



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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GOVERNOR

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**New England Waste Services of ME, Inc.
dba Hawk Ridge Compost Facility
Waldo County
Unity, Maine
A-663-71-B-N (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

New England Waste Services of ME, Inc. dba Hawk Ridge Compost Facility (Hawk Ridge) has applied for an Air Emission License permitting the operation of emission sources associated with their composting facility.

The equipment addressed in this license is located at 73 Reynolds Road, Unity, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Engines

<u>Equipment</u>	<u>Max Output KW</u>	<u>Heat Input (MMBtu/hr)</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Manf. Date</u>
Screen #1	130	1.3	9.5	diesel, 0.0015%	post-2006
Screen #2	130	1.3	9.5	diesel, 0.0015%	post-2006
Generator #5	275	2.9	21	diesel, 0.0015%	2002
Generator #6	275	2.9	21	diesel, 0.0015%	2004

Hawk Ridge has an additional screen (Screen #3) powered by an engine that is less than 0.5 MMBtu/hr in size and therefore considered an insignificant activity.

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17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD, SUITE 6
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312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

Process Equipment

<u>Equipment</u>	<u>Material Throughput</u>	<u>Pollution Control Equipment</u>
Composting Tunnels (6)	46,080 ton/year of biosolids	wet scrubber & biofilter

C. Application Classification

Hawk Ridge is classified as an existing source that is applying for its first air emission license, after the fact. The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With the operating hours restriction on the engines and the use of the control equipment on the composting operation, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

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

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

B. Process Description

Hawk Ridge operates an in-vessel tunnel system for converting biosolids (primarily waste water treatment plant biosolids) into compost and compost containing materials for commercial sale.

Materials for composting are received and temporarily stored at the facility before being mixed together. The incoming municipal biosolids are mixed with organic bulking agents (primarily sawdust) in appropriate quantities to achieve the proper carbon to nitrogen ratios, porosity, and moisture content needed for efficient

composting to occur prior to being loaded into the enclosed tunnels for processing.

Air flow within the tunnels is managed through the tunnels and treated through the use of a wet scrubber for control of ammonia (NH₃) followed by a biofilter for control of VOCs.

After a residence time of about a week in the tunnels, the active phase of the composting is complete, and the compost is moved outside for continued aerated curing. Compost is piled on cement pads outside over perforated PVC pipe which blows air through the compost as part of the curing process. Afterwards the compost is moved to the finishing phase where the compost is stored in windrows for final curing, screened, and mixed with other components (mulch, peat, humus, etc.) and sold.

C. Composting Emissions

As described above, Hawk Ridge accepts primarily municipal waste water treatment plant biosolids. However, they are also licensed to accept food wastes, wood ash, leaf and yard waste, shredded paper, short paper fiber, fish waste, and wood waste.

A summary of the BACT analysis for the composting process occurring in the tunnel vessels is the following:

Ammonia (NH₃) Emissions

The principle compound believed to be responsible for odor in the composting process at Hawk Ridge is NH₃ generated in the tunnel vessels during composting. Hawk Ridge replaced an existing scrubber with a new chemical scrubber that reduces NH₃ emissions by approximately 93%. The new chemical scrubber was specifically designed for the removal of NH₃ and utilizes a sulfuric acid solution (H₂SO₄) as the scrubbing media.

Hawk Ridge's Solid Waste license limits them to the processing of 57,600 cu yd per year (approximately 46,080 ton/year). The average ratio of bulking agent (wood waste) to biosolids is 1.2 to 1. This equates to a maximum process rate of 55,296 ton/yr of bulking agents and a total material throughput of 101,376 ton/yr.

Based on the types and mixtures of materials composted at Hawk Ridge an uncontrolled emission factor of 0.70 lb of NH₃ per ton of material processed is believed to be appropriate. This emission factor comes from the Emission Inventory Improvement Program's draft final report *Estimating Ammonia Emissions from Anthropogenic Nonagricultural Sources* dated April 2004 for composting of material that is 50% dewatered biosolids and 50% wood waste.

Based on the maximum throughput and emission factors listed above, the uncontrolled emission rate for NH₃ from the tunnel vessels is estimated to be 8.1 lb/hr or 35.5 tons/year (based on operation 8,760 hours/year).

Based on an expected NH₃ removal efficiency for the scrubber of 93%, an average emission rate of 0.6 lb/hr for NH₃ on the scrubber outlet is assumed.

