



DEPARTMENT ORDER

**Municipal Review Committee, Inc.  
Municipal Waste Solutions, LLC  
Penobscot County  
Hampden, Maine  
A-1111-71-E-M**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #3**

**FINDINGS OF FACT**

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

**I. REGISTRATION**

A. Introduction

Air Emission License A-1111-71-A-N was issued jointly to Fiberight LLC and Municipal Review Committee, Inc. (MRC) on July 14, 2016, for emission sources associated with a municipal solid waste (MSW) processing facility. The license was subsequently amended on April 1, 2019 (A-1111-71-B-A) to address the phasing of the facility's construction and on October 9, 2019 (A-1111-71-C-A) to add three natural gas-fired make-up air units. All facility licenses were transferred to MRC and Municipal Waste Solutions, LLC (MWS), jointly, on April 18, 2023 (A-1111-71-D-T).

The equipment addressed in this license amendment is located on Bouchard Lane in Hampden, Maine.

MRC/MWS has requested a minor revision to their license to reevaluate the emission factors associated with the facility's tipping floor scrubbers in order to conduct a trial involving limited processing of no more than 18,000 tons of MSW without the scrubbers being operated.

With this license, the Department is also taking this opportunity to make the following changes:

1. Removing equipment that was permitted but not installed; and
2. Updating visible emission standards as necessary due to recent changes to 06-096 Code of Maine Rules (C.M.R.) ch. 101, *Visible Emissions Regulation*.

B. Emission Equipment

The following equipment was previously permitted but not installed. Pursuant to Standard Condition (3) of A-1111-71-A-N (7/14/2016), approval to construct the following equipment is considered invalid and it is being removed from this license.

**Boilers**

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Sulfur Content	Stack #
Boiler #1	48	5.1 ton/hr	Post-Hydrolysis Solids	varies	1
		783 scfm	Natural Gas	negligible	
Boiler #2	48	5.1 ton/hr	Post-Hydrolysis Solids	varies	2
		783 scfm	Natural Gas	negligible	
		315 scfm	Digester Gas	25 ppmv H <sub>2</sub> S	

**Other Fuel Burning Equipment**

Equipment	Maximum Firing Rate	Fuel Type	Sulfur Content
ZBRID TO	386 scfm	Tail Gas	1,600 ppmv H <sub>2</sub> S
	209 scfm	Digester Gas	1,000 ppmv H <sub>2</sub> S

**Process Equipment**

Equipment	Pollution Control Equipment
Hydrolysis Reactors	N/A
PHS Dryers	multiclone & baghouse
Ash Handling	N/A
Cooling Towers	drift eliminators

The following equipment was installed within the authorized construction window and continues to be authorized to operate.

**Boilers**

Equipment	Max. Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Sulfur Content	Date of Manuf.	Stack #
Boiler #3	13.2 both fuels combined	207 scfm	Natural Gas	negligible	2018	3
		315 scfm	Digester Gas	25 ppmv H <sub>2</sub> S		

**Make-up Air Units**

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (scfh)	Fuel Type	Date of Manuf.	Date of Install.
HX-34000	5.57	5,353	Natural Gas	2019	2019
HX-34001	5.57	5,353	Natural Gas	2019	2019
HX-34100	3.56	3,475	Natural Gas	2019	2019

**Other Fuel Burning Equipment**

Equipment	Maximum Firing Rate	Fuel Type	Sulfur Content	Date of Manuf.
Flare #1	320 scfm	Digester Gas	1,000 ppmv H <sub>2</sub> S	2019

**Process Equipment**

Equipment	Pollution Control Equipment
Tipping Floor	(2) scrubber trains
Pulpers	
Wash Tunnels	
Anaerobic Digesters	thermal oxidizer & flares

C. Definitions

Records or Logs mean either hardcopy or electronic records.

D. Application Classification

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

This amendment will increase licensed emissions by less than 4 ton/year for each single pollutant not including greenhouse gases (GHG) and less than 8 ton/year for all pollutants combined not including GHG. Therefore, this modification is determined to be a minor revision and has been processed as such.

