable Emission Standards</b>	<b>Origin and Authority</b>	<b>Licensed Emission Limits for EACH Unit</b>
<b>VOC</b>	20 ppmdv @ 7% O <sub>2</sub>	<b>A-378-72-B-A (July 27, 1990) BACT</b>	20 ppmdv @ 7% O <sub>2</sub> , 1-hour basis
	1.16 lb/hr		1.16 lb/hr, 1-hour basis
<b>Visible Emissions</b>	30% opacity on a 6-minute block average basis	06-096 CMR 101, §2(B)(1)(e)	10% opacity, 6-minute block average
	10% opacity, 6-minute average	<b>06-096 CMR 121 (7)(A)(2) and A-378-72-B-A (July 27, 1990) BACT</b>	
	20% opacity on a 6-minute block average basis, except for one 6-minute period per hour of not more than 27% opacity	40 CFR Part 60, Subpart BBBB	
<b>Hydrogen Chloride (HCl)</b>	250 ppmv -or- 50% reduction of potential hydrogen chloride emissions	40 CFR Part 60, Subpart BBBB	25 ppmvd @ 7% O <sub>2</sub> 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
	25 ppmvd @ 7% O <sub>2</sub> -or- 90% reduction by weight, whichever is less stringent	<b>A-378-72-B-A (July 27, 1990) BACT</b>	
	30 ppmv -or- 95% reduction by weight or volume, @ 7% O <sub>2</sub> (dry basis), whichever is less stringent	06-096 CMR 121 (7)(A)(5)	
<b>Dioxins/Furans (PCDD/PCDF, total mass basis)</b>	125.0 ng/dscm @ 7% O <sub>2</sub>	<b>40 CFR Part 60, Subpart BBBB</b>	125.0 ng/dscm @ 7% O <sub>2</sub> , on the basis of a 3-run average, minimum run duration is 4 hours
<b>Cadmium (Cd)</b>	0.10 mg/dscm @ 7% O <sub>2</sub>	40 CFR Part 60, Subpart BBBB	0.03 mg/dscm @ 7% O <sub>2</sub> , 3-run average
	0.03 mg/dscm @ 7% O <sub>2</sub>	<b>06-096 CMR 140, BPT</b>	
<b>Mercury (Hg)</b>	0.080 mg/dscm; 85% reduction of potential mercury emissions	40 CFR Part 60, Subpart BBBB	0.028 mg/dscm @ 7% O <sub>2</sub> or a minimum control efficiency of 85% reduction by weight, whichever is less stringent; 3-run average
	0.028 mg/dscm @ 7% O <sub>2</sub> or a minimum control efficiency of 85% reduction by weight, whichever is less stringent	<b>A-378-72-B-A (November 18, 1999) BACT</b>	

<b>Pollutant</b>	<b>Applicable Emission Standards</b>	<b>Origin and Authority</b>	<b>Licensed Emission Limits for EACH Unit</b>
<b>Lead (Pb)</b>	1.6 mg/dscm @ 7% O <sub>2</sub>	40 CFR Part 60, Subpart BBBBB	0.66 mg/dscm @ 7% O <sub>2</sub> , 3-run average
	0.66 mg/dscm (equal to 0.0007 gr/dscf) @ 7% O <sub>2</sub>	<b>06-096 CMR 140, BPT</b>	

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

<b>Pollutant</b>	<b>lb/hour (1-hour average basis)</b>	<b>Origin and Authority</b>
<b>Antimony (Sb)</b>	9.17x10 <sup>-4</sup>	<b>A-378-72-B-A (July 27, 1990) BACT</b>
<b>Arsenic (As)</b>	1.45x10 <sup>-3</sup>	
<b>Beryllium (Be)</b>	9.42x10 <sup>-6</sup>	
<b>Cr (Hexavalent)</b>	2.42x10 <sup>-4</sup>	
<b>Cr (Total)</b>	2.42x10 <sup>-2</sup>	
<b>Copper (Cu)</b>	8.25x10 <sup>-3</sup>	<b>A-378-72-B-A (July 27, 1990) BACT</b>
<b>Flourides (as HF)</b>	0.13	
<b>Formaldehyde</b>	0.07	
<b>Nickel (Ni)</b>	1.95x10 <sup>-2</sup>	
<b>Selenium (Se)</b>	7.02x10 <sup>-4</sup>	
<b>Sulfuric Acid Mist</b>	0.693	
<b>Zinc (Zn)</b>	8.25x10 <sup>-2</sup>	

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

2. Emission Limit Compliance Methods

Compliance with the criteria pollutant emission limits associated with MSW Combustor Units #1 and #2 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.

<b>Pollutant</b>	<b>Emission Limit</b>	<b>Compliance Method</b>	<b>Frequency</b>
PM	22.88 mg/dscm @ 7% O <sub>2</sub>	40 CFR Part 60, App. A, Method 5	Once every three years
	1.83 lb/hr		
PM <sub>10</sub>	1.83lb/hr	40 CFR Part 60, App. A, Method 5 or EPA Test Method 201 or 201A	As requested
SO <sub>2</sub>	30 ppmv @ 7% O <sub>2</sub> or 80% reduction by weight or volume @ 7% O <sub>2</sub> , whichever is less stringent	SO <sub>2</sub> CEMS or 40 CFR Part 60, App. A, Method 6	Continuously (in accordance with 40 CFR Part 60, Appendix B)

<u>Pollutant</u>	<u>Emission Limit</u>	<u>Compliance Method</u>	<u>Frequency</u>
NO <sub>x</sub>	315 ppmv @ 7% O <sub>2</sub> , 24-hr daily block arithmetic avg. basis (summer) and 330 ppmv @ 7% O <sub>2</sub> , 24-hr daily block arithmetic avg. basis (winter)	NO <sub>x</sub> CEMS on a 24-hour block average basis; midnight to midnight	Continuously (in accordance with 40 CFR Part 60, Appendix B)
	52.62 lb/hr(summer)	40 CFR Part 60, App. A, Method 7	
	54.87 lb/hr (winter)		
CO	10.17 lb/hr	CO CEMS or 40 CFR Part 60, Appendix A, Method 10	Continuously (in accordance with 40 CFR Part 60, Appendix B)
	100 ppmv		
VOC	20 ppmv @ 7%O <sub>2</sub>	40 CFR Part 60, Appendix A, Method 25 or 25A	As requested
	1.16 lb/hr		
Visible Emissions	10% opacity	COMS, on a 6-minute block average basis	Continuously (in accordance with 40 CFR Part 60, Appendix B)

3. Start-up, Shutdown, Malfunction (SSM) (40 CFR § 60.1695)

Compliance and performance testing standards apply at all times, except during periods of start-up, shutdown, and malfunction.

Startup, shutdown, or malfunction periods are limited to three hours per occurrence in accordance with 40 CFR Part 60.1710. A maximum of three hours of test data can be dismissed from compliance during periods of start-ups, shutdowns, and malfunctions. [06-096 CMR 140, BPT]

*Startup* is the period when the Combustor begins continuous burning of MSW and does not include any warm-up period when the affected facility is combusting fossil fuel or other non-MSW fuel when no MSW is being fed to the combustor. [06-096 CMR 140, BPT]

*Continuous burning* is the continuous, semi-continuous, or batch feeding of MSW for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of MSW solely to provide thermal protection of the grate during the startup period when MSW is not being fed to the grate is not considered to be continuous burning. [06-096 CMR 140, BPT]

Operations during startup, shutdown, and malfunction periods will occur in accordance with the startup, shutdown, and malfunction plan contained in the source operating manual. [06-096 CMR 140, BPT]

*Warm-up* is defined as the period before startup commences, when natural gas is being fired in the Combustor. [06-096 CMR 140, BPT]

The stack O<sub>2</sub> 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 ppm<sub>dv</sub> averages for SO<sub>2</sub>, NO<sub>x</sub>, and CO if the observed stack oxygen is greater than 14.0% during Warm-up and Startup and to use the recalculated number for compliance purposes. Subsequent to Startup, the use of actual O<sub>2</sub> readings will be resumed. Emission concentrations shall be corrected to 7.0% oxygen (dry basis). [40 CFR Part 60, Subpart BBBB; 06-096 CMR 140, BPT]

K. Periodic Monitoring

MMWAC shall periodically monitor and record parameters for MSW Combustors #1 and #2 and their associated air pollution control equipment as indicated in the following table.

<u>To Be Monitored</u>	<u>Units</u>	<u>Monitoring Tool/Method</u>	<u>Frequency</u>
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)

L. Parameter Monitoring

- MMWAC shall monitor and record parameters for MSW Combustors #1 and #2 and their associated air pollution control equipment as indicated in the following table whenever the equipment is operating. [40 CFR Part 60, Subpart BBBB]

<u>Parameter</u>	<u>Units of Measure</u>	<u>Monitoring Tool/Method</u>	<u>Frequency</u>
Unit load level as steam flow <sup>b</sup>	lb/hour	Steam flow meter	Continuously <sup>a</sup>
Baghouse inlet temperature <sup>b</sup>	°F	Thermocouple	
Carbon injection rate <sup>b</sup>	lb/hour	Screw Feeder Speed	

a For the purpose of this license, “continuously” is defined as a minimum of 2 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 CFR Part 60, Subpart BBBB, § 60.1690(e)]:

- During annual tests for dioxins/furans.
- During annual mercury tests (for carbon feed rate requirements only).