Prior testing has not demonstrated a consistent reduction in NH₃ emissions through the biofilter. Therefore, no credit for NH₃ reduction was attributed to the biofilter in the facility's emissions calculations.

Therefore, the Department finds that BACT for control of NH₃ emissions from the composting tunnels shall be use of the scrubber to achieve at least 93% reduction in NH₃ emissions.

Volatile Organic Compound (VOC) Emissions

Another potentially significant air pollutant from the composting process are VOC emissions generated in the tunnel vessels during composting. Based on the types and mixtures of materials composted at Hawk Ridge an uncontrolled emission factor of 0.76 lb of VOC per ton of material processed is believed to be a conservative estimate. This emission factor comes from the Emission Inventory Improvement Program's draft final report *Estimating Ammonia Emissions from Anthropogenic Nonagricultural Sources* dated April 2004 for composting of material that is 50% dewatered biosolids and 50% wood waste.

Based on the maximum throughput and emission factors listed above, the uncontrolled emission rate for VOC from the tunnel vessels is estimated to be 8.8 lb/hr or 38.5 tons/year (based on operation 8,760 hours/year).

There has been no prior testing of the scrubber to demonstrate its VOC removal efficiency. Therefore, no credit for VOC reduction was attributed to the scrubber in the facility's emission calculations.

Based on an expected VOC removal efficiency for the biofilter of 70%, an average emission rate of 2.6 lb/hr for VOC exiting the biofilter is assumed.

Therefore, the Department finds that BACT for control of VOC emissions from the composting tunnels shall be use of the biofilter to achieve at least 70% reduction in VOC emissions.

D. Maintenance Shutdowns

Due to the nature of the composting process, it is not possible to immediately turn off or take off-line the composting tunnels. Therefore, Hawk Ridge has requested

the flexibility to take the control equipment off-line for either scheduled maintenance or unplanned emergency repairs.

A total of 14 days (336 hours) of uncontrolled operation has been included in the facility's annual emissions to account for either scheduled or unscheduled downtime. Hawk Ridge shall maintain records of all control equipment downtime including dates, times, and reason for such downtime.

E. Emergency Generators

Hawk Ridge operates two emergency generators (Generator #5 and Generator #6). The emergency generators are rated at 275 kW (2.9 MMBtu/hr) each and fire diesel fuel with a sulfur content of 0.0015% or less by weight. The generators were manufactured in 2002 and 2004 respectively.

1. BACT Findings

The BACT emission limits for the generators are based on the following:

- PM/PM₁₀ - 0.12 lb/MMBtu based on BACT, 06-096 CMR 115
- SO₂ - combustion of diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)
- NO_x - 4.41 lb/MMBtu from AP-42 dated 10/96
- CO - 0.95 lb/MMBtu from AP-42 dated 10/96
- VOC - 0.35 lb/MMBtu from AP-42 dated 10/96
- Opacity - 06-096 CMR 101

The BACT emission limits for the generators are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #5	0.35	0.35	neg	12.70	2.74	1.01
Generator #6	0.35	0.35	neg	12.70	2.74	1.01

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

Each of the emergency generators shall be limited to 500 hours of operation a year, based on a calendar year. Hawk Ridge shall keep records of the hours of operation for each unit.

2. 40 CFR Part 63, Subpart ZZZZ

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

a. Emergency Definition:

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

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
- (2) Paragraph (1) above notwithstanding, the emergency stationary RICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:
 - (i) Maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
 - (ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity

and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

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

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

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

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

public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

Generators #5 and #6 shall be limited to the usage outlined in §63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 CFR Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in §63.6640(f) may cause these engines to not be considered emergency engines and therefore subject to all the requirements for non-emergency engines.

b. 40 CFR Part 63, Subpart ZZZZ Requirements:

(1) Operation and Maintenance Requirements

	Compliance Dates	Operating Limitations* (40 CFR §63.6603(a) and Table 2(d))
Compression ignition (diesel, fuel oil) units: Generator #5 and #6	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 the facility shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §63.6625(e)]

(2) Optional Oil Analysis Program

Hawk Ridge 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, Hawk Ridge must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR §63.6625(i)]

(3) Non-Resetable Hour Meter Requirement

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

(4) Startup Idle and Startup Time Minimization Requirements

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

(5) Annual Time Limit for Maintenance and Testing

The generators shall each be limited to 100 hours/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)]

(6) Recordkeeping

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

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

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

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

[40 CFR §63.6650(h)]

F. Screen Engines

Hawk Ridge operates three portable screens on-site. Each screen is powered by a portable engine. Screen Engines #1 and #2 are 130 kW (1.3 MMBtu/hr) each. Screen Engine #3 is 43 kW (0.4 MMBtu/hr) which is considered an insignificant activity and is mentioned for inventory purposes only. The screen engines fire diesel fuel with a sulfur content of 0.0015% or less by weight.