E. Facility Classification

With the facility-wide annual emission limit on SO<sub>2</sub>, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because MRC/MWS is subject to license restrictions that keep facility emissions below major source thresholds for SO<sub>2</sub>; and
- As an area source of hazardous air pollutants (HAP), because the licensed emissions are below the major source thresholds for HAP.

**II. BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

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

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

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

B. Scrubber Operation

MRC/MWS wishes to process a limited amount of MSW for the purpose of conducting trial-scale waste processing. The goal of these trial runs is to operate the “front-end” processing equipment that physically separates the waste and to collect samples for assessing the composition of the material as received and after front-end processing. These trials are intended to inform the design of anticipated future changes to the “wet-end” processing equipment.

MRC/MWS proposes to conduct these trials without reactivating the facility’s scrubber trains. The facility is equipped with an air handling system that draws air from inside the building and treats it with packed bed wet scrubbers. Each scrubber train consists of two

scrubbers in series, and the facility has two scrubber trains. The scrubbers are intended to minimize emissions of fugitive volatile organic compounds (VOC) and associated VOC-based hazardous air pollutants (HAP).

MRC/MWS proposed an enforceable processing limit of 18,000 tons of MSW over the next 12 months following issuance of this license amendment, which is equivalent to 10% of the facility's anticipated normal throughput. This would limit total potential emissions of VOC from MSW trial processing over the next 12 months to no more than 0.5 tons of VOC.

In support of their request, MRC/MWS provided data from a study<sup>1</sup> of VOC emissions from food waste and conservatively estimated emissions based on the proposed maximum throughput of 18,000 tons of MSW and assumed an emission rate of 23 mg/kg of waste (0.046 lb/ton of waste), which is the study's highest emission rate and assumes an ambient temperature of 35 °C (95 °F).

The processing of MSW in MRC/MWS's front-end equipment at the throughput limit proposed results in emissions of less than one ton per year of any single criteria pollutant or HAP and less than four tons per year for all criteria pollutants combined. Therefore, this trial processing meets the criteria to be considered an insignificant activity pursuant to *Major and Minor Source Air Emission License Regulation*, 06-096 C.M.R. ch. 115, Appendix B, § B.1.

The facility's scrubbers are currently shut down, drained of chemical, and blanked off from the sewer system. Due to a long period of inactivity, reactivation of the scrubbers will require repair or replacement of several scrubber components that is estimated to cost in excess of \$250,000 in addition to the ongoing operating costs. The Department agrees that this cost is not justified for control of emissions from a temporary process that can be classified as an insignificant activity. To minimize fugitive emissions, MRC/MWS has proposed work practice standards that include keeping the receiving area doors closed during all times other than when vehicles or equipment are entering or exiting the building and minimizing the amount of time waste is stored on the tipping floor.

Based on the above, the Department finds that the following limits on operation of the facility's front-end processing equipment represents BPT for control of emissions during trial processing. MRC/MWS shall be limited to the processing of no more than 18,000 tons of MSW over the 12 months following issuance of this license amendment without operation of the scrubber trains. MRC/MWS shall not operate any wet-end equipment (e.g.,

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<sup>1</sup> Yuxue Cui, Haijing Zhang, Jingwen Zhang, Baoyi Lv, Bing Xie, *The emission of volatile organic compounds during the initial decomposition stage of food waste and its relationship with the bacterial community*, Environmental Technology & Innovation, Volume 27, 2022, 102443, ISSN 2352-1864, <https://doi.org/10.1016/j.eti.2022.102443>

wash tunnel or pulper) without restarting the scrubbers. MRC/MWS shall keep all receiving area doors closed whenever waste is present on the tipping floor.

C. Visible Emissions

In 2023, the Department completed rulemaking on revisions to *Visible Emissions Regulation*, 06-096 C.M.R. ch. 101. The revised rule went into effect on January 1, 2024. The following section identifies applicable visible emissions requirements and addresses necessary revisions to applicable requirements due to this rulemaking.

1. Boiler #3

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

When firing natural gas, Boiler #3 is subject to the following visible emissions standards pursuant to 06-096 C.M.R. ch. 101, § 4(A)(3):

Visible emissions from Boiler #3 shall not exceed 10% opacity on a six-minute block average basis.

