



DEPARTMENT ORDER

SDIX, LLC
Cumberland County
Windham, Maine
A-124-71-I-R/A

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

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

SDIX, LLC (SDIX) has applied to renew their Air Emission License, permitting the operation of their human and animal diagnostics products manufacturing facility. SDIX has also requested an amendment to their license in order to add three generators to the license, two of which are after-the-fact, since they are already in operation at the facility.

The equipment addressed in this license is located at 52 Anderson Road, Windham, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license renewal and amendment:

Incinerator

Incinerator Make and Model	Burn-Easy, Model 428
Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4, animal carcass
Max. Design Charging Rate (lb)	900
Max. Design (Combustion/Feed) Rate	75 lb/hr
Auxiliary Fuel Input:	Distillate fuel
Primary Chamber (Btu/hr)	315,000
Secondary Chamber (Btu/hr)	189,000
Emission Control	Afterburner

The incinerator combustion gases vent to a 16.75-foot AGL (Above Ground Level) stack, with a diameter of 8 inches.

Engines

Unit ID	Max. Capacity (MMBtu/hr)	Rated Output Capacity (kW)	Fuel Type	Date of Manuf.	Date of Install.
Generator #1	0.62	60	LPG	2010	2010
Generator #2	0.57	47	LPG	2007	2007
Generator #3	0.53	45	LPG	1981	1995
Generator #4*	1.36	125	LPG	2016	2016
Generator #5*	0.81	50	LPG	2019	2019
Generator #6*	0.88	60	LPG	2023	--

* New to the license

SDIX 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, SDIX 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 issued date of this license.

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the “Significant Emission” levels as defined in the Department’s *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (tpy)	Future License (tpy)	Net Change (tpy)	Significant Emission Levels
PM	0.7	0.9	0.2	100
PM ₁₀	0.7	0.9	0.2	100
PM _{2.5}	--	0.9	0.9	100
SO ₂	1.5	0.4	-1.1	100
NO _x	2.3	1.6	-0.7	100
CO	0.7	1.4	0.7	100
VOC	0.1	0.1	--	50*

*SDIX is located in an area of the state included in the Ozone Transport Region. Therefore, the significant emission level for VOC is 50 tpy.

This modification is determined to be a minor modification and has been processed as such.

The application for SDIX includes both the license renewal and the installation of new equipment. Therefore, the license is considered to be a renewal of currently licensed emission units and an after-the-fact minor modification 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

The facility is licensed as follows:

- As a natural minor source of air emissions, because no license restrictions are necessary to keep facility emissions below major source thresholds for criteria pollutants; 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**

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 06-096 C.M.R. ch. 100.

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 C.M.R. ch. 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental, and energy impacts.

BPT for existing 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. Veterinary Incinerator

BPT for the Class IV-A veterinary incinerator includes the following:

1. Emission Limits

- a. SDIX shall not exceed a particulate matter emission rate of 0.12 gr/dscf corrected to 12% CO₂ without the contribution of CO₂ from the auxiliary fuel fired in the Veterinary Incinerator. [06-096 C.M.R. 104 § 2(B)]
- b. Emissions information is based on the particulate matter emission limit above, the burning of distillate fuel as an auxiliary fuel, and the use of AP-42 factors from Tables 2.3-1 and 2.3-2 for biomedical waste incineration (dated 7/93) and Tables 1.3-1 and 1.3-3 for firing distillate fuel (dated 05/10):

BPT combustion factors and emission limits for Incinerator #3 are the following:

Pollutant	Fuel Combustion Factor (lb/MMBtu)	Waste Combustion Factor (lb/ton)	Total Emission Limit (lb/hr)
PM	0.08	4.67	0.22
PM ₁₀	0.08	4.67	0.22
PM _{2.5}	0.08	4.67	0.22
SO ₂	0.0015	2.17	0.08
NO _x	0.143	3.56	0.21
CO	0.036	2.95	0.13
VOC	0.001	0.299	0.01

Note: the previous license used an emission limit of 0.6 lb/hr for both PM and PM₁₀. The emission limits for PM, PM₁₀, and PM_{2.5} have been updated in this license renewal using the most current and applicable AP-42 emission factors.

