STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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DEPARTMENT ORDER

New England Waste Services of ME, Inc. **d/b/a Hawk Ridge Compost Facility** **Kennebec County** **Unity Township, Maine** **A-663-71-D-R/M**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Renewal and Minor Revision**

FINDINGS OF FACT

After review of the air emission license renewal and minor revision 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

New England Waste Services of ME, Inc. d/b/a Hawk Ridge Compost Facility (Hawk Ridge) has applied to renew their Air Emission License for the operation of emission sources associated with their composting facility.

Hawk Ridge has also applied to remove Screen Engine #2 from the license, which was replaced in 2019 with a smaller engine. The new engine has a maximum design heat input capacity of less than 0.5 MMBtu/hr and is therefore considered an insignificant unit and not required to be included in this license.

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

B. Emission Equipment

The following equipment is addressed in this air emission license:

Process Equipment

Equipment	Material Throughput	Pollution Control Equipment
Composting Tunnels (6)	46,080 ton/yr of biosolids	Wet scrubber & biofilter

Engines

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #5	2.9	275	Distillate fuel	21.0 gal/hr	2002	2003

Equipment	Max. Input Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Firing Rate (gal/hr)	Date of Manuf.	Date of Install.
Generator #6	2.9	275	Distillate fuel	21.0 gal/hr	2004	2004
Screen Engine #1	1.3	130	Distillate fuel	9.5 gal/hr	Post-2006	2008
*Screen Engine #2**	*1.3*	*130*	*Distillate fuel*	*9.5 gal/hr*	*Post-2006*	*2008*

* Removed from the license

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

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

C. Definitions

Distillate Fuel means the following:

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

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

An engine is not a non-road (portable) engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source.

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

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

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.

Hawk Ridge has applied to renew currently licensed emission units as well as amend their license as addressed in Section I(A) above. This amendment will not increase licensed emissions of any pollutant. Therefore, this license is considered to be both a renewal and a minor revision and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 Code of Maine Rules C.M.R. ch. 115.

E. Facility Classification

With the operating hours restriction on the engines and the annual composting throughput limit, the facility is licensed as follows:

- As a synthetic minor source of air emissions for criteria pollutants, because Hawk Ridge is subject to license restrictions that keep facility emissions below major source thresholds for NO_x, VOC, and NH_3; 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. Process Description

Hawk Ridge operates several in-vessel composting tunnel systems 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. Prior to being loaded into the enclosed tunnels where the decomposition process of composting occurs, incoming municipal biosolids are mixed with organic bulking agents (primarily sawdust) in appropriate quantities to achieve the proper carbon-to-nitrogen ratio, porosity, and moisture content to optimize the composting process.

Air flow within the tunnels is managed and treated using a wet scrubber for control of ammonia (NH_3) emissions followed by a biofilter for control of VOC emissions.

After an in-tunnel residence time of about a week, the active phase of the composting process is complete, and the compost is moved outside for continued aerated curing. Compost is piled outside on cement pads over perforated PVC piping, from which air blows 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, mixed with other components (mulch, peat, humus, etc.), and sold.

C. Composting Process

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.

1. BPT Findings

Ammonia (NH_3) Emissions
The principle compound believed to be responsible for odor in the composting process at Hawk Ridge is NH_3 generated in the tunnel vessels during composting. Hawk Ridge uses a chemical scrubber to remove NH_3 with a design control efficiency of 93%. The chemical scrubber was designed specifically for the removal of NH_3 and utilizes a sulfuric acid solution (H_2SO_4) as the scrubbing media.

Volatile Organic Compound (VOC) Emissions
Another potentially significant air pollutant from the composting process are VOC emissions generated in the tunnel vessels during composting. Hawk Ridge uses a biofilter to remove VOC with a design control efficiency of 70%.

The BPT emission limits for the composting process are based on composting material that is 50% dewatered biosolids and 50% wood waste and the following emission factors:

VOC – 0.76 lb/ton from EIIP[1] Table II-6 dated 4/04
NH_3 – 0.7 lb/ton from EIIP Table II-6 dated 4/04

The BPT emission limits for the composting process are the following:

Unit	VOC (lb/hr)	NH_3 (lb/hr)
Uncontrolled Emissions	8.8	8.1
Controlled Emissions	2.6	0.6

Hawk Ridge's Solid Waste license limits them to processing no more than 57,600 cubic yards 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. The lb/hr emissions limits are based on operation of 8,760 hours per year.