3. During the two weeks preceding annual tests for dioxins/furans.
  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 controls for the Combustors
2. Load Level [40 CFR Part 60, Subpart BBBB, § 60.1805]  
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 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 CFR Part 60, Subpart BBBB, § 60.1825, and must notify the Department according to §60.1885(e).
  - 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.
  - 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,” 6<sup>th</sup> Edition (1971)
  - d. Two weeks prior to each dioxin/furan stack test, or at least once per year, calibrate all signal conversion elements associated with steam flow measurements according to the manufacturer instructions. [40 CFR Part 60, Subpart BBBB]
  - e. The maximum demonstrated municipal waste combustor unit load shall be determined during each subsequent annual performance test during which compliance with the dioxin/furan emission limit is achieved. The maximum demonstrated municipal waste 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 dioxin/furan emission limit was achieved. [06-096 CMR 140, BPT]

3. Baghouse Inlet Temperature [40 CFR Part 60, Subpart BBBB, § 60.1805]  
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 CFR Part 60, Subpart BBBB]

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 CFR Part 60, Subpart BBBB, § 60.1825, and must notify the Department according to §60.1885(e). The maximum demonstrated particulate matter control device temperature shall be determined during each subsequent annual performance test during which compliance with the dioxin/furan 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. [06-096 CMR 140, BPT]

4. Carbon Feed Rate [40 CFR Part 60, Subpart BBBB, § 60.1805]  
Carbon injection is used to control emissions of dioxins/furans 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 recalibrated, 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 injection rate, aka the screw feeder speed, until a subsequent stack test changes the value.

Compliance with the dioxins/furans and mercury emission limits shall be demonstrated by documenting that the daily screw feeder speed monitoring data shows that the screw feeder is being operated at a speed which correlates to an amount of injected carbon equivalent to or higher than the amount injected during the most recent successful stack test.

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 CFR Part 60, Subpart BBBB]

*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 40 CFR Part 60, Subpart BBBB, § 60.1825, and must notify the Department according to §60.1885(e).

**M. Operator Training and Certification** [40 CFR Part 60, Subpart BBBB, § 60.1645]

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.
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 CFR §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.
3. MMWAC shall establish a program in accordance with 40 CFR §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.

4. MMWAC must have a site-specific operating manual, as required by the timetable set forth in 40 CFR §60.1660, which shall be updated and reviewed annually, and all persons whose responsibilities affect the operation of the facility must be familiar with this document. The manual shall contain the following:
  - 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. Combustors startup, shutdown, and malfunction procedures;
  - 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 EPA.

N. Operating Practices

Each Combustor shall meet the following operating practice standards:

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, except for the two weeks prior to and during PCDD/PCDF 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. "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. [40 CFR Part 60, Subpart BBBB]

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, except for the two weeks prior to and during PCDD/PCDF 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 of advancing the state-of-the-art for controlling facility emissions. "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 PCDD/PCDF. [40 CFR 60, Subpart BBBB]
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, except for the two weeks prior to and during the annual mercury testing, or if waived by the Department for purposes of evaluating system performance, testing new technology or control technologies, or diagnostic testing, or related activities for the purpose of improving facility performance of advancing the state-of-the-art for controlling facility emissions.

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 CFR Part 60, Subpart BBBB, Section 60.1935(f), Equation 4 or 5. [40 CFR Part 60, Subpart BBBB]

4. Start-up, Shutdown, and Malfunction  
MMWAC shall keep their written start-up, 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.

MMWAC shall include in the operating manual a written start-up, shutdown, and malfunction plan that describes detailed procedures for operating and

maintaining the source during periods of start-up, 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 CMS malfunctions. This plan shall be developed by MMWAC by the timetable set forth in 40 CFR 60.1660.

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

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 event that demonstrate that the procedures specified in the plan were followed. These records shall include records of the occurrence and duration for each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment.

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 2 working days after commencing actions inconsistent with the plan, followed by a letter to the Department within 7 working days after the end of the event.

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 the plan was developed, MMWAC shall revise the start-up, 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.

5. Stack testing for dioxin/furans, cadmium, lead, hydrogen chloride, opacity, and particulate matter emission rates shall be performed in accordance with this license.
6. Records shall be maintained of natural gas use in each combustor, on a monthly and 12-month rolling total basis.

O. Continuous Emissions Monitoring (CEM) [40 CFR Part 60, Subpart BBBB, § 60.1715]

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

<u>To Continuously Monitor</u>	<u>Units of Measurement</u>	<u>Origin and Authority</u>
NO <sub>x</sub>	ppm and lb/hr	06-096 CMR 117 and 06-096 CMR 138
SO <sub>2</sub>	ppm and lb/hr	06-096 CMR 117
O <sub>2</sub>	ppm	
CO	ppm and lb/hr	
Opacity	%	

Documentation shall be maintained that the COM and the CEMS monitoring emissions of O<sub>2</sub>, SO<sub>2</sub>, CO, and NO<sub>x</sub> are continuously accurate, reliable, and operated in accordance with 06-096 CMR 117, Appendix P of 40 CFR Part 51, and Appendices B and F of 40 CFR Part 60.

P. 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:

<u>Pollutant</u>	<u>Units of Limits</u>	<u>Method</u> <sup>a</sup>	<u>Schedule</u>	<u>Enforceability</u>
PM	mg/dscm @ 7% O <sub>2</sub>	Method 5	Every three years	-
PM <sub>10</sub>		Method 201	When requested by the Department <sup>b</sup>	<b>Enforceable by State-only</b>
SO <sub>2</sub>	ppmdv @ 7% O <sub>2</sub>	Method 6		
NO <sub>x</sub>		Method 7		
CO	ppmdv @ 7% O <sub>2</sub>	Method 10	When requested by the Department <sup>b</sup>	<b>Enforceable by State-only</b>
VOC		Method 25A		
HCl		Method 26	Annually <sup>c</sup>	-
Pb	mg/dscm @ 7% O <sub>2</sub>	Method 29	Annually <sup>c</sup>	-
Cd	mg/dscm @ 7% O <sub>2</sub>	Method 29		
Hg				
PCDD/PCDF	ng/dscm @ 7% O <sub>2</sub>	Method 23		

<b>Pollutant</b>	<b>Units of Limits</b>	<b>Method*</b>	<b>Schedule</b>	<b>Enforceability</b>
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 CFR Part 60, Appendix A or as approved by the Department. [06-096 CMR 121]
  - b MMWAC shall conduct an emissions test for PM<sub>10</sub> if emissions test results for PM show that the emissions are greater than 80% of the licensed limit. [06-096 CMR 140, BPT]
  - c See item 5 below for alternate testing schedules.
2. For Combustors #1 and #2, MMWAC shall conduct performance testing on each effluent, or the combined effluent, as applicable. [06-096 CMR 121]
  3. The procedures and test methods used to determine compliance with the emission limits for particulate matter, cadmium, lead, opacity, fugitive ash, mercury, dioxin/furan, and hydrogen chloride shall be in accordance with 06-096 CMR 121 and 40 CFR Part 60 Subpart BBBB. [40 CFR Part 60, Subpart BBBB § 60.1790]
  4. MMWAC shall conduct a performance test for compliance with the emission limits for particulate matter, cadmium, lead, mercury, dioxins/furans, and hydrogen chloride on an annual basis (no later than 13 calendar months following the previous performance test). [40 CFR Part 60, Subpart BBBB § 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: dioxins/furans, 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 CFR Part 60, Subpart BBBB § 60.1795(a)]

6. When determining percent reductions for mercury and hydrogen chloride emissions, both inlet and outlet concentrations of the control device shall be measured during stack testing. [06-096 CMR 121]
  7. Stack test results shall be submitted to the Department in accordance with the requirements of 06-096 CMR 121. [06-096 CMR 121]
- Q. Recordkeeping and Reporting [06-096 CMR 117; and 40 CFR Part 60, Subpart BBBB, §60.1830]
1. MMWAC shall collect the minimum amount of monitoring data required in accordance with 40 CFR Part 60, Subpart BBBB, §60.1825, as specified in the applicable sections above.
  2. The facility shall maintain additional Carbon Feed Rates records, as required in 40 CFR Part 60, Subpart BBBB, § 60.1855, as specified here:
    - a. *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 dioxins/furans 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.
    - b. *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.
    - c. *Records of Exclusions*  
Document each time data was excluded from the calculation of average carbon feed rates and the reasons the data were excluded.
    - d. *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 6 years:
    - 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 an inspector.
  - a. All 6-minute average opacity levels
  - b. All 1-hour average SO<sub>2</sub> emission concentrations
  - c. All 1-hour average NO<sub>x</sub> emission concentrations
  - d. All 1-hour average CO emission concentrations
  - e. All 1-hour average load levels of each Combustor
  - f. All 1-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.
  - a. All 24-hour daily block geometric average SO<sub>2</sub> emission concentrations or all 24-hour daily geometric average percent reductions of sulfur dioxide emissions
  - b. All 24-hour daily block arithmetic average NO<sub>x</sub> emission concentrations
  - c. All 4-hour block or 24-hour daily block 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.
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:
  - a. SO<sub>2</sub> emissions data
  - b. NO<sub>x</sub> 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:
  - a. SO<sub>2</sub> emissions data
  - b. NO<sub>x</sub> 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 CFR Part 60, Appendix F, Procedure 1) for SO<sub>2</sub>, NO<sub>x</sub>, and CO continuous emissions monitoring systems.