1. BACT Findings

The BACT emission limits for the screen engines were based on the following:

PM/PM₁₀ - 0.12 lb/MMBtu based on BACT 06-096 CMR 115
SO₂ - combustion of diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur)
NO_x - 4.41 lb/MMBtu from AP-42 dated 10/96
CO - 0.95 lb/MMBtu from AP-42 dated 10/96

VOC - 0.35 lb/MMBtu from AP-42 dated 10/96
Opacity - 06-096 CMR 101

The BACT emission limits for the generators are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Screen Engine #1	0.16	0.16	neg	5.73	1.24	0.46
Screen Engine #2	0.16	0.16	neg	5.73	1.24	0.46

Visible emissions from Screen Engines #1 and #2 shall each not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

Screen Engines #1 and #2 shall be limited to 4,000 hours of operation per year for the two engines combined, based on a calendar year. Hawk Ridge shall keep records of the hours of operation.

2. 40 CFR Part 63, Subpart ZZZZ

The screen engines are considered non-road engines, as opposed to stationary engines, since the screen engines are portable and will be moved around the site. Therefore, the screen engines are not subject to 40 CFR Part 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*. The definition in 40 CFR Part 1068.30 states that a non-road engine is an internal combustion engine that meets certain criteria, including: "Portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform." 40 CFR Part 1068.30 further states that an engine is not a non-road engine if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source.

3. 40 CFR Part 60, Subpart IIII

The screen engines were each manufactured after April 2006. Therefore, these engines are subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*.

- a. Manufacturer Certification Requirement
The screen engines shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 CFR §60.4201. [40 CFR §60.4204(b)]
- b. Ultra-Low Sulfur Diesel Fuel Requirement
The diesel fuel fired in the screen engines shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 CFR §60.4207(b)]
- c. Operation and Maintenance Requirements
The screen engines shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by facility that are approved by the engine manufacturer. Facility may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

G. Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour.

H. General Process Emissions

Visible emissions from any general process (conveyor belts, bucket elevators, truck loading/unloading operations, etc.) shall not exceed an opacity of 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period.

I. Annual Emissions

1. Total Annual Emissions
Hawk Ridge shall be restricted to the following annual emissions, based on a 12 month rolling total. The tons per year limits were calculated based on a throughput of 46,080 ton/year of biosolids, 500 hr/yr for the emergency generators, and 4,000 hr/yr for the screen engines.

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	NH ₃
Generator #5	0.1	0.1	–	3.2	0.7	0.3	–
Generator #6	0.1	0.1	–	3.2	0.7	0.3	–
Screen Engines #1 & #2	0.3	0.3	–	11.5	2.5	0.9	–
Compost Tunnels	–	–	–	–	–	11.6	2.5
Control Equip Downtime	–	–	–	–	–	1.5	1.4
Total TPY	0.5	0.5	–	17.9	3.9	14.6	3.9

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 (CO₂e).

Based on the facility’s fuel use limit, 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, Hawk Ridge is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
PM ₁₀	25
SO ₂	50
NO _x	50
CO	250

The total facility licensed emissions are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

ORDER

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

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

The Department hereby grants Air Emission License A-663-71-B-N subject to the following conditions.

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

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]

- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions

unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]

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

SPECIFIC CONDITIONS

(16) Composting Tunnels

- A. Hawk Ridge shall not exceed the processing of 46,080 tons of municipal biosolids per year based on a 12-month rolling total. The facility shall keep records of the tonnage of biosolids processed on a monthly and calendar year basis. [06-096 CMR 115, BACT]
- B. Hawk Ridge shall continuously control emissions from any tunnel actively composting material by use of the wet scrubber and the biofilter with the exception that each piece of control equipment may have up to 336 hours per calendar year of downtime to address scheduled and unplanned maintenance. [06-096 CMR 115, BACT]
- C. The wet scrubber and biofilter shall be operated and maintained in combination to meet a minimum control efficiency of 93% in the control of NH₃ emissions and to meet a minimum control efficiency of 70% in the control of VOC emissions. [06-096 CMR 115, BACT]
- D. Hawk Ridge shall develop, and submit to the Department, a testing protocol to test the control efficiency of the wet scrubber for NH₃ removal and the biofilter for VOC removal by December 31, 2014. [06-096 CMR 115, BACT]
- E. Hawk Ridge shall perform testing to demonstrate compliance with the minimum control efficiency levels for NH₃ and VOC by June 30, 2015. [06-096 CMR 115, BACT]
- F. Hawk Ridge shall keep records of all control equipment downtime including the dates, duration, and reason for any downtime. [06-096 CMR 115, BACT]