2. 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 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 control equipment downtime.

3. Performance Test Requirement

Hawk Ridge conducted testing on August 25, 2015, to demonstrate compliance with the minimum control efficiency levels for NH_3 and VOC, as required in Air Emission License A-663-71-C-M (issued 6/15/2015). Hawk Ridge collected additional NH_3 samples on December 30, 2014.

4. Periodic Monitoring [06-096 C.M.R. ch. 115, BPT]

a. Hawk Ridge shall keep records of the tonnage of biosolids processed on a monthly and calendar year total basis.

[1] Roe, et al. (April 2004). Estimating Ammonia Emissions from Anthropogenic Nonagricultural Sources. *Emission Inventory Improvement Program*. https://www.epa.gov/sites/default/files/2015-08/documents/eiip_areasourcesnh3.pdf

b. Hawk Ridge shall maintain records of all control equipment downtime including dates, times, and reason for such downtime.
c. Hawk Ridge shall continuously monitor the pH and flow rate of the scrubber media and record each once per day.
d. Hawk Ridge shall continuously monitor the temperature of the biofilter media and record it once per day.

D. Generators #5 and #6

Hawk Ridge operates two emergency generators, Generators #5 and #6. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. Generators #5 and #6 each fire distillate fuel in an engine rated at 2.9 MMBtu/hr. Generator #5 was manufactured in 2002 and installed in 2003. Generator #6 was manufactured and installed in 2004.

1. BPT Findings

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

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
CO	–	0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
VOC	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96

The BPT emission limits for the generators are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #5	0.35	0.35	0.35	0.004	12.79	2.76	1.04
Generator #6	0.35	0.35	0.35	0.004	12.79	2.76	1.04

2. Visible Emissions

Visible emissions from each of the emergency generators shall not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Hawk Ridge shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

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

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

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

[06-096 C.M.R. ch. 101, § 4(A)(4)]

3. Chapter 169

Generator #5 and #6 was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is therefore exempt from this rule pursuant to section 1.

4. New Source Performance Standards (NSPS)

Due to the dates of manufacture of the compression ignition emergency engines listed above, the engines are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE),* 40 C.F.R. Part 60, Subpart IIII since the units were manufactured prior to April 1, 2006. [40 C.F.R. § 60.4200]

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

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ is applicable to the emergency engines 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. [40 C.F.R. § 63.6585]

A summary of the currently applicable federal 40 C.F.R. Part 63, Subpart ZZZZ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 63, Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under

40 C.F.R. Part 63, Subpart ZZZZ, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

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

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

(2) Non-Emergency Situation Operation

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

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

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

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

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

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

(1) Operation and Maintenance Requirements

- Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
- Inspect the air cleaner every 1,000 hours of operation or within one year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
- Inspect all hoses and belts every 500 hours of operation or within one year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

[40 C.F.R. § 63.6603(a) and Table 2(d))]

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

(2) Optional Oil Analysis Program
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 each engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]

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

(4) Startup Idle and Startup Time Minimization Requirements
During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate

and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

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

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

E. Screen Engine #1

Hawk Ridge operates two portable screens on-site. Each screen is powered by a portable engine. Screen Engine #1 is rated at 1.3 MMBtu/hr (130 kW) and fires distillate fuel. Screen Engine #1 was manufactured post-2006 and installed in 2008. Screen Engine #2 is rated at 0.4 MMBtu/hr (38 kW) and is considered an insignificant unit.

State statute directs that, with limited exceptions, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm) pursuant to 38 M.R.S. § 603-A(2)(A)(3). Therefore, the distillate fuel purchased or otherwise obtained for use in Screen Engine #1 shall not exceed 0.0015% by weight (15 ppm).

1. BPT Findings

The BPT emission limits for Screen Engine #1 are based on the following:

$PM/PM_{10}/PM_{2.5}$	–	0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
SO_2	–	Combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight)
NO_x	–	4.41 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
CO	–	0.95 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96
VOC	–	0.36 lb/MMBtu from AP-42 Table 3.3-1 dated 10/96

The BPT emission limits for Screen Engine #1 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Screen #1 Engine	0.16	0.16	0.16	0.002	5.73	1.24	0.47

2. Usage Limits and Recordkeeping [06 096 C.M.R. ch. 115, BPT]

   Screen Engine #1 shall be limited to 3,000 hours of operation per calendar year. Compliance shall be demonstrated by a written or electronic log of all operating hours. A non-resettable hour meter shall be installed and operated on Screen Engine #1 to track the hours Screen Engine #1 was operated.

