



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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GOVERNOR

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COMMISSIONER

**Strategic Diagnostics Inc.
Cumberland County
Windham, Maine
A-124-71-G-R**

**Departmental
Findings of Fact and Order
Air Emission License
Renewal**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

Strategic Diagnostics Inc. (SDI) has applied to renew their Air Emission License permitting the operation of emission sources associated with their human and animal diagnostics products manufacturing facility. The facility operates a Class IV-A veterinary incinerator to dispose of animal remains and three emergency generators.

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

B. Emission Equipment

The following equipment is addressed in this air emission license:

Generators

Equipment	Power Output (kW)	Maximum Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type	Manf. Date	Install. Date
Generator #1	60	0.62	6.6	LPG	2010	2010
Generator #2	47	0.57	6.1	LPG	2007	2007
Generator #3	45	0.53	5.6	LPG	1981	1999

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
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BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

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

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 Charge Rate (per load)	900 lb
Max. Design Combustion Rate	75 lb/hr
Auxiliary Fuel Input:	#2 Fuel oil
Primary Chamber (Btu/hr)	315,000 Btu/hr
Secondary Chamber (Btu/hr)	189,000 Btu/hr
Emission Control	Afterburner

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

C. Application Classification

The application for SDI does not include the installation of new or modified equipment. Emission factors have been updated to reflect the most current values resulting in modified licensed emissions. Therefore, the license is considered to be a renewal of currently licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

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

BPT for 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. Veterinary Incinerator

The Burn-Easy Model 428 veterinary incinerator, Class IV-A, was manufactured in March 2004 and installed in April 2004. The unit fires #2 fuel oil.

In air emission license A-124-71-F-M (dated December 18, 2011), SDI requested the burn temperature requirement of the veterinary incinerator be lowered from 1600°F to the range of 1300-1400°F. When previously operated at 1600°F and in combination with the body fat of the animals being incinerated, the secondary chamber overheated to 1800°F and deteriorated the chamber and stack.

The facility was visited twice by Department staff during a test where the secondary chamber operated in the range of 1300-1400°F burn and no visible emissions or operating concerns were observed. There were also no public complaints directed towards the facility. Therefore, the Department approved BPT for the operating burn temperature to be 1300-1400°F based on the observed operation of the incinerator and the physical limitations of the higher temperature on the unit. [A-124-71-F-M (dated December 18, 2011)]

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

1. Operating Parameters:

- Operating temperature in the secondary chamber or refractory lined stack shall be maintained in the range between 1300-1400°F with a stack gas retention time, in the range between 1300-1400°F, of at least 0.75 seconds.
- 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 1300-1400°F prior to commencing the burn cycle.
- 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 1300-1400°F in the secondary chamber.
- The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1300-1400°F for the duration of the burn cycle.
- 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 insure a flue gas retention time of not less than 0.75 seconds at the minimum of 1300-1400°F.

- SDI shall maintain a log detailing and quantifying the hours of operation on a daily basis for the Class IV-A Veterinary Incinerator. The log shall record a description of the waste, 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.
- SDI 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.
- The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management.
- 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.

2. Emission Limits

A maximum particulate emission rate of 0.12 gr/dscf corrected to 12% CO₂ shall be met. Emissions information is based on the particulate matter emission limit above, the burning of #2 fuel as an auxiliary fuel, and the use of AP-42 factors: 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 fuel burning (dated 5/10):

- PM – 0.12 gr/dscf corrected to 12% CO₂, based on BPT and 2 lb/1000 gal based on AP-42 factors
- SO₂ – 2.17 lb/ton based on AP-42 factors and fuel oil sulfur content (no greater than 0.5% sulfur by weight)
- NO_x – 3.56 lb/ton and 20 lb/1000 gal, based on AP-42 factors
- CO – 2.95 lb/ton and 5 lb/1000 gal, based on AP-42 factors
- VOC – 0.299 lb/ton and 0.34 lb/1000 gal, based on AP-42 factors
- Opacity – 06-096 CMR 115, BPT

BPT emission limits for the incinerator are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Incinerator #1	0.16	0.16	0.34	0.21	0.13	0.01

Visible emissions from the incinerator shall not exceed 10% opacity based on a six (6) minute block average basis.

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

C. Emergency Generators #1, #2 and #3

SDI operates a total of three emergency generators. Generator #1 is a 0.62 MMBtu/hr (60 kW power output) unit located behind the office and labs, Generator #2 is rated at 0.57 MMBtu/hr (47 kW power output) and located next to barn #9 across the street and Generator #3 is a 0.53 MMBtu/hr (45 kW power output) unit positioned next to barn #3. All three generator units fire liquid propane gas (LPG). The generators were manufactured in 2010, 2007 and 1981, respectively.

1. BPT Findings

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

PM/PM ₁₀ –	0.0384 lb/MMBtu, AP-42 Table 3.2-1(dated 7/2000)
SO ₂ –	0.000588 lb/MMBtu, AP-42 Table 3.2-1(dated 7/2000)
NO _x –	3.17 lb/MMBtu, AP-42, Table 3.2-1 (dated 7/2000)
CO –	0.386 lb/MMBtu, AP-42, Table 3.2-1 (dated 7/2000)
VOC –	0.120 lb/MMBtu, AP-42, Table 3.2-1 (dated 7/2000)
Opacity –	06-096 CMR 115, BPT

* There are no AP-42 LPG emission factors for engines, therefore the previous license and this license used similar natural gas emission factors.

The BPT emission limits for the generators are the following:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.02	0.02	0.01	1.97	0.24	0.07
Generator #2	0.02	0.02	0.01	1.81	0.22	0.07
Generator #3	0.02	0.02	0.01	1.68	0.20	0.06

Visible emissions from each of the propane generators shall not exceed 10% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

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

2. Federal Regulations

a. 40 CFR Part 63, Subpart ZZZZ

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE)* is applicable to Generator #3. The unit is considered an existing, emergency stationary reciprocating internal combustion engine at an area HAP source and is not subject to New Source Performance Standards (NSPS) regulations.