When firing digester gas, Boiler #3 is subject to the following visible emissions standard pursuant to 06-096 C.M.R. ch. 101, § 4(B)(8):

Visible emissions from Boiler #3 shall not exceed 30% opacity on a six-minute block average basis, except for periods of startup, shutdown, or malfunction during which time MRC/MWS must meet the normal operating visible emissions standard or the following alternative visible emissions standard.

During periods of startup, shutdown, or malfunction, visible emissions shall not exceed 40% opacity on a six-minute block average basis. This alternative visible emissions standard shall not be utilized for more than two hours (20 consecutive six-minute block averages) per event. MRC/MWS shall keep records of the date, time, and duration of each event.

b. 06-096 C.M.R. ch. 115, BACT

Boiler #3 is subject to the following visible emissions standard established pursuant to 06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019):

Visible emissions from Boiler #3 shall not exceed 10% opacity on a six-minute block average basis.

c. Streamlining

The Department has determined that the BACT visible emissions standard is equivalent to or more stringent than the applicable visible emissions standards in 06-096 C.M.R. ch. 101. Therefore, the visible emissions limits have been streamlined to the more stringent BACT limit, and only this more stringent limit shall be included in the Order section of this air emission license.

2. Flare #1

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

Flare #1 is subject to the following visible emissions standard pursuant to 06-096 C.M.R. ch. 101, § 4(A)(8):

Visible emissions from Flare #1 shall not exceed 30% opacity on a six-minute block average basis, except for periods of startup, shutdown, or malfunction during which time Peaks must meet the normal operating visible emissions standard or the following alternative visible emissions standard.

During periods of startup, shutdown, or malfunction, visible emissions shall not exceed 40% opacity on a six-minute block average basis. This alternative visible emissions standard shall not be utilized for more than two hours (20 consecutive six-minute block averages) per event. Peaks shall keep records of the date, time, and duration of each event.

b. 06-096 C.M.R. ch. 115, BACT

Flare #1 is subject to the following visible emissions standards pursuant to 06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019):

Visible emissions from Flare #1 shall not exceed 10% opacity on a six-minute block average basis.

c. Streamlining

The Department has determined that the BACT visible emissions standard is more stringent than the applicable visible emissions standard in 06-096 C.M.R. ch. 101. Therefore, the visible emissions limits have been streamlined to the more stringent BACT limit, and only this more stringent limit shall be included in the Order section of this air emission license.

3. Make-Up Air Units

The visible emissions standard for HX-34000, HX-34001, and HX-34100 has not changed. However, the citation is updated to 06-096 C.M.R. ch. 101, § 4(A)(3).

4. General Process Sources

The visible emissions standard for general process sources not otherwise identified has not changed. However, the citation is updated to 06-096 C.M.R. ch. 101, § 4(B)(4).

5. Fugitive Emissions

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

Sources of fugitive emissions (including roadways) are subject to the following visible emissions standard pursuant to 06-096 C.M.R. ch. 101, § 4(C):

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

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

b. 06-096 C.M.R. ch. 115, BACT

Sources of fugitive emissions are subject to the following visible emissions standards pursuant to 06-096 C.M.R. ch. 115, BACT (A-1111-71-A-N, 7/14/2016):

Visible emissions from a fugitive emission source (including roadways) shall not exceed an opacity of 20%.

c. Streamlining

The Department has determined that the visible emissions standards contained in 06-096 C.M.R. ch. 101 are more stringent than the applicable visible emissions standard established under BACT. Therefore, the visible emissions limits have been



streamlined to the more stringent limits, and only these more stringent limits shall be included in the Order section of this air emission license.