   Hawk Ridge shall keep records that include maintenance conducted on Screen Engine #1 and the hours of operation of Screen Engine #1 recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit was operated.

3. Visible Emissions

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

4. Chapter 169

   Screen Engine #1 was installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and is also a portable engine and therefore exempt from this rule pursuant to section 1.

5. New Source Performance Standards 40 C.F.R. Part 60, Subpart IIII (Screen #1)

   Screen Engine #1 is <u>not</u> subject to *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines,* 40 C.F.R. Part 60, Subpart IIII. The definition in 40 C.F.R. § 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." The regulation further states at 40 C.F.R. § 1068.30 that an engine is <u>not</u> a non-road engine if it remains or will remain at a location for more than 12 consecutive months or for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet

the criteria of a non-road engine and is subject to applicable stationary engine requirements. [40 C.F.R. § 60.4200]

Screen Engine #1 is considered a non-road engine, as opposed to a stationary engine, since the Screen Engine #1 is portable and will be moved to various sites throughout the Facility.

6. National Emission Standards for Hazardous Air Pollutants: 40 C.F.R. Part 63, Subpart ZZZZ

   Screen Engine #1 is not subject to *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,* 40 C.F.R. Part 63, Subpart ZZZZ.

   The definition in 40 C.F.R. § 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." The regulation further states at 40 C.F.R. § 1068.30 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 for a shorter period of time if sited at a seasonal source. A seasonal source is a source that remains in a single location for two years or more and which operates for fewer than 12 months in a calendar year. If an engine operates at a seasonal source for one entire season, the engine does not meet the criteria of a non-road engine and is subject to applicable stationary engine requirements. [40 C.F.R. § 63.6585]

   Screen Engine #1 is considered a non-road engine, as opposed to a stationary engine, since Screen Engine #1 is portable and will be moved to various sites throughout the facility.

F. General Process Emissions

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

G. Fugitive Emissions

Hawk Ridge 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.

Hawk Ridge 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.

H. 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:

- An annual composting throughput of 46,080 tons/yr of municipal biosolids and 55,296 ton/yr of organic bulking agents with expected NH_3 and VOC removal efficiency of 93% and 70%, respectively, from control equipment;
- An uncontrolled composting time limit of 336 hr/yr;
- Operating Generators #5 and #6 for 100 hr/yr, each; and
- Operating Screen Engine #1 for 3,000 hr/yr.

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

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

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	VOC	NH_3
Compost Tunnels	--	--	--	--	--	--	11.6	2.5
Uncontrolled Composting	--	--	--	--	--	--	1.4	1.5
Generator #5	--	--	--	--	0.6	0.1	0.1	--
Generator #6	--	--	--	--	0.6	0.1	0.1	--
Screen Engine #1	0.2	0.2	0.2	--	8.6	1.9	0.7	--
Total TPY	**0.2**	**0.2**	**0.2**	**--**	**9.8**	**2.1**	**13.9**	**4.0**

Pollutant	Tons/year
Single HAP	7.9
Total HAP	19.9

III. AMBIENT AIR QUALITY ANALYSIS

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

Pollutant	Tons/Year
PM_{10}	25
$PM_{2.5}$	15
SO_2	50
NO_x	50
CO	250

The total licensed annual emissions for the facility 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.

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

ORDER

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

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

The Department hereby grants Air Emission License A-663-71-D-R/M subject to the following conditions.