- c. Visible emissions from the Veterinary Incinerator shall not exceed 10% opacity based on a six-minute block average basis.

2. Operating Parameters

- a. Operating temperature in the secondary chamber or refractory lined stack shall be maintained in the range between 1,300-1400 °F with a stack gas retention time of at least 0.75 seconds in the range between 1,300-1400 °F.
- b. To ensure an efficient burn and to prevent odors and minimize visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1,300 °F prior to commencing the burn cycle.
- c. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,300 °F in the secondary chamber.
- d. The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1,300 °F for the duration of the burn cycle.
- e. A pyrometer and ¼-inch test port shall be installed and maintained at the location of the incinerator or refractory lined stack, which provides sufficient volume to ensure a flue gas retention time of not less than 0.75 seconds at the minimum of 1,300 °F.

- f. A log shall be maintained detailing and quantifying the hours of operation on a daily basis for each Class IV-A Veterinary Incinerator. The log shall record the weight of each charge to the incinerator, preheat temperature, preheating time, charging time, and afterburner temperature directly after charging and every 60 minutes after startup until and including final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location.
- g. A log shall be maintained detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location.
- h. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management.
- i. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

C. Emergency Generators

SDIX operates five emergency generators, and proposes to install a sixth generator before the end of this year. The emergency generators are generator sets with each gen set consisting of an engine and an electrical generator. The emergency generators fire liquid petroleum gas (LPG).

BPT: Generator #1 is rated at 0.62 MMBtu/hr and was manufactured and installed in 2010. Generator #2 is rated at 0.57 MMBtu/hr and was manufactured and installed in 2007. Generator #3 is rated at 0.53 MMBtu/hr and was manufactured in 1981 and installed in 1995. These three existing generators are subject to the BPT requirements presented below.

BACT: Generator #4 is rated at 1.36 MMBtu/hr and was manufactured and installed in 2016. Generator #5 is rated at 0.81 MMBtu/hr and was manufactured and installed in 2019. Generators #4 and #5 are after-the-fact additions to the license. Generator #6 is rated at 0.88 MMBtu/hr and was manufactured in 2023 and is licensed to be installed in 2023. These three units are subject to the BACT requirements presented below.

1. BACT Findings

The BACT emission limits for Generators #4, #5, and #6 are based on the following:

- PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
- SO₂ – 5.88 x 10⁻⁴ lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- NO_x – 2.27 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- CO – 3.51 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- VOC – 2.96 x 10⁻² lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- Visible Emissions – 06-096 C.M.R. ch. 115, BACT

The BACT emission limits for Generators #4, #5, and #6 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 #4	0.16	0.16	0.16	0.001	3.09	4.78	0.04
Generator #5	0.10	0.10	0.10	--	1.85	2.86	0.02
Generator #6	0.11	0.11	0.11	0.001	1.99	3.08	0.03

Visible emissions from each of the emergency generators shall not exceed 10% opacity on a six-minute block average basis.

The Department has determined that the proposed BACT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for each generator has been streamlined to the more stringent BACT limit, and only this more stringent limit shall be included in the air emission license.

2. BPT Findings

The BPT emission limits for Generators #1, #2, and #3 are based on the following:

- PM/PM₁₀/PM_{2.5} – 0.12 lb/MMBtu from 06-096 C.M.R. ch. 115, BPT
- SO₂ – 5.88 x 10⁻⁴ lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- NO_x – 2.27 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- CO – 3.51 lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- VOC – 2.96 x 10⁻² lb/MMBtu from AP-42 Table 3.2-3 dated 7/00
- Visible Emissions – 06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Generators #1, #2, and #3, 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 #1	0.07	0.07	0.07	--	1.41	2.18	0.02
Generator #2	0.07	0.07	0.07	--	1.29	2.00	0.02
Generator #3	0.06	0.06	0.06	--	1.20	1.86	0.02

Visible emissions from each of the emergency generators shall not exceed 10% opacity on a six-minute block average basis.

The Department has determined that the proposed BPT visible emission limit is more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limit for each generator has been streamlined to the more stringent BPT limit, and only this more stringent limit shall be included in the air emission license.