R. Ancillary Equipment

1. **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.

New Source Performance Standards (NSPS)

Visible emissions from the Ash Handling System are regulated by the NSPS requirements of 40 CFR Part 60, Subpart BBBB, *Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999*.

Emission Limits and Streamlining

MMWAC accepts streamlining for fugitive ash opacity requirements. For the Ash Handling System, 40 CFR Part 60, Subpart BBBB, 06-096 CMR 101, and 06-096 CMR 121 contain applicable visible emissions limits. The 06-096 CMR 121 visible emission limit is more stringent; therefore, only the 06-096 CMR 121 opacity limit shall be required by this license.

<b>Applicable Standard</b>	<b>Origin and Authority</b>	<b>Licensed Limit</b>
≤ 5% of hourly observation period (three 1-hour observation periods)	40 CFR Part 60, Subpart BBBB	no visible emissions for more than 5% of the observation period (i.e., 9 minutes in any 3-hour period)
≤ 20% on a 6-min. block avg. basis	06-096 CMR 101	
no visible emissions for more than 5% of the observation period (i.e., 9 minutes in any 3-hour period)	<b>06-096 CMR 121 (7)(A)(7)</b>	

Emission Limit Compliance Methods

Compliance with the opacity 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.

<u>Pollutant</u>	<u>Compliance Method</u>	<u>Frequency</u>
Visible Emissions	EPA Reference Method 22 in 40 CFR 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], 06-096 CMR 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.

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. Fugitive ash visible emission limitations do not cover visible emissions discharged inside buildings or enclosures of ash conveying systems or visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems; and do not apply during maintenance and repair of ash conveying systems. [06-096 CMR 121]

MMWAC shall conduct a performance test for fugitive ash emissions on an annual basis, no more than 12 calendar months following the previous performance test.

Ash from Combustor and all ash and non-combustible materials culled from the ash handling system shall be sufficiently conditioned with water to render it dust-free, or shall be stored in covered containers or in a leak tight enclosure so as to prevent fugitive emissions. [06-096 CMR 140, BPT]



## 2. 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.

### Emission Limits and Streamlining

MMWAC accepts streamlining for opacity requirements. 06-096 CMR 101(2)(B)(1)(c) and 06-096 CMR 140, BPT are applicable. The BPT opacity limit is more stringent; therefore, only the more stringent BPT requirement is included in this license.

<b>Applicable Standard</b>	<b>Origin and Authority</b>	<b>Licensed Limit</b>
≤ 10% based on a six-minute block average basis except for no more than one six-minute block average in a three-hour period	06-096 CMR 101(2)(C)	≤ 10% based on a six-minute block average basis
≤ 10% based on a six-minute block average basis	<b>06-096 CMR 140, BPT</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.

## 3. Emergency Diesel Generator and Fire Pump

MMWAC has a Diesel Fire Pump Engine and an Emergency Diesel Generator on-site to allow safe and environmentally protective operation and/or shut-down of key facility systems in the event of power outages. Both were manufactured prior to 2006 and are thus considered existing, emergency, diesel-fired generators. The emergency generators are each limited to 500 hours/year of operation.

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to these emergency generators. The units are considered existing, emergency stationary reciprocating internal combustion engines at a major HAP source which are not subject to New Source Performance Standards (NSPS) regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP*

for *Stationary RICE*) specifically does not exempt these units from the federal requirements of Subpart ZZZZ.

a. Emergency Definition

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

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
- (2) Paragraph (1) above notwithstanding, the emergency stationary RICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:
  - (i) Maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
  - (ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2, as defined in the NERC Reliability Standard EOP-002-3.
  - (iii) Periods where there is a deviation of voltage or frequency of 5% or greater below standard voltage or frequency.
- (3) Paragraphs (1) and (2) above notwithstanding, emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing,

emergency demand response, and periods of voltage deviation or low frequency, as provided in paragraph (2) above.

The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity, except as provided in the following paragraphs:

- (i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution center.
- (ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
  - (a) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
  - (b) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
  - (c) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
  - (d) The power is provided only to the facility itself or to support the local transmission and distribution system.
  - (e) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

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

emergency engines and therefore subject to all the requirements for non-emergency engines.

b. 40 CFR Part 63, Subpart ZZZZ Requirements:

	<b>Compliance Dates</b>	<b>Operating Limitations* (40 CFR §63.6603(a) and Table 2(d))</b>
Compression Ignition (diesel, fuel oil) Units	No later than May 3, 2013	- Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

\* Note: Due to the 500 hour operation limit on each generator, the inspections and oil/filter changes shall be performed annually to meet the requirements of 40 CFR Part 63, Subpart ZZZZ.

The generators 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 CFR §63.6625(e)]

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 CFR §63.6625(i)]

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

During periods of startup, the facility must minimize each engine’s time spent at idle and minimize each engine’s startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

The generators shall each be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate

income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §63.6640(f)(4)(ii) are met). [40 CFR §63.6640(f)]

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

If MMWAC operates or is contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), the facility must conform with the following requirements [40 CFR §63.6650(h)]:

- (1) Beginning January 1, 2015, the diesel fuel fired in the generators shall not exceed 15 ppm sulfur (0.0015%). Any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. [40 CFR §63.6604(b)]
- (2) The facility shall submit an annual report containing the information in §63.6650(h)(1)(i) through (ix). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

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

c. Emission Limits

Emissions from the Emergency Generator shall not exceed the following:

<b>Pollutant</b>	<b>Licensed Emission Limit</b>	<b>Origin and Authority</b>
PM	0.12 lb/MMBtu	06-096 CMR 103

Emissions from the Emergency Generator and the Fire Pump Engine shall not exceed the following:

<b>Lb/hour:</b>	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Emergency Generator (3.2 MMBtu/hr) diesel	0.38	0.38	0.16	14.11	3.04	1.15
Fire Pump Engine (1.7 MMBtu/hr) diesel	0.20	0.20	0.09	7.50	1.62	0.61
Emission Factor, lb/MMBtu	0.12		0.05	4.41	0.95	0.36
Emission Factor Source	06-096 CMR 103		based on 0.05% S limit, by wt.	AP-42 Table 3.3-1 (10/96)		
Authority	06-096 CMR 140, BPT					

Note: % S = percent fuel sulfur, by weight

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

- d. Prior to January 1, 2016, the diesel fuel fired at MMWAC shall not exceed a sulfur content of 0.05% by weight. [06-096 CMR 140, BPT]

Beginning January 1, 2016, or on the date specified in 38 MRSA §603-A(2)(A)(3), diesel fuel fired at the MMWAC facility shall not exceed a sulfur content of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]

Beginning January 1, 2018, or on the date specified in 38 MRSA §603-A(2)(A)(3), diesel fuel fired at the MMWAC facility shall not exceed a sulfur content of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]

Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 140, BPT]

e. Periodic Monitoring

MMWAC shall monitor and record parameters for the emergency generator and engine as indicated in the following table whenever the equipment is operating.

<u>Parameter</u>	<u>Units</u>	<u>Monitoring Method</u>	<u>Frequency</u>
Fuel oil sulfur content	% by weight	Fuel receipts from supplier	As fuel is purchased
Operating time	Hours	Hour Meter	Monthly and 12-month rolling total

f. Parameter Monitors

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

g. CEMS and COMS

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

4. **Parts Washers**

Parts washers used at the MMWAC facility are subject to *Solvent Degreasers*, 06-096 CMR 130 (as amended). Periodic monitoring for the parts washer shall consist of recordkeeping including records of solvent added and removed.

S. Facility Annual Emissions

1. Total Annual Emissions

Annual emissions from MMWAC are calculated based on the lb/hr emission limits for the MSW Combustor units and 8760 hours/year of operation of each unit.

**Total Licensed Annual Emissions for the Facility**

**Tons/year**

(used to calculate the annual license fee\*)

	<u>PM</u>	<u>PM<sub>10</sub></u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOC</u>
MSW Combustor Units #1 and #2	16.0	16.0	61.0	480.6	89.0	10.2
<b>Total TPY</b>	<b>16.0</b>	<b>16.0</b>	<b>61.0</b>	<b>480.6</b>	<b>89.0</b>	<b>10.2</b>

\* CO emissions are not included in the annual fee calculation.