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

STANDARD CONDITIONS

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

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

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

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

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

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

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

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

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated

noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
[06-096 C.M.R. ch. 115]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SPECIFIC CONDITIONS

(17) **Composting Process**

A. Hawk Ridge shall not process more than 46,080 tons of municipal biosolids per year based on a calendar year basis. Hawk Ridge shall keep records of the tonnage of biosolids processed on a monthly and calendar year basis. [06-096 C.M.R. ch. 115, BPT]

B. The BPT emissions limits for the composting process are the following: [06-096 C.M.R. ch. 115, BPT]

Unit	VOC (lb/hr)	NH_3 (lb/hr)
Uncontrolled Emissions	8.8	8.1
Controlled Emissions	2.6	0.6

C. Hawk Ridge shall continuously control emissions from any tunnel actively composting material by use of the wet scrubber and 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 C.M.R. ch. 115, BPT]

D. The wet scrubber and biofilter shall be maintained and operated in combination to achieve a minimum control efficiency of 93% of NH_3 emissions and a minimum control efficiency of 70% of VOC emissions. [06-096 C.M.R. ch. 115, BPT]

E. Hawk Ridge shall keep records of all control equipment downtime including the dates, duration, and reason for any downtime. [06-096 C.M.R. ch. 115, BPT]

F. Hawk Ridge shall continuously monitor the pH and flow rate of the scrubber media and record each once per day. [06-096 C.M.R. ch. 115, BPT]

G. Hawk Ridge shall continuously monitor the temperature of the biofilter media and record the value once per day. [06-096 C.M.R. ch. 115, BPT]

(18) **Generators #5 and #6**

A. The fuel sulfur content of the distillate fuel fired in Generators #5 and #6 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #5	0.35	0.35	0.35	0.004	12.79	2.76	1.04
Generator #6	0.35	0.35	0.35	0.004	12.79	2.76	1.04

C. Visible Emissions

Visible emissions from each of the emergency generators shall not exceed 20% opacity on a six-minute block average basis except for periods of startup, during which time

Hawk Ridge shall either meet the normal operating visible emissions standard or the following work practice standards and alternative visible emissions standard.

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

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

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

[06-096 C.M.R. ch. 101, § 4(A)(4)]

D. Generators #5 and #6 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following: [incorporated under 06-096 C.M.R. ch. 115, BPT]

1. Hawk Ridge shall meet the following operational limitations for each of the compression ignition emergency engines:

   a. Change the oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;
   b. Inspect the air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
   c. Inspect the hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

   Records shall be maintained documenting compliance with the operational limitations.

   [40 C.F.R. § 63.6603(a) and Table 2(d); and 06-096 C.M.R. ch. 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 each engine. The analysis program must be part of the maintenance plan for each engine. [40 C.F.R. § 63.6625(i)]

3. Non-Resettable Hour Meter

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

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

   a. As emergency engines, the units shall each be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise to supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and 06-096 C.M.R. ch. 115, BPT]
   b. Hawk Ridge shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resettable hour meter. Documentation shall include the number of hours each unit operated for emergency purposes, the number of hours each unit operated for non-emergency purposes, and the reason each engine was in operation during each time. [40 C.F.R. §§ 63.6655(e) and (f)]

5. Operation and Maintenance

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

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

6. Startup Idle and Startup Time Minimization

   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. [40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(19) **Screen Engine #1**

A. The fuel sulfur content of the distillate fuel fired in Screen Engine #1 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel delivery receipts from the supplier, fuel supplier certification, certificate of analysis, or testing of the fuel in the tank on-site. [06-096 C.M.R. ch. 115, BPT]

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

Unit	PM (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Screen #1 Engine	0.16	0.16	0.16	0.002	5.73	1.24	0.47

C. Usage Limits and Recordkeeping [06 096 C.M.R. ch. 115, BPT]

Screen Engine #1 shall be limited to 3,000 hours per calendar year of operation based on a calendar year total. Compliance shall be demonstrated by a written or electronic log of all operating hours. A non-resettable hour meter shall be installed and operated on Screen Engine #1 to track the hours Screen Engine #1 was operated.

Hawk Ridge shall keep records that include maintenance conducted on Screen Engine #1 and the hours of operation of Screen Engine #1 recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit was operated.

D. Visible Emissions

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

(20) **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)]

(21) **Fugitive Emissions [06-096 C.M.R. ch. 101, § 4(C)]**

A. Hawk Ridge 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. Hawk Ridge 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.

(22) If the Department determines that any parameter value pertaining to construction and operation of the emissions units, including but not limited to stack size, configuration, flow rate, emission rates, nearby structures, etc., deviates from what was submitted in the application or ambient air quality impact analysis for this air emission license, Hawk Ridge may be required to submit additional information. Upon written request from the Department, Hawk Ridge 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 5th DAY OF DECEMBER, 2024.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____ for ____
MELANIE LOYZIM, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 4, 2023
Date of application acceptance: August 18, 2023

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