3. Chapter 169

Generators #1, #2, #3, #4, and #5 were installed prior to the effective date of *Stationary Generators*, 06-096 C.M.R. ch. 169 and are therefore exempt from this rule pursuant to section 1.

Stationary Generators, 06-096 C.M.R. ch. 169 (Chapter 169), is applicable to Generator #6. It is an emergency generator powered by an engine with a rated output of less than 1,000 brake horsepower (747 kW). Chapter 169 identifies emission standards for generator engines subject to this chapter and stack height requirements for certain generator engines subject to this chapter.

a. Chapter 169 Emission Standards Requirements

For Generator #6, SDIX shall comply with the emission standards for emergency generators by complying with the applicable standards contained in 40 C.F.R. Part 60, Subpart JJJJ. [06-096 C.M.R. ch. 169, § 4(B)(1)]

b. Chapter 169 Stack Height Requirements

Chapter 169 identifies stack height requirements for any stack used to exhaust a generator engine or combination of generator engines with a combined rated output equal to or greater than 1,000 brake horsepower (747 kW). Individual generator engines with a maximum power capacity of less than 300 kW are not included in the assessment of the combined generator power capacity exhausted through a common stack. [06-096 C.M.R. ch. 169, § 6]

There are no stack height requirements in Chapter 169 applicable to Generator #6 because it exhausts through its own stack and its rated output is less than 1,000 brake horsepower (747 kilowatts). [06-096 C.M.R. ch. 169, § 6]

4. New Source Performance Standards

Due to the date of manufacture of Generators #2 and #3, the engines are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Spark Ignition Internal Combustion Engines (SI ICE)*, 40 C.F.R. Part 60, Subpart JJJJ since the units were manufactured before January 1, 2009. [40 C.F.R. § 60.4230]

Generators #1, #4, #5, and #6 are subject to 40 C.F.R. Part 60, Subpart JJJJ since these units were ordered after June 12, 2006, and manufactured after January 1, 2009. [40 C.F.R. § 60.4230]

A summary of the currently applicable federal 40 C.F.R. Part 60, Subpart JJJJ requirements is listed below.

a. Emergency Engine Designation and Operating Criteria

Under 40 C.F.R. Part 60, Subpart JJJJ, a stationary reciprocating internal combustion engine (ICE) is considered an emergency stationary ICE (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 60, Subpart JJJJ, 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 ICE 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.

[40 C.F.R. §§ 60.4243(d) and 60.4248]

b. 40 C.F.R. Part 60, Subpart JJJJ Requirements

(1) Manufacturer Certification Requirement

The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. [40 C.F.R. § 60.4233] The EPA certifications for Generators #1, #4, #5, and #6 are supplied by the manufacturer and are in the facility's air license file.

(2) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on each engine.
[40 C.F.R. § 60.4237]

(3) Operation and Maintenance Requirement

The engines shall be operated and maintained according to the manufacturer's written instructions or procedures developed by SDIX that are approved by the engine manufacturer. SDIX may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

SDIX shall have available for review by the Department a copy of the manufacturer's written instructions or procedures developed by SDIX that are approved by the engine manufacturer for engine operation and maintenance. [06-096 C.M.R. ch. 115, BPT]

(4) Annual Time Limit for Maintenance and Testing

As emergency engines, the units shall each be limited to 100 hours/year for maintenance and testing. The emergency engines may operate up to 50 hours per year in non-emergency situations, but those 50 hours are included in the 100 hours total allowed for maintenance and testing. The 50 hours for non-emergency use cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 C.F.R. § 60.4243(d)]

(5) Recordkeeping

SDIX 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. § 60.4245(b)]

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

By meeting the requirements of 40 C.F.R. Part 60, Subpart JJJJ, Generators #1, #4, #5, and #6 also meet the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 C.F.R. Part 63, Subpart ZZZZ. [40 C.F.R. § 63.6590(c)]

Generators #2 and #3 are subject to the requirements of 40 C.F.R. Part 63, Subpart ZZZZ. 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 #2 and #3 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause these engines to not be considered emergency engines and therefore subject to all applicable requirements for non-emergency engines.