2. Greenhouse Gases

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

Based on the facility's fuel use limits, the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, MMWAC is below the major source threshold of 100,000 tons of CO<sub>2</sub>e per year.

### 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 on 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-B-R/A pursuant to 06-096 CMR 140 and the preconstruction permitting requirements of 06-096 CMR 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 in 06-096 CMR 108 or 06-096 CMR 115 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 permit. As such, the conditions in this license supercede all previously issued air license conditions.



Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements for making such changes as found in 06-096 CMR 115 and pursuant to the applicable requirements in 06-096 CMR 140.

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

### STANDARD 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 CMR 140]
- (2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 140]
- (3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable. [06-096 CMR 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 CMR 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 CMR 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 an application dated December 22, 2006. [06-096 CMR 140]

<u>Source</u>	<u>Citation</u>	<u>Description</u>	<u>Basis for Determination</u>
MSW Combustors #1 and #2	40 CFR Part 64	Compliance Assurance Monitoring	Units are subject to 40 CFR Part 60, Subpart BBBB and are thus exempted per 40 CFR Part 64, §64.2(b)(1)(i).
Storage Tanks	40 CFR Part 68	Accidental Release Prevention	Chemicals stored on site are less than Threshold Quantities
Facility	40 CFR 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 CFR 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 CMR 134	Reasonably Available Control Technology for Facilities That Emit Volatile Organic Compounds	VOC source is from combustion only, per Section 1(C)(4), MEDEP Chapter 134
MSW Combustors #1 and #2	06-096 CMR 135	Hexavalent Chromium Particulate Emission Standard	Sources total aggregate chromium input is less than 0.05% by weight of raw MSW

(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 3 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 CMR 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 CMR 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 CMR 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.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in 06-096 CMR 140. [06-096 CMR 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 CMR 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.A. §353-A.
- (5) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 140]  
**Enforceable by State-only**
- (6) 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 CMR 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 CMR 140]
- (8) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing 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 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.  
[06-096 CMR 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 CFR Part 60 or other method approved or required by the Department; and
  - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 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.A. § 349(9), the Commissioner may exempt from civil penalty an air emission in excess of license limitations if the emission occurs during start-up or shutdown or results exclusively from an unavoidable malfunction entirely beyond the control of the licensee and the licensee has taken all reasonable steps to minimize or prevent any emission and takes corrective action as soon as possible. There may be no exemption if the malfunction is caused, entirely or in part, by poor maintenance, careless

operation, poor design or any other reasonably preventable condition or preventable equipment breakdown. The burden of proof is on the licensee seeking the exemption under this subsection.

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

[06-096 CMR 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 CMR 140]
- (12) The licensee shall submit semiannual reports of any required periodic monitoring. 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 CMR 140]
- (13) The licensee shall submit a compliance certification to the Department and EPA at least annually, 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 CMR 140]

## **SPECIFIC CONDITIONS**

### **(14) MSW Combustor Unit#1 and Unit #2 Limits**

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

- C. MMWAC shall fire only waste types 0, 1, 2, 3, 5, and 6, as defined in 06-096 CMR 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. [06-096 CMR 140, BPT]
- D. Natural gas use, during a calendar year, shall be limited to a combined annual capacity factor of 10% or less, calculated in accordance with 40 CFR Part 60 Subpart Db. [40 CFR Part 60 Subpart Db]
- E. Natural gas fired into each Combustor shall be monitored by a fuel totalizer operated in accordance with the manufacturer's specifications. [06-096 CMR 140, BPT] **Enforceable by State-only**
- F. Emissions from Combustor #1 shall vent to Flue #1 of Stack #1, and emissions from Combustor #2 shall vent to Flue #2 of Stack #1. Each shall be at least 213 feet AGL.
- G. Emissions from each MSW Combustor unit shall not exceed the following:

<u>Pollutant</u>	<u>Emission Limits for EACH Unit</u>	<u>Origin and Authority</u>
PM	22.88 mg/dscm (equal to 0.010 gr/dscf) @ 7%O <sub>2</sub> ; 1-hour basis, 3-run average	A-378-72-B-A (July 27, 1990), BACT
	1.83 lb/hr, 1-hour basis	
PM <sub>10</sub>	1.83 lb/hr, 1-hour basis	
SO <sub>2</sub>	30 ppmvd @ 7% O <sub>2</sub> -or- 80% reduction by weight or volume @ 7% O <sub>2</sub> , whichever is less stringent 1-hour, 24-hr daily geometric mean	06-096 CMR 121 (7)(A)(4) and A-378-72-B-A (July 27, 1990), BACT
	6.97 lb/hr , 1-hour basis	A-378-70-A-I (July 1, 2002), BACT/BPT
NO <sub>x</sub>	315 ppmvd @7% O <sub>2</sub> , (summer) -and- 330 ppmvd @ 7% O <sub>2</sub> , (winter) 24-hr daily block arithmetic average basis	A-378-72-E-A (October 16, 1996) and 06-096 CMR 138, NO <sub>x</sub> RACT
	52.62 lb/hr, 1-hour basis (summer)	A-378-70-A-I (July 1, 2002), BACT/BPT
	54.87 lb/hr, 1-hour basis (winter)	
CO	100 ppmvd; 4-hr block average, arithmetic mean	40 CFR Part 60, Subpart BBBB
	10.17 lb/hr, 1-hour basis	
VOC	20 ppmvd @ 7% O <sub>2</sub>	A-378-72-B-A (July 27, 1990), BACT
	1.16 lb/hr, 1-hour basis	
Visible Emissions	10% opacity, 6-minute block average	06-096 CMR 121 (7)(A)(2) and A-378-72-B-A (July 27, 1990), BACT

<u>Pollutant</u>	<u>Emission Limits for EACH Unit</u>	<u>Origin and Authority</u>
Hydrogen Chloride (HCl)	25 ppmvd @ 7% O <sub>2</sub> or a minimum control efficiency of 90% reduction by weight, whichever is less stringent (Stack Test Method 26)	A-378-72-B-A (July 27, 1990), BACT
Dioxins/Furans (PCDD/PCDF, total mass basis)	125.0 ng/dscm @ 7% O <sub>2</sub> ; 3-run average, (minimum run duration is 4 hours)	40 CFR Part60, Subpart BBBB
Cadmium (Cd)	0.03 mg/dscm @ 7% O <sub>2</sub> , 3-run average	06-096 CMR 140, BPT
Mercury (Hg)	0.028 mg/dscm @ 7% O <sub>2</sub> or a minimum control efficiency of 85% reduction by weight, whichever is less stringent; 3-run average	A-378-72-B-A (November 18, 1999), BACT
Lead (Pb)	0.66 mg/dscm @ 7% O <sub>2</sub> ; 3-run average	06-096 CMR 140, BPT

<u>Pollutant</u>	<u>lb/hour from EACH unit</u>	<u>Origin and Authority</u>
Antimony (Sb)	9.17x10 <sup>-4</sup>	A-378-72-B-A (July 27, 1990) BACT
Arsenic (As)	1.45x10 <sup>-3</sup>	
Beryllium (Be)	9.42x10 <sup>-6</sup>	
Cr (Hexavalent)	2.42x10 <sup>-4</sup>	
Cr (Total)	2.42x10 <sup>-2</sup>	
Copper (Cu)	8.25x10 <sup>-3</sup>	
Flourides (as HF)	0.13	A-378-72-B-A (July 27, 1990) BACT
Formaldehyde	0.07	
Nickel (Ni)	1.95x10 <sup>-2</sup>	
Selenium (Se)	7.02x10 <sup>-4</sup>	
Sulfuric Acid Mist	0.693	
Zinc (Zn)	8.25x10 <sup>-2</sup>	

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

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

(15) **Air Emission Control Equipment**

- A. Particulate matter (PM, PM<sub>10</sub>) emissions from each unit 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. [06-096 CMR 140, BPT]



- B. Sulfur Dioxide (SO<sub>2</sub>) and hydrochloric acid (HCl) emissions from each unit shall be controlled by a spray dryer absorber followed by a fabric filter. [06-096 CMR 140, BPT]
- C. Emissions of dioxins, furans, mercury, and other metals from each unit shall be controlled by a carbon injection system and the fabric filter.