**D. Annual Emissions**

The table below provides an estimate of facility-wide annual emissions for the purposes of calculating the facility’s annual air license fee and establishing the facility’s potential to emit (PTE). Only licensed equipment is included, i.e., emissions from insignificant activities are excluded. Similarly, unquantifiable fugitive particulate matter emissions are not included except when required by state or federal regulations. Maximum potential emissions were calculated based on the following assumptions:

- Operating Boiler #3 for 8,760 hr/year and worst-case emissions for either natural gas or digester gas;
- Operating Flare #1 and the Make-up Air Units for 8,760 hr/year;
- Processing 18,000 ton/year of MSW at an uncontrolled emission rate of 0.046 lb of VOC per ton of MSW; and
- A facility-wide SO<sub>2</sub> limit of 49.9 tpy.

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

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

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boiler #3	0.6	0.6	0.6	–	2.4	1.0	0.5
Flare #1	5.4	5.4	5.4	–	13.9	63.6	1.7
HX-34000	1.2	1.2	1.2	–	2.4	2.0	0.1
HX-34001	1.2	1.2	1.2	–	2.4	2.0	0.1
HX-34100	0.8	0.8	0.8	–	1.5	1.3	0.1
Fugitive VOC	–	–	–	–	–	–	4.2
Facility-wide Limit	–	–	–	49.9	–	–	–
<b>Total TPY</b>	<b>9.2</b>	<b>9.2</b>	<b>9.2</b>	<b>49.9</b>	<b>22.6</b>	<b>69.9</b>	<b>6.7</b>

<b>Pollutant</b>	<b>Tons/year</b>
Single HAP	9.9
Total HAP	24.9

**ORDER**

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

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

The Department hereby grants Air Emission License Amendment A-1111-71-E-M subject to the conditions found in Air Emission License A-1111-71-A-N, in amendments A-1111-71-B-A and A-1111-71-C-A, and the following conditions.

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

**For clarity, the following shall replace all Conditions in Air Emission Licenses A-1111-71-A-N and amendments A-1111-71-B-A and A-1111-71-C-A.**

**STANDARD CONDITIONS**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S. § 347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to beginning actual construction of a modification, unless specifically provided for in Chapter 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction,

reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]

- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 C.M.R. ch. 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 C.M.R. ch. 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 C.M.R. ch. 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 C.M.R. ch. 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department, the licensee shall:
  - A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    2. Pursuant to any other requirement of this license to perform stack testing.

- B. Install or make provisions to install test ports that meet the criteria of 40 C.F.R. Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. Submit a written report to the Department within thirty (30) days from date of test completion.  
[06-096 C.M.R. ch. 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. Within thirty (30) days following receipt of the written test report by the Department, or another alternative timeframe approved by the Department, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 C.F.R. Part 60 or other method approved or required by the Department; and
  - B. The days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - C. The licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.  
[06-096 C.M.R. ch. 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or license requirement. [06-096 C.M.R. ch. 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 C.M.R. ch. 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 C.M.R. ch. 115]
- (16) The licensee shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S. § 605). [06-096 C.M.R. ch. 115]

### **SPECIFIC CONDITIONS**

**Conditions specific to equipment that was licensed but not constructed are considered obsolete and have been removed.**

#### **(17) Facility-Wide Emission Limits**

- A. MRC/MWS shall not exceed facility-wide total annual emissions of 49.9 tpy of SO<sub>2</sub> (12-month rolling total) for Boiler #3, Flare #1, HX-34000, HX-34001, and HX-34100 (all units combined). [06-096 C.M.R. ch. 115, BACT (A-1111-71-C-A, 10/9/2019)]
- B. MRC/MWS shall not exceed facility-wide total annual emissions of 9.9 tpy of any single HAP and 24.9 tpy of any combination of HAPs based on a 12-month rolling total. [06-096 C.M.R. ch. 115, BACT (A-1111-71-C-A, 10/9/2019)]
- C. When the anaerobic digester is in operation, compliance with the annual SO<sub>2</sub> and HAP emission limits shall be demonstrated by monthly calculations of emissions based on the following:
1. Amount of each fuel fired in Boiler #3, HX-34000, HX-34001, and HX-34100 (see note below);
  2. Amount of gas burned in Flare #1;
  3. H<sub>2</sub>S concentration of the gas burned in Boiler #3 and Flare #1; and
  4. Emission factors based on the equipment's licensed emission limits or performance test results.
- [06-096 C.M.R. ch. 115, BPT (A-1111-71-C-A, 10/9/2019)]

Note: In determining the fuel use for the make-up air units, MRC/MWS may conservatively use all natural gas fired by units other than the boiler. Alternatively, MRC/MWS may conservatively calculate fuel use for the make-up air units based on the hours the units were in operation and the maximum hourly fuel use for each unit.