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

(1) Operation and Maintenance Requirements

- (i) Change oil and filter every 500 hours of operation or annually, whichever comes first;
- (ii) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- (iii) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
[40 C.F.R. § 63.6603(a) and Table 2(d)]
- (iv) The engines shall be operated and maintained according to the manufacturer's emission-related written instructions, or SDIX 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

SDIX 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, SDIX 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)]

(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

SDIX 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)]

D. Annual Emissions

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

- Operating the Veterinary Incinerator for 8,760 hr/yr;
- Operating each emergency generator for 100 hrs/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
Vet Incinerator	0.9	0.9	0.9	0.4	0.9	0.6	0.1
Emergency Generators	--	--	--	--	0.7	0.8	--
Total TPY	0.9	0.9	0.9	0.4	1.6	1.4	0.1

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

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 renewal and amendment.

This determination is based on information provided by the applicant regarding the expected construction and operation of the proposed 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 SDIX 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 above source:

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

The Department hereby grants Air Emission License Renewal and Amendment A-124-71-I-R/A 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 which any emission 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. [06-096 C.M.R. ch. 115]
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in 06-096 C.M.R. ch. 115. [06-096 C.M.R. ch. 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 C.M.R. ch. 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 C.M.R. ch. 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]

- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 C.M.R. ch. 115]
- (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practices 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 the 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 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 the 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 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 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 provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or 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 when such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitations. [06-096 C.M.R. ch. 115]
- (15) Upon the written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such 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) Veterinary Incinerator

- A. The incinerator shall be used for the disposal of type 4 (veterinary) waste and shall not be used for the disposal of plastics, cytotoxic (antineoplastic) drugs or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in 06-096 C.M.R. ch. 100. However, the incidental use of plastics used in wrapping animal carcasses for handling and storage purposes is allowed.
[06-096 C.M.R. ch. 115, BPT]
- B. The incinerator shall not exceed the maximum design charging rate of 900 lbs. Auxiliary fuel input to the primary and secondary chamber shall be distillate fuel.
[06-096 C.M.R. ch. 115, BPT]
- C. The owner/operator shall maintain a log detailing and quantifying the hours of operation on a daily basis for each Class IV-A Veterinary Incinerator. The log shall record the weight of each charge to the incinerator, preheat temperature, preheating time, charging time, afterburner temperature directly after charging and every 60 minutes after startup until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged may be logged on the chart. The operation log shall be kept on-site at the incinerator location.
[06-096 C.M.R. ch. 115, BPT]
- D. The owner/operator shall maintain a log detailing the maintenance of emission control equipment. Records of the date of each inspection and any corrective action required will be included in the maintenance log. The maintenance log shall be kept on-site at the incinerator location. [06-096 C.M.R. ch. 115, BPT]
- E. The secondary chamber shall be preheated as specified by the manufacturer to a minimum of 1,300 °F prior to combusting any waste and shall be maintained at a minimum of 1,300 °F during the duration of the burn. [06-096 C.M.R. ch. 115, BPT]
- F. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner and as specified by the manufacturer for the period of time between preheat and reaching the set operational temperature to be a minimum of 1,300 °F in the secondary chamber.
[06-096 C.M.R. ch. 115, BPT]
- G. A pyrometer and ¼-inch test port shall be operated and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to ensure a flue gas retention time of not less than 0.75 seconds at the minimum of 1,300 °F.
[06-096 C.M.R. ch. 115, BPT]

- H. SDIX shall not exceed a particulate matter emission limit of 0.12 gr/dscf corrected to 12% CO₂ without the contribution of CO₂ from the auxiliary fuel.