**(16) Compliance Demonstration Methods**

- A. MMWAC shall maintain an SO<sub>2</sub> CEMS certified and installed downstream of the fabric filter and in accordance with 06-096 CMR 117 and the Specific Conditions of this license. When demonstrating compliance with the 80% reduction in SO<sub>2</sub> emissions, MMWAC shall measure both inlet and outlet SO<sub>2</sub> concentrations of the control device with a CEMS. [06-096 CMR 117 and 06-096 CMR 121]
- B. MMWAC shall maintain a NO<sub>x</sub> CEMS in accordance with applicable provisions of 06-096 CMR 117 and the Specific Conditions of this license. [06-096 CMR 117 and 06-096 CMR 121]
- C. 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 CMR 117 and the Specific Conditions of this license. [06-096 CMR 117 and 06-096 CMR 121]
- D. MMWAC shall install, calibrate, maintain, and operate a continuous emission monitoring system for O<sub>2</sub> at the outlet of the fabric filter. The O<sub>2</sub> concentration shall be monitored at each location where the SO<sub>2</sub>, CO, and NO<sub>x</sub> are monitored. The monitoring system shall comply with 06-096 CMR 117 and 06-096 CMR 121, and 40 CFR Part 60, Subpart BBBB. [40 CFR Part 60, Subpart BBBB]
- E. Compliance with the opacity limit shall be demonstrated by means of a continuous opacity monitoring system (COMS). MMWAC shall maintain the COMS in accordance with applicable provisions of 06-096 CMR 117 and the Special Conditions of this license. [06-096 CMR 117 and 121]
- F. Compliance shall be demonstrated in accordance with the following methods and frequencies, or other methods and frequencies as approved by the Department [06-096 CMR 140]:

<b>Pollutant</b>	<b>Unit of Standard</b>	<b>Compliance Method</b>	<b>Frequency</b>
PM	mg/dscm and lb/hr	40 CFR Part 60, App. A, Method 5	Once every three years
PM <sub>10</sub>	mg/dscm and lb/hr	40 CFR Part 60, App. A, Method 5 or EPA Test Method 201 or 201A	As requested

<u>Pollutant</u>	<u>Unit of Standard</u>	<u>Compliance Method</u>	<u>Frequency</u>
SO <sub>2</sub>	ppmdv and lb/hr	SO <sub>2</sub> CEMS on a 24-hour block average basis; midnight to midnight	Continuously
NO <sub>x</sub>	ppmdv and lb/hr	NO <sub>x</sub> CEMS on a 24-hour block average basis; midnight to midnight	Continuously
CO	ppmdv and lb/hr	CO CEMS on a 24-hour block average basis; midnight to midnight	Continuously
VOC	ppmdv and lb/hr	40 CFR Part 60, App. A, Method 25 or 25A	As requested

(17) **Periodic Monitoring**

MMWAC shall monitor and record parameters for MSW Combustors #1 and #2 and their associated air pollution control equipment as indicated in the following table. [06-096 CMR 140, BPT]

<u>To Be Monitored</u>	<u>Units of Measure</u>	<u>Monitoring Tool/Method</u>	<u>Frequency</u>
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)

(18) **Parameter Monitors**

A. MMWAC shall monitor and record parameters for MSW Combustors #1 and #2 and their associated air pollution control equipment as indicated in the following table whenever the equipment is operating. [40 CFR Part 60, Subpart BBBB and 06-096 CMR 140, BPT]

<u>Parameter</u>	<u>Units of Measure</u>	<u>Monitoring Tool/Method</u>	<u>Frequency</u>
Unit load level as steam flow <sup>b</sup>	lb/hour	Steam flow meter	Continuously <sup>a</sup>
Baghouse inlet temperature <sup>b</sup>	°F	Thermocouple	
Carbon injection rate**	lb/hour	Screw Feeder Speed	

<sup>a</sup> For the purpose of this license condition, “continuously” is defined as a minimum of two points in a one-hour period.

<sup>b</sup> 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 CFR Part 60, Subpart BBBB, § 60.1690(e)]:

1. During annual tests for dioxins/furans.
2. During annual mercury tests (for carbon feed rate requirements only).

3. During the two weeks preceding annual tests for dioxins/furans.
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 controls for the Combustors

B. Load Level [40 CFR Part 60, Subpart BBBB, § 60.1805]

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

1. Continuously measure and record the measurements of steam 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 CFR Part 60, Subpart BBBB, § 60.1825, and must notify the Department according to §60.1885(e).
2. 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.
3. 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," 6<sup>th</sup> Edition (1971)
4. Two weeks prior to each dioxin/furan stack test, or at least once per year, calibrate all signal conversion elements associated with steam flow measurements according to the manufacturer instructions. [40 CFR Part 60, Subpart BBBB]
5. The maximum demonstrated municipal waste combustor unit load shall be determined during each subsequent annual performance test during which

compliance with the dioxin/furan emission limit is achieved. The maximum demonstrated municipal waste 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 dioxin/furan emission limit was achieved. [06-096 CMR 140, BPT]

C. Baghouse Inlet Temperature [40 CFR Part 60, Subpart BBBB, § 60.1805]

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 CFR Part 60, Subpart BBBB]

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 CFR Part 60, Subpart BBBB, § 60.1825, and must notify the Department according to §60.1885(e).

The maximum demonstrated particulate matter control device temperature shall be determined during each subsequent annual performance test during which compliance with the dioxin/furan 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. [06-096 CMR 140, BPT]

D. Carbon Feed Rate [40 CFR Part 60, Subpart BBBB, § 60.1805]

Carbon injection is used to control emissions of dioxins/furans and mercury. MMWAC shall meet the following requirements for the carbon injection system:

1. 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 recalibrated, 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.
2. 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 injection rate, aka the screw feeder speed, until a subsequent stack test changes the value.

Compliance with the dioxins/furans and mercury emission limits shall be demonstrated by documenting that the daily screw feeder speed monitoring data shows that the screw feeder is being operated at a speed which correlates to an amount of injected carbon equivalent to the amount injected during the most recent successful stack test.

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 CFR Part 60, Subpart BBBB]

“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 40 CFR Part 60, Subpart BBBB, § 60.1825, and must notify the Department according to §60.1885(e).

E. Other Monitoring Requirements

MMWAC shall collect the minimum amount of monitoring data required in accordance with 40 CFR Part 60, Subpart BBBB, §60.1825.

(19) **CEMS and COMS**

The CEMS, COMS, and parameter monitors required by this license shall be the primary means of demonstrating compliance with emission standards set by this Order, statute, state or federal regulation, as applicable. MMWAC shall comply with the following:

A. Performance Specifications

All CEMS and COMS shall meet the sampling and performance criteria specified in 40 CFR Part 51 Appendix P, and shall be operated in accordance

with 40 CFR Part 60 Appendix B and F and 06-096 CMR 117 at all times the unit is in operation.

1. If the continuous emission monitoring system for the gaseous emissions is recording accurate and reliable data less than 90% of the source-operating time within any quarter of the 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.
2. If the continuous opacity monitoring system is recording accurate and reliable data less than 95% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the continuous emission monitoring system was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction so 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.
3. Conduct Relative Accuracy Testing (RATA) and/or Performance Audits in accordance with 06-096 CMR 117.
4. MMWAC shall develop and maintain an updated quality assurance plan for all CEMS and COMS in accordance with 40 CFR Part 60 Appendix F and 06-096 CMR 117.

B. Recordkeeping

For all of the continuous emission monitoring (CEMS), continuous opacity monitor (COM), 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:

1. Documentation which shows monitor operational status during all source operating time, including specifics for calibration and audits; and
2. 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.
3. For all CEMS and COMS, the records shall include the following:
  - a. Documentation that all CEMS and COMS are continuously accurate, reliable, and operated in accordance with applicable provisions of 06-

096 CMR 117, 40 CFR Part 60, Subpart BBBB, 40 CFR Part 51, Appendix P, and 40 CFR Part 60, Appendices B and F;

- b. Records of emission measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS and COMS, as required by 40 CFR Part 51 Appendix P;
- c. 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. Methods allowed by 40 CFR Part 75 may be used to demonstrate compliance with applicable emission standards. 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, upon 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
- d. 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.

C. For MSW Combustor Unit #1 and Unit #2, the table below lists the required CEMS and COMS.

<b>Pollutant and Continuous Monitor</b>	<b>Unit of Measurement</b>	<b>Origin and Authority</b>
NO <sub>x</sub> CEMS	ppm and lb/hr	06-096 CMR 117 and 06-096 CMR 138
SO <sub>2</sub> CEMS	ppm and lb/hr	06-096 CMR 117
O <sub>2</sub> CEMS	ppm	
CO CEMS	ppm and lb/hr	
Opacity COMS	%	

D. MMWAC shall satisfy 40 CFR Part 64 CAM requirements through the operation and maintenance of the COM and the SO<sub>2</sub> and O<sub>2</sub> CEMS as required under 06-096 CMR 117. [40 CFR Part 64, §64.3(d)]

**(20) Operating Practices**

Each Combustor shall meet the following operating practice standards:

- A. Over a 4-hour block period, each Combustor operating load level shall not exceed 110% of the maximum demonstrated Combustor load level measured

as steam flow or feed water flow demonstrated during the most recent PCDD/PCDF testing, except for the 2 weeks prior to and during PCDD/PCDF testing, or if waived by the Department for purposes of evaluating system performance, testing new technology or control technologies, or diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions. "Maximum demonstrated municipal Combustor load" means the highest 4-hour arithmetic average Combustor load achieved during 4 consecutive hours during the most recent PCDD/PCDF performance test demonstrating compliance with the applicable limit for PCDD/PCDF.