- G. Hawk Ridge shall continuously monitor, and record once per day, the pH and flow rate of the scrubber media. [06-096 CMR 115, BACT]
- H. Hawk Ridge shall continuously monitor, and record once per day, the temperature of the biofilter media. [06-096 CMR 115, BACT]

(17) Emergency Generators

- A. Emergency Generators #5 and #6 are each limited to 500 hours per year total operation, based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115, BACT]
- B. The fuel oil sulfur content for Generators #5 and #6 shall be limited to 0.0015% sulfur. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BACT]
- C. Emissions shall not exceed the following [06-096 CMR 115, BACT]:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM₁₀ (lb/hr)</u>	<u>SO₂ (lb/hr)</u>	<u>NO_x (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Generator #5	0.35	0.35	neg	12.70	2.74	1.01
Generator #6	0.35	0.35	neg	12.70	2.74	1.01

- D. Visible emissions from each of the emergency generators shall not exceed 20% opacity on a 6 minute block average, except for no more than two (2) six (6) minute block averages in a 3 hour period. [06-096 CMR 101]
- E. The Emergency Generators #5 and #6 shall meet the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, including the following:
 - 1. No later than May 3, 2013, Hawk Ridge shall meet the following operational limitations for each of the compression ignition emergency generators:
 - a. Change the oil and filter annually,
 - b. Inspect the air cleaner annually and replace as necessary, and
 - c. Inspect the hoses and belts annually and replace as necessary.

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

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

2. Oil Analysis Program Option

Hawk Ridge 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, Hawk Ridge must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[40 CFR §63.6625(i)]

3. Non-Resettable Hour Meter

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

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

a. The generators shall each be limited to 100 hours/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 written log of all generator operating hours.

[40 CFR §63.6640(f) and 06-096 CMR 115]

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

5. Operation and Maintenance

The generators shall be operated and maintained according to the manufacturer's emission-related written instructions or Hawk Ridge shall

develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 CFR §63.6625(e)]

6. Startup Idle and Startup Time Minimization

During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

[40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

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

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

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

[40 CFR §63.6650(h)]

(18) **Screen Engines #1 and #2**

A. Fuel Use

1. Screen Engines #1 and #2 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur). Compliance shall

be demonstrated by records from the supplier showing the type of fuel delivered. [06-096 CMR 115, BACT and 40 CFR §60.4207(b)]

2. Screen Engines #1 and #2 shall not exceed 4,000 hr/yr of use for the two engines combined. Compliance shall be demonstrated by records of all operating times for Screen Engines #1 and #2. Records of annual hours of operation shall be kept on a monthly and calendar year total. [06-096 CMR 115, BACT]

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

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Screen Engine #1	0.16	0.16	neg	5.73	1.24	0.46
Screen Engine #2	0.16	0.16	neg	5.73	1.24	0.46

C. Visible emissions from Screen Engines #1 and #2 shall each not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

D. Screen Engines #1 and #2 shall meet the applicable requirements of 40 CFR Part 60, Subpart III, including the following:

1. Manufacturer Certification

The screen engines shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4201. [40 CFR §60.4204(b)]

2. Operation and Maintenance

The screen engines shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Hawk Ridge that are approved by the engine manufacturer. Hawk Ridge may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

(19) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

New England Waste Services of ME, Inc.
dba Hawk Ridge Compost Facility
Waldo County
Unity, Maine
A-663-71-B-N (SM)

22

Departmental
Findings of Fact and Order
Air Emission License
After-the-Fact

(20) **General Process Sources**

Visible emissions from any general process source (conveyor belts, bucket elevators, truck loading/unloading operations, etc.) shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

- (21) Hawk Ridge shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 13 DAY OF December, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

Marc Allen Robert Core for
PATRICIA W. AHO, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/24/08

Date of application acceptance: 4/7/08

Date filed with the Board of Environmental Protection:

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