Emissions shall be limited to the following [06-096 C.M.R. ch. 115, BPT]:

Pollutant	gr/dscf	lb/hr
PM	0.12	0.22
PM ₁₀	0.12	0.22
PM _{2.5}	0.12	0.22
SO ₂	n/a	0.08
NO _x	n/a	0.21
CO	n/a	0.13
VOC	n/a	0.01

- I. Visible emissions from the incinerator shall not exceed 10% opacity limit on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]
- J. The incinerator combustion gases shall vent to a stack which is at least 16.75-feet AGL or with a stack height which is at least 60 percent of Good Engineering Practice (GEP) stack height, based upon the facility building dimensions.
[06-096 C.M.R. ch. 115, BPT]
- K. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management. [06-096 C.M.R. ch. 115, BPT]
- L. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications, and shall be familiar with the terms of this Air Emission License as it pertains to the operation of the incinerator.
[06-096 C.M.R. ch. 115, BPT]
- M. Although not required at this time, the installation and operation of continuous chart recording devices may become necessary to document compliance with the temperature requirements of this license. Should the Bureau of Air Quality determine that continuous recording devices are necessary, the licensee shall, within 120 days, demonstrate that continuous recorders have been installed and are operational.
[06-096 C.M.R. ch. 115, BPT]
- (18) Emergency Generators
- A. SDIX shall keep records of all maintenance conducted on the engines associated with Generators #1, #2, #3, #4, #5, and #6. [06-096 C.M.R. ch. 115, BACT (for units #4, #5, and #6) and BPT (for units #1, #2, and #3)]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BACT and 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 #1	0.07	0.07	0.07	--	1.41	2.18	0.02
Generator #2	0.07	0.07	0.07	--	1.29	2.00	0.02
Generator #3	0.06	0.06	0.06	--	1.20	1.86	0.02
Generator #4	0.16	0.16	0.16	0.001	3.09	4.78	0.04
Generator #5	0.10	0.10	0.10	--	1.85	2.86	0.02
Generator #6	0.11	0.11	0.11	0.001	1.99	3.08	0.03

C. Visible Emissions

Visible emissions from each of the emergency generators shall not exceed 10% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BACT and BPT]

D. Generators #1, #4, #5, and #6 shall meet the applicable requirements of 40 C.F.R. Part 60, Subpart JJJJ, including the following:

[incorporated under 06-096 C.M.R. ch. 115, BACT and BPT]

1. Manufacturer Certification

The engines shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 C.F.R. Part 60, Subpart JJJJ, Table 1. The EPA certifications for Generators #1, #4, #5, and #6 are supplied by the manufacturer and are in the facility's air license file.

2. Non-Resettable Hour Meter

A non-resettable hour meter shall be installed and operated on each engine. [40 C.F.R. § 60.4237 and 06-096 C.M.R. ch. 115, BPT]

3. Annual Time Limit for Maintenance and Testing

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 supply power as part of a financial arrangement with another entity). The limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 C.F.R. § 60.4243(d) and 06-096 C.M.R. ch. 115, BPT]

b. SDIX 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. § 60.4245(b)]

4. Operation and Maintenance

Each engine shall be operated and maintained according to the manufacturer's written instructions or procedures developed by SDIX that are approved by the engine manufacturer. SDIX may only change those settings that are permitted by the manufacturer. [40 C.F.R. § 60.4243]

SDIX 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]

E. Generators #2 and #3 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. SDIX shall meet the following operational limitations for each of the spark ignition emergency engines:
 - a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
 - b. Inspect the spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - c. Inspect the hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Records shall be maintained documenting compliance with the operational limitations.

[40 C.F.R. § 63.6603(a) and Table 2(d) and 06-096 C.M.R. ch. 115, BPT]

2. Oil Analysis Program Option

SDIX 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, SDIX 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-Resetable Hour Meter

A non-resetable 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. SDIX shall keep records that include maintenance conducted on the engines and the hours of operation of each engine recorded through the non-resetable 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 SDIX 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)]

SDIX 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)]

SDIX, LLC
Cumberland County
Windham, Maine
A-124-71-I-R/A

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

- (19) If the Department determines that any parameter value pertaining to construction and operation of the proposed 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, SDIX may be required to submit additional information. Upon written request from the Department, SDIX 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 12th DAY OF OCTOBER, 2023.

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 complete renewal application, as determined 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 renewal of the license.]

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 16, 2023

Date of application acceptance: March 1, 2023

Date filed with the Board of Environmental Protection:

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

FILED
OCT 12, 2023
State of Maine
Board of Environmental Protection