[40 CFR Part 60, Subpart BBBB]

- B. The 4-hour block average fabric filter inlet temperature shall not exceed 17°C above the maximum demonstrated particulate matter control device inlet temperature as determined during PCDD/PCDF testing, except for the 2 weeks prior to and during PCDD/PCDF testing, or if waived by the Department for purposes of evaluating system performance, testing new technology or control technologies, or diagnostic testing, or related activities for the purpose of improving facility performance of advancing the state-of-the-art for controlling facility emissions.

"Maximum demonstrated particulate matter control device inlet temperature" means the highest 4-hour arithmetic average flue gas temperature measured at the particulate matter control device inlet during four consecutive hours during the most recent PCDD/PCDF performance test demonstrating compliance with the applicable limit for PCDD/PCDF.

[40 CFR 60, Subpart BBBB]

- 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, except for the 2 weeks prior to and during the annual mercury testing, or if waived by the Department for purposes of evaluating system performance, testing new technology or control technologies, or diagnostic testing, or related activities for the purpose of improving facility performance of advancing the state-of-the-art for controlling facility emissions.

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 CFR Part 60, Subpart BBBB, Section 60.1935(f), Equation 4 or 5.

[40 CFR Part 60, Subpart BBBB]



D. Pit Venting [06-096 CMR 140, BPT] **Enforceable by State-only**

1. 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 that 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 to be vented through the primary and secondary ducts, through the Combustor, and out the stack. During periods when MSW is not being received, the truck entry doors shall remain in the closed position except when operating conditions require they be open to permit rolling stock or trailers to move in or out of the building, with the following allowed exceptions.
2. 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. 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.
3. 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.

E. Smoke Ventilators [06-096 CMR 140, BPT] **Enforceable by State-only**

1. MMWAC shall maintain three (3) smoke ventilators at the facility in locations as have been deemed necessary by the Auburn Fire Department in case of an emergency.
2. For all smoke ventilators, MMWAC shall maintain the smoke ventilators in the weather-tight closed position at all times and operated only in the event of an emergency, except for the purposes as described in Specific Condition (20) D.2 above.

(21) **Start-ups, Shut-downs, and Malfunctions (SSM)** [06-096 CMR 140, BPT]

- A. Compliance and performance testing standards apply at all times, except during periods of start-up, shutdown, and malfunction. Startup, shutdown, or malfunction periods are limited to three hours per occurrence in accordance with 40 CFR Part 60.1710. A maximum of three hours of test data can be dismissed from compliance documentation during periods of start-up, shutdowns and malfunction.
- B. MMWAC shall keep the written start-up, shutdown, and malfunction plan (SSM Plan) on record and shall make it available for review to EPA or the Department upon request. In addition, if the SSM Plan is revised, MMWAC

shall keep previous versions of the plan on record to be made available for inspection upon request.

- C. MMWAC shall include in the operating manual the SSM Plan which describes, in detail, procedures for operating and maintaining the source during periods of start-up, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the relevant standards. The plan shall identify all routine or otherwise predictable CMS malfunctions.
- D. During periods of startup, shutdown, or malfunction, MMWAC shall operate and maintain the unit, including associated air pollution control equipment, in accordance with the procedures specified in the SSM Plan.
- E. When actions taken during a startup, shutdown, or malfunction are consistent with the procedures specified in the SSM Plan, MMWAC shall maintain records for that event that demonstrate that the procedures specified in the plan were followed. These records shall include records of the occurrence and duration for each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control equipment.
- F. If an action taken during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the SSM Plan, MMWAC shall record the actions taken for that event and shall report to the Department such actions 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.

If the SSM Plan fails to address an event that meets the characteristics of a malfunction but was not included in the plan at the time the plan was developed, MMWAC shall revise the SSM 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.

- G. "Startup" is the period when the Combustor begins continuous burning of MSW and does not include any warm-up period when the affected facility is combusting fossil fuel or other non-MSW fuel while no MSW is being fed to the combustor.

"Continuous Burning" is the continuous, semi-continuous, or batch feeding of MSW for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of MSW solely to provide thermal protection of the grate during the startup period when MSW is not being fed to the grate is not considered to be continuous burning.

“Warm-up” is defined as the period before startup commences, when natural gas is being fired in the Combustor.

- H. The stack O<sub>2</sub> 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 ppm<sub>dv</sub> averages for SO<sub>2</sub>, NO<sub>x</sub>, and CO if the observed stack oxygen is greater than 14.0% during Warm-up and startup and to use the recalculated number for compliance purposes. Subsequent to startup, the use of actual O<sub>2</sub> readings will be resumed. Emission concentrations shall be corrected to 7.0% oxygen (dry basis). [40 CFR Part 60, Subpart BBBB; 06-096 CMR 140, BPT]

(22) **Operator Training and Certification** [40 CFR Part 60, Subpart BBBB]

- 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.
- 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 CFR 60.1675. If one of the above specified personnel 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.
- C. MMWAC shall establish a program in accordance with 40 CFR 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.

- D. MMWAC must have a site-specific operating manual by the timetable set forth in 40 CFR 60.1660. The manual shall be updated and reviewed annually, and all persons whose responsibilities affect the operation of the facility must be familiar with this document. The manual shall contain the following:
- 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. Combustors startup, shutdown, and malfunction procedures;
  - 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.
- 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 EPA.

**(23) Ash Handling System**

- A. MMWAC shall not discharge to the atmosphere visible emissions of combustion ash from the ash conveying system, including conveyor transfer points and building or enclosures of ash conveying systems and storage areas, in excess of 5% of the observation period (i.e., nine minutes in any three-hour period). [06-096 CMR 121]

Compliance with the opacity emission limit for the Ash Handling System shall be demonstrated in accordance with the method and frequency indicated in the table below or other method or frequency as approved by the Department.

<b><u>Pollutant</u></b>	<b><u>Compliance Method</u></b>	<b><u>Frequency</u></b>
Visible Emissions	EPA Reference Method 22 in 40 CFR Part 60, Appendix A (not applicable during maintenance and repair of Ash Handling System)	once every 2.5 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.

- B. 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.

- C. MMWAC shall conduct a performance test for fugitive ash emissions on an annual basis, no more than 12 calendar months following the previous performance test.
- D. Fugitive ash visible emission limitations do not cover visible emissions discharged inside buildings or enclosures of ash conveying systems or visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems; and do not apply during maintenance and repair of ash conveying systems.  
[06-096 CMR 121]
- E. Ash from Combustor and all ash and non-combustible materials culled from the ash handling system shall be sufficiently conditioned with water to render it dust-free, or shall be stored in covered containers or in a leak tight enclosure so as to prevent fugitive emissions. [06-096 CMR 140, BPT]

(24) **Lime Silo**

- A. 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. [06-096 CMR 140, BPT] **Enforceable by State-only**
- B. Visible emissions from the lime silo baghouse shall not exceed 10% opacity on a six-minute block average basis. [06-096 CMR 140, BPT]

(25) **Emergency Units: Emergency Diesel Generator, Fire Pump Engine**

- A. Allowable Operation and Fuels
  - 1. The diesel Fire Pump Engine and the Emergency Diesel Generator are licensed to fire diesel fuel. [06-096 CMR 140, BPT]
  - 2. Each of these two units is limited to 500 hours per year total operation, based on a 12-month rolling total. Compliance shall be demonstrated by a log of all generator and engine operating hours. [06-096 CMR 140, BPT]
- B. Diesel Fuel Sulfur Content
  - 1. Prior to January 1, 2016, the diesel fuel fired at MMWAC shall not exceed a sulfur content of 0.05% by weight. [06-096 CMR 140, BPT]
  - 2. Beginning January 1, 2016, or on the date specified in 38 MRSA §603-A(2)(A)(3), diesel fuel fired at the MMWAC facility shall not exceed a sulfur content of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]

3. Beginning January 1, 2018, or on the date specified in 38 MRSA §603-A(2)(A)(3), diesel fuel fired at the MMWAC facility shall not exceed a sulfur content of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
4. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 140, BPT]

C. Emissions from the Emergency Generator shall not exceed the following:

<b>Pollutant</b>	<b>Licensed Emission Limit</b>	<b>Origin and Authority</b>
PM	0.12 lb/MMBtu	06-096 CMR 103

D. Emissions from the Emergency Generator and the Fire Pump Engine shall not exceed the following:

<b>Lb/hour:</b>	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Emergency Generator (3.2 MMBtu/hr) diesel	0.38	0.38	0.16	14.11	3.04	1.15
Fire Pump Engine (1.7 MMBtu/hr) diesel	0.20	0.20	0.09	7.50	1.62	0.61
<b>Emission Factor</b>	0.12 lb/MMBtu		0.05 lb/MMBtu	4.41 lb/MMBtu	0.95 lb/MMBtu	0.36 lb/MMBtu
<b>Emission Factor Source</b>	06-096 CMR 103		based on 0.05% S	AP-42 Table 3.3-1 (10/96)		
<b>Authority</b>	06-096 CMR 140, BPT					

E. Visible Emissions

Visible emissions from each diesel generator or diesel engine shall not exceed 20% opacity on a six-minute block average, except for no more than two six-minute block averages in a three-hour period. [06-096 CMR 101]

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

1. No later than May 3, 2013, MMWAC shall meet the following operational limitations for each of the compression ignition emergency generators:
  - a. Change the oil and filter annually,
  - b. Inspect the air cleaner annually, and
  - c. Inspect the hoses and belts annually and replace as necessary.