D. When the anaerobic digester is in operation, updated calculations of facility-wide monthly and 12-month rolling total emissions of SO<sub>2</sub> and HAP shall be completed by the 20<sup>th</sup> of each following month and made available to the Department upon request. [06-096 C.M.R. ch. 115, BPT (A-1111-71-C-A, 10/9/2019)]

**(18) Boiler #3**

A. Boiler #3 is licensed to fire natural gas and digester gas. [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

B. The digester gas fired in Boiler #3 shall have an H<sub>2</sub>S concentration not to exceed 25 ppmv. Compliance shall be demonstrated by the H<sub>2</sub>S sampling required by Condition (19). [06-096 C.M.R. ch. 115, BACT(A-1111-71-B-A, 4/1/2019)]

C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]:

Emission Unit	Pollutant	lb/MMBtu
Boiler #3 (natural gas and/or digester gas)	PM	0.012
	NO <sub>x</sub>	0.043
	CO	0.017

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3 (natural gas and/or digester gas)	0.14	0.14	0.01	0.55	0.22	0.10

D. Compliance with the SO<sub>2</sub> emission limits shall be demonstrated by firing only natural gas and digester gas with a H<sub>2</sub>S concentration of 25 ppmv or less. [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

E. Compliance with all other pollutant emission limits shall be demonstrated by conducting performance testing upon request by the Department. [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

F. Visible emissions from Boiler #3 shall not exceed 10% opacity on a six-minute block average basis. Compliance shall be demonstrated by performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 9 upon request by the Department. [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

G. MRC/MWS shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boiler #3 including, but not limited to maintaining records of the amounts

of each fuel combusted during each calendar month in Boiler #3.  
[40 C.F.R. § 60.48c(g)]

**(19) Anaerobic Digester and Flare #1**

A. Any digester gas produced that is not either combusted in Boiler #3 or sold for use off-site must be controlled by Flare #1. [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

B. MRC/MWS shall use flow meters to measure the amount (scf) of each type of gas (digester gas, tail gas, and sales gas) fired in each combustion unit (Boiler #3 or Flare #1). Records of the amount of each gas combusted in each unit shall be kept on a monthly and 12- month rolling total basis.  
[06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

C. H<sub>2</sub>S Sampling

1. On a monthly basis (when operating), MRC/MWS shall sample and record the H<sub>2</sub>S concentration of both the raw digester gas and the digester gas after the SulfAx™ Iron Sponge using a handheld analyzer, laboratory analysis by gas chromatograph, or other test method approved by the Department. The sampling results for each month along with the gas flow rates to each combustion device, shall be used to calculate the monthly SO<sub>2</sub> emissions and determine compliance with the ton per year (tpy) emission limit (on a 12-month rolling total basis) based on the assumption that the majority of sulfur compounds produced are H<sub>2</sub>S and that all sulfur is converted to SO<sub>2</sub> during combustion.  
[06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

2. MRC/MWS shall keep records of calibrations performed pursuant to the manufacturer's recommendations for any on-site monitor used to demonstrate compliance with this condition. [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

D. Emissions shall not exceed the following:

[06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Flare #1	0.33	0.33	3.25	0.85	3.87	8.24

E. Visible emissions from Flare #1 shall each not exceed 20% opacity on a 6-minute block average basis. [06-096 C.M.R. ch. 115, BACT (A-1111-71-B-A, 4/1/2019)]

**(20) Scrubber Trains**

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

A. MRC/MWS may process up to 18,000 tons of MSW over the 12 months following issuance of this license amendment without operating the scrubber trains provided all of the following conditions are met:

1. MRC/MWS shall not operate any wet-end equipment (e.g., wash tunnel or pulper).
2. MRC/MWS shall keep all receiving area doors closed whenever waste is present on the tipping floor except as necessary for ingress and egress.
3. MRC/MWS shall minimize the amount of time that waste is stored on the tipping floor when the scrubber trains are not operating. To demonstrate compliance, by the end of each week, MRC/MWS shall either remove any MSW from the site or secure it in a covered container inside the building.
4. MRC/MWS shall keep records of the amount of MSW received for processing on a monthly basis.