A log shall be maintained documenting compliance with the operational limitations. [40 CFR §63.6603(a) and Table 2(d); and 06-096 CMR 140, BPT]

2. 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 CFR §63.6625(i)]
3. A non-resettable hour meter shall be installed and operated on each generator and engine. [40 CFR §63.6625(f)]
4. Maintenance, Testing, and Non-Emergency Operating Situations
  - a. The generator and engine shall each be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §63.6640(f)(4)(ii) are met). These limits are based on a calendar year. Compliance shall be demonstrated by a log of all generator operating hours. [40 CFR §63.6640(f) and 06-096 CMR 115]
  - b. MMWAC shall keep records that include maintenance conducted on each generator and engine and the hours of operation of each unit recorded from the non-resettable hour meter. Documentation shall include the hours spent for emergency operation including what classified the operation as emergency and how many hours each engine was operated for non-emergency use. If the generator is operated during a period of demand response or deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), MMWAC must keep records of the notification of the emergency situation, and the date, start time, and end time of each generator operation for these purposes. [40 CFR §63.6655(e) and (f)]
5. Each generator and engine 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 unit in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §63.6625(e)]

6. During periods of startup, the facility must minimize each generator's and engine's time spent at idle and minimize each generator's and engine's startup time to a period needed for appropriate and safe loading of the unit, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]
7. If MMWAC operates or is contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), the facility must conform with the following requirements [40 CFR §63.6650(h)]:
  - a. Beginning January 1, 2015, the diesel fuel fired in the generators shall not exceed 15 ppm sulfur (0.0015%). Any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. [40 CFR §63.6604(b)]
  - b. The facility shall submit an annual report containing the information in §63.6650(h)(1)(i) through (ix). The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

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

(26) **Parts Washers**

Parts washers at MMWAC shall comply with applicable requirements found in *Solvent Cleaners*, 06-096 CMR 130 (as amended), as follows:

- A. MMWAC shall keep records of the amount of solvent added to each parts washer. [06-096 CMR 140, BPT]
- B. The following are exempt from the requirements of 06-096 CMR 130 [06-096 CMR 130]:



1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
  2. Wipe cleaning; and,
  3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- C. The following standards apply to cold cleaning machines that are applicable sources under 06-096 CMR 130.
1. MMWAC shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 CMR 130]:
    - a. Waste solvent shall be collected and stored in closed containers.
    - b. Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
    - c. Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized, or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
    - d. The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
    - e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
    - f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
    - g. Spills during solvent transfer shall be cleaned immediately. Sorbent material used to clean spills shall then be immediately stored in covered containers.
    - h. Work area fans shall not blow across the opening of the degreaser unit.
    - i. The solvent level shall not exceed the fill line.
  2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches.

(27) **Stack Testing**

- A. Compliance with the limits established in this air emission license shall be demonstrated by stack testing as follows:

<u>Pollutant</u>	<u>Limits</u>	<u>Method</u> <sup>a</sup>	<u>Schedule</u>	<u>Enforcement Authority</u>
PM	mg/dscm @ 7% O <sub>2</sub>	Method 5	Every three years	--
PM <sub>10</sub>	mg/dscm @ 7% O <sub>2</sub>	Method 201	When requested by the Department <sup>b</sup>	<b>Enforceable by State-only</b>
SO <sub>2</sub>	ppmvd @ 7% O <sub>2</sub>	Method 6		
NO <sub>x</sub>	ppmdv @ 7% O <sub>2</sub>	Method 7		
CO	ppmdv @ 7% O <sub>2</sub>	Method 10		
VOC	ppmdv @ 7% O <sub>2</sub>	Method 25A		
HCl	ppmdv @ 7% O <sub>2</sub>	Method 26	Annually <sup>c</sup>	--
Pb	mg/dscm @ 7% O <sub>2</sub>	Method 29		
Cd	mg/dscm @ 7% O <sub>2</sub>	Method 29		
Hg	mg/dscm @ 7% O <sub>2</sub>	Method 29		
PCDD/PCDF	ng/dscm @ 7% O <sub>2</sub>	Method 23		
Sb, As, Be, Cr (hex), Cr (total), Cu, Flourides (as HF), Formaldehyde, Ni, Se, and Zn	lb/hr	Method 29	When requested by the Department	<b>Enforceable by State-only</b>
Sulfur acid mist		Method 8		

a Test Methods are in accordance with 40 CFR Part 60, Appendix A or as approved by the Department.[ 06-096 CMR 121]

b MMWAC shall conduct a stack test for PM<sub>10</sub> if stack test results for PM show the emissions are greater than 80% of the licensed limit. [06-096 CMR 140, BPT]

c See Condition 30(E) for alternate testing schedules.

B. For Combustors #1 and #2, MMWAC shall conduct performance testing on each effluent, or the combined effluent, as applicable. [06-096 CMR 121]

C. The procedures and test methods used to determine compliance with the emission limits for particulate matter, cadmium, lead, opacity, fugitive ash, mercury, dioxin/furan, and hydrogen chloride shall be in accordance with 06-096 CMR 121 and 40 CFR Part 60 Subpart BBBB. [40 CFR Part 60, Subpart BBBB § 60.1790]

D. MMWAC shall conduct a performance test for compliance with the emission limits for particulate matter, cadmium, lead, mercury, dioxin/furan, and hydrogen chloride on an annual basis (no later than 13 calendar months following the previous performance test). [40 CFR Part 60, Subpart BBBB § 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:

dioxins/furans, 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 CFR Part 60, Subpart BBBB § 60.1795(a)]

F. When determining percent reductions for mercury and hydrogen chloride emissions, both inlet and outlet concentrations of the control device shall be measured during stack testing. [06-096 CMR 121]

G. Stack test results shall be submitted to the Department in accordance with 06-096 CMR 121. [06-096 CMR 121]

(28) **Recordkeeping Requirements** [06-096 CMR 121, 130, and 140; and 40 CFR Part 60, Subpart BBBB]

A. Emissions Monitoring Records

MMWAC shall maintain records, in either paper or digital format or an alternative format approved by the Department, of the following information for each emission unit for a period of at least six years. These records shall be kept available for submittal to the Department or review on-site by a Department representative.

1. The calendar date of each record;
2. All 6-minute average opacity levels;
3. All 1-hour average SO<sub>2</sub> emission concentrations;
4. All 1-hour average NO<sub>x</sub> emission concentrations;
5. All 1-hour average CO emission concentrations;
6. All 1-hour average load levels of each Combustor;
7. All 1-hour average flue gas temperatures at the inlet of the fabric filter;
8. The average concentrations and percent reductions, as applicable, computed and recorded, for the following:
  - a. All 24-hour daily block geometric average SO<sub>2</sub> emission concentrations, or all 24-hour daily geometric average percent reductions of sulfur dioxide emissions;
  - b. All 24-hour daily block arithmetic average NO<sub>x</sub> emission concentrations;
  - c. All 4-hour block or 24-hour daily block 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;
  9. 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;
  10. 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:
    - a. SO<sub>2</sub> emissions data
    - b. NO<sub>x</sub> emissions data
    - c. CO emissions data
    - d. Combustor load level data
    - e. Flue gas temperature at the inlet to the fabric filter
  11. Documentation of each time that data was excluded from the calculation of averages for any of the following:
    - a. SO<sub>2</sub> emissions data
    - b. NO<sub>x</sub> emissions data
    - c. CO emissions data
    - d. Combustor load level data;
    - e. Flue gas temperature at the inlet to the fabric filter
  12. Documentation of the results of daily drift tests and quarterly accuracy determinations (in accordance with 40 CFR Part 60, Appendix F, Procedure 1) for SO<sub>2</sub>, NO<sub>x</sub>, and CO continuous emissions monitoring systems.
- B. Operator Training Records**
1. For the Combustors, records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been provisionally and/or fully certified by the American Society of Mechanical Engineers (ASME) or an equivalent State-approved certification program, including the dates of initial provisional and full certification and renewal full certifications. Include in these records documentation showing current provisional and/or current full certifications.

2. For the Combustors, records showing the names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustion operator training course or a State-approved equivalent course. Include in these records the dates of completion of the operator training course and documentation showing completion of the training course.
3. Records showing the names of persons who have completed a review of the operating manual, including the date of the initial review and the dates of subsequent annual reviews.
4. Records showing when a certified operator is temporarily offsite in accordance with 40 CFR Part 60, Subpart BBBB, §60.1840 (e).

C. Performance Test Records

The test reports documenting the results of the following performance tests shall be recorded along with supporting calculations:

1. The results of all performance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission limits.
2. The results of all subsequent dioxin/furan performance tests, which shall include the maximum demonstrated load of the Combustors and maximum temperature at the inlet of the fabric filter.
3. The results of all performance tests to determine emissions of antimony, arsenic, beryllium, hexavalent chromium, total chromium, copper, flourides as HF, formaldehydes, nickel, selenium, sulfuric acid mist, and zinc.

D. Carbon Injection Records

1. *Records of Average Carbon Feed Rate*
  - a. Average carbon feed rate in pounds per hour during all stack tests for mercury emissions, including supporting calculations;
  - b. Average operating level of the carbon screw feeder speed during all stack tests for mercury emissions, including supporting data that document the relationship between the screw feeder speed and the carbon feed rate;
  - c. All 8-hour block average carbon feed rates in pounds per hour calculated from the screw feeder speed;
  - d. Total carbon purchased and delivered to MMWAC for each calendar quarter;

- e. Required quarterly usage of carbon for the facility as calculated in accordance with 40 CFR Part 60, Subpart BBBB, Section 60.1935(f), Equation 4 or 5.
2. *Records of Low Carbon Feed Rates*
  - a. 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 mercury emissions;
  - b. Reasons for the low carbon feed rates;
  - c. Corrective actions taken to meet the 8-hour average carbon injection rate requirement.
3. *Records of Minimum Carbon Feed Rates*
  - a. Calendar dates for which the minimum amount of carbon feed rate data was not collected;
  - b. Reasons the data was not collected;
  - c. Corrective actions taken to get the required amount of data.
4. *Records of Exclusions*

Documentation of each time data was excluded from the calculation of the average carbon feed rates and the reasons the data were excluded.
- E. For all the equipment parameter monitoring and recordkeeping required by this license, records shall include the following:
  1. Documentation which shows monitor operational status during all source operating time (steam flow, baghouse inlet temperature, carbon injection rate and unit combustion temperature); and
  2. 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.
- F. MMWAC shall maintain monthly records of natural gas use. Fuel use records shall indicate the quantity of fuel consumed.
- G. MMWAC shall maintain annual records of all solvent added to and removed from the solvent degreasers.
- H. For all licensed pollution control equipment, MMWAC shall maintain a log detailing all routine and non-routine maintenance on all fabric filters and both spray dryer absorbers. MMWAC shall keep a log documenting the location, date, and nature of all pollution control equipment failures or malfunctions.

(29) **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 CMR 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 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.

(30) **Semiannual Reporting** [40 CFR Part 60, Subpart BBBB and 06-096 CMR 140]

- A. The licensee shall submit to the Department semiannual reports which are due on **January 31<sup>st</sup>** and **July 31<sup>st</sup>** 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 before the due date or if the report is received by the DEP within seven calendar days of the due date.
- C. Each semiannual report shall include a summary of the periodic and CAM monitoring required by this license.
- D. Each semiannual report shall include the annual capacity factor of natural gas fired in Unit #1 and Unit #2.
- 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.
- F. Each semiannual report shall include a summary of the following items:
  1. For any of the following five pollutants or parameters that exceeded the limits in this license, the calendar date of any exceedances, the reasons for the exceedances, and the corrective action taken:
    - a. Concentration or percent reductions of SO<sub>2</sub> emissions;

- b. Concentration of CO emissions;
  - c. Load level of each unit;
  - d. Temperature of the flue gases at the inlet of the fabric filter;
  - e. Unit combustion temperature;
  - f. Average 6-minute opacity level. The data obtained from the COM are not used to determine compliance with the limit on opacity emissions.
2. If the results of the stack test show emissions above the limits specified in this license for dioxin/furan, cadmium, lead, mercury, particulate matter, opacity, hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and the corrective actions taken.
  3. Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) was less than the highest carbon feed rate established during the most recent mercury stack test. The facility shall include the following:
    - a. Eight-hour average carbon feed rate;
    - b. Reasons for occurrences of low carbon feed rates;
    - c. The corrective actions taken to meet the carbon feed rate requirement;
    - d. The calendar date.
  4. Documentation of each quarter when total carbon purchased and delivered to the facility is less than the total required quarterly usage of carbon. Include the following:
    - a. The amount of carbon purchased and delivered to the plant;
    - b. The required quarterly usage of carbon;
    - c. Reasons for not meeting the required quarterly usage of carbon;
    - d. The corrective actions taken to meet the required quarterly usage of carbon;
    - e. The calendar date.
  5. The rolling 12-month total of natural gas fired into Unit #1 and Unit#2.
  6. The combined annual capacity factor for natural gas in Units #1 and #2.
  7. Summary page of the results of stack testing performed.
  8. Diesel fuel oil sulfur content of the diesel fuel burned and the total operating hours over the past six months for each generator.



(31) **Annual Compliance Certification**

MMWAC shall submit an annual compliance certification to the Department in accordance with Standard Condition (13) of this license. The annual compliance certification is due January 31 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 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 CMR 140]

The annual report shall include the following items:

- A. The results of the annual stack test, using appropriate units, for eight pollutants:
  1. Dioxin/furans
  2. Cadmium
  3. Lead
  4. Mercury
  5. Opacity
  6. Particulate matter
  7. Hydrogen chloride
  8. Fugitive ash
- B. A list of the highest average levels recorded, in the appropriate units. List those values for:
  1. SO<sub>2</sub> emissions;
  2. CO emissions;
  3. Temperature of the flue gas at the inlet of the fabric filter;
- C. The highest 6-minute opacity level measured. Base this value on all 6-minute average opacity levels recorded by the COM;
- D. The average carbon feed rates recorded during the most recent mercury stack test;
- E. The lowest 8-hour block average carbon feed rate recorded during the year;
- F. The total carbon purchased and delivered to the facility for each calendar quarter;

- G. The required quarterly carbon usage at the facility calculated using equation 4 or 5 in 40 CFR Part 60, Subpart BBBB, §60.1935(f);
- H. The total number of days that MMWAC did not obtain the minimum number of hours of data for the following. Include the reasons the data was not collected and the corrective actions taken to obtain the data in the future:
  - 1. SO<sub>2</sub> emissions;
  - 2. CO emissions;
  - 3. Load level of each unit;
  - 4. Temperature of the flue gas at the inlet of the fabric filter;
  - 5. Carbon feed rate;
  - 6. Unit combustion temperature;
- I. The number of hours of excluded data from the calculations of average levels (including the reasons for exclusion). Include the following data:
  - 1. SO<sub>2</sub> emissions;
  - 2. CO emissions;
  - 3. Load level of each unit;
  - 4. Temperature of the flue gas at the inlet to the fabric filter;
  - 5. Carbon feed rate;
  - 6. Unit combustion temperature;
- J. A notice of an intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year if eligible for alternative scheduling (40 CFR Part 60, Subpart BBBB §60.1795(b)).
- K. A notice of an intent to begin a reduced stack testing schedule for other pollutants during the following calendar year if eligible for other scheduling (40 CFR Part 60, Subpart BBBB §60.1795(a)).
- L. A summary of any emission or parameter level that did not meet the limits specified in this license;
- M. A summary of this data from the year preceding the reporting year which gives the Department and EPA a summary of the performance of the Combustors over a 2-year period.
- N. Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.

(32) **Annual Emission Statement**

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

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

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

**(33) General Applicable State Regulations**

The licensee is subject to the State regulations listed below.

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

**(34) 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 CFR 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 CFR, Part 82, Subpart F]

**(35) Asbestos Abatement**

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

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

- A. MMWAC shall submit a complete Part 70 renewal application at least six months but no more than 18 months prior to the expiration of this air license.
- B. Pursuant to Title 5 MRSA §10002, and 06-096 CMR 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 CMR 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**

Mid-Maine Waste Action Corporation  
Androscoggin County  
Auburn, Maine  
A-378-70- B-R/A

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Departmental  
Findings of Fact and Order  
Part 70 Air Emission License  
Renewal / Amendment

(37) **New Source Review**

MMWAC is subject to all previous New Source Review requirements summarized in this Part 70 air emissions license, and the NSR requirements remain in effect even if this 06-096 CMR 140 Air Emissions License, A-378-70-B-R/A, expires.

DONE AND DATED IN AUGUSTA, MAINE THIS *12* DAY OF *August*, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Maric Allen Robert Corne for*  
PATRICIA W. AHO, COMMISSIONER

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

[Note: If a renewal application determined by the Department as complete, is submitted at least 6 months but no earlier than 18 months prior to expiration of this Part 70 license, then pursuant to Title 5 MRSA §10002, all terms and conditions of the Part 70 license shall remain in effect until the Department takes final action on the application for renewal of the Part 70 license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 26, 2006

Date of application acceptance: January 4, 2007

Date filed with the Board of Environmental Protection:

This Order prepared by Jane E. Gilbert, Bureau of Air Quality.