B. Except as provided for in Condition (20)(A), MRC/MWS shall comply with the following:

1. At least one scrubber train shall be operated at all times MSW is present on the tipping floor. Both scrubber trains shall be operated whenever an overhead door is open.
2. All components of the scrubber trains shall be maintained in good working order. When in operation, MRC/MWS shall perform monthly inspections of each scrubber and maintain records of all inspection and maintenance activities performed on the scrubbers.

**(21) Make-up Air Units**

A. HX-34000, HX-34001, and HX-34100 shall fire only natural gas.  
[06-096 C.M.R. ch. 115, BACT (A-1111-71-C-A, 10/9/2019)]

B. Emissions shall not exceed the following:

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
HX-34000	PM	0.05	06-096 C.M.R. ch. 115, BACT (A-1111-71-C-A, 10/9/2019)
HX-34001	PM	0.05	
HX-34100	PM	0.05	



C. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT (A-1111-71-C-A, 10/9/2019)]:

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
HX-34000	0.28	0.28	neg.	0.54	0.46	0.03
HX-34001	0.28	0.28	neg.	0.54	0.46	0.03
HX-34100	0.18	0.18	neg.	0.35	0.29	0.02

D. Visible emissions from HX-34000, HX-34001, and HX-34100 shall each not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 101, § 4(A)(3)]

**(22) Parameter Monitors**

Each parameter monitor must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% 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 parameter monitor 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.

The flow meters and other devices used to monitor the amount of fuel combusted in Boiler #3 and the amount of gas destroyed in Flare #1 are considered parameter monitors for the purposes of this license.

[06-096 CMR 115, BACT (A-1111-71-A-N, 7/14/2016)]

**(23) General Process Sources**

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

**(24) Fugitive Emissions**

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

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

[06-096 C.M.R. ch. 101, § 4(C)]

**(25) Annual Emission Statements**

- A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, MRC/MWS shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.
- B. MRC/MWS shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:
1. The amount of each fuel fired in Boiler #3, HX-34000, HX-34001, and HX-34100 (each) on a monthly basis (see note);
  2. The amount of gas burned in Flare #1;
  3. The H<sub>2</sub>S concentration of the gas burned in Boiler #3 and Flare #1;
  4. The amount of MSW received;
  5. Calculations of the VOC and/or HAP emissions from the scrubber trains on a calendar year total basis; and
  6. Hours each emission unit was active or operating on a monthly basis.

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

Note: In determining the fuel use for the make-up air units, MRC/MWS may conservatively use all natural gas fired by units other than the boiler. Alternatively, MRC/MWS may conservatively calculate fuel use for the make-up air units based on the hours the units were in operation and the maximum hourly fuel use for each unit.

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

- (26) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the

**Municipal Review Committee, Inc.  
Municipal Waste Solutions, LLC  
Penobscot County  
Hampden, Maine  
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application or ambient air quality impact analysis for this air emission license, MRC/MWS may be required to submit additional information. Upon written request from the Department, MRC/MWS shall provide information necessary to demonstrate AAQS will not be exceeded, potentially including submission of an ambient air quality impact analysis or an application to amend this air emission license to resolve any deficiencies and ensure compliance with AAQS. Submission of this information is due within 60 days of the Department's written request unless otherwise stated in the Department's letter.  
[06-096 C.M.R. ch. 115, § 2(O)]

DONE AND DATED IN AUGUSTA, MAINE THIS 28<sup>th</sup> DAY OF JUNE, 2024.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:  for  
MELANIE LOYZIM, COMMISSIONER

The term of this license amendment shall be ten (10) years from the issuance of Air Emission License A-1111-71-A-N (issued 7/14/2016).

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/25/2024

Date of application acceptance: 4/30/2024

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