According to 40 CFR Part 63, Subpart ZZZZ, Generators #1 and #2 are considered new, emergency engines located at an area source and therefore are required to meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of NSPS 40 CFR Part 60, Subpart JJJJ, which is discussed below. No further requirements apply to Generators #1 and #2 under 40 CFR Part 63, Subpart ZZZZ. [40 CFR §63.6590 (c)(1)]

b. 40 CFR Part 60, Subpart JJJJ

The federal regulation 40 CFR Part 60, Subpart JJJJ, *Standards of Performance for Spark Ignition Internal Combustion Engines (SI ICE)* is applicable to emergency Generator #1 listed above since the unit was ordered after June 12, 2006 and manufactured after January 1, 2009. By meeting the requirements of Subpart JJJJ, the units also meet the requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ.

Due to Generator #2 being ordered after June 12, 2006, but manufactured prior to January 1, 2009, the emergency unit is not subject to 40 CFR Part 60, Subpart JJJJ.

Since Generator #2 is not subject to 40 CFR Part 60, Subpart JJJJ and has no applicable requirements under 40 CFR Part 63, Subpart ZZZZ, the emergency generator is only to be operated for maintenance purposes and

for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Generator #2 is not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity. In addition, a non-resettable hour meter shall be installed and operated on Generator #2. [06-096 CMR 115, BPT]

c. Emergency Definition

Emergency stationary RICE as defined by 40 CFR Part 63, Subpart ZZZZ for Generator #3 and 40 CFR Part 60, Subpart JJJJ for Generator #1 means any stationary reciprocating internal combustion engine that meets all of the following criteria:

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
- (2) Paragraph (1) above notwithstanding, the emergency stationary RICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year:
 - (i) Maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
 - (ii) Emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14 for Subpart ZZZZ or §60.17 for Subpart JJJJ), or other authorized

entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

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

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

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

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution center. *

* Applicable only to Generator #3 for being subject to 40 CFR Part 63, Subpart ZZZZ. Generators #1 which is not subject to 40 CFR Part 63, Subpart ZZZZ is not eligible for this condition.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(a) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(b) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(c) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

- (d) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (e) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

Emergency Generators #1 and #3 shall be limited to the usage outlined in §60.4243(d) or §63.6640(f), respectively, and therefore may be classified as an existing emergency stationary RICE as defined in the federal regulations. Failure to comply with all of the requirements listed in §63.6640(f) or §60.4243(d) may cause Generator #1 and/or Generator #3 to not be considered emergency engines and therefore subject to all the requirements for non-emergency engines in the applicable federal regulation.

d. 40 CFR Part 63, Subpart ZZZZ Requirements:

	Compliance Dates	Operating Limitations* (40 CFR §63.6603(a) and Table 2(d))
Spark ignition (natural gas, propane) units: Generator #3	No later than October 19, 2013	- Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect spark plugs every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

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

Generator #3 shall be operated and maintained according to the manufacturer's emission-related written instructions or SDI shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §63.6625(e)]

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

A non-resettable hour meter shall be installed and operated on Generator #3. [40 CFR §63.6625(f)]

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

Generator #3 shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §63.6640(f)(4)(ii) are met). [40 CFR §63.6640(f)]

SDI shall keep records that include maintenance conducted on Generator #3 and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If Generator #3 is operated during a period of demand response or deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), SDI must keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]

e. 40 CFR Part 60, Subpart JJJJ Requirements:

Generator #1 shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 CFR Part 60, Subpart JJJJ, Table 1. [40 CFR §60.4233]

A non-resettable hour meter shall be installed and operated on Generator #1. [40 CFR §60.4237]

Generator #1 shall be operated and maintained according to the manufacturer's written instructions or procedures developed by SDI that are approved by the engine manufacturer. SDI may only change those settings that are permitted by the manufacturer. [40 CFR §60.4243]

Generator #1 shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §60.4243(d)(3)(i) are met). [40 CFR §60.4243(d)]

SDI shall keep records of the hours of operation of Generator #1 that is recorded through the non-resettable hour meter. SDI shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency. [40 CFR §60.4245(b)]

D. Fugitive Emissions

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

E. General Process Emissions

Visible emissions from any general process source shall not exceed an opacity of 20% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

F. Annual Emissions

1. Total Annual Emissions

SDI shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits for the veterinary incinerator were calculated based on the manufacturers average stack gas dry volumetric flow rate of 146.5 dscf/min plus #2 fuel oil usage for 8760 hours/year. The emergency generators were calculated based on an operation of 500 hrs/yr for each unit.

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

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Incinerator	0.69	0.69	1.47	0.90	0.56	0.05
Generator #1	0.01	0.01	0.01	0.49	0.06	0.02
Generator #2	0.01	0.01	0.01	0.45	0.06	0.02
Generator #3	0.01	0.01	0.01	0.42	0.05	0.02
Total TPY	0.7	0.7	1.5	2.3	0.7	0.1

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, SDI is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

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

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

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

ORDER

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

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

The Department hereby grants Air Emission License A-124-71-G-R subject to the following conditions.

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

STANDARD CONDITIONS

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

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

- C. submit a written report to the Department within thirty (30) days from date of test completion.
[06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
[06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) 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 CMR 100. However, the incidental use of plastics used in wrapping animal carcasses for handling and storage purposes is allowed. [06-096 CMR 115, BPT]
- B. The incinerator shall not exceed the maximum design charging rate of 900 lbs.
- C. Auxiliary Fuel input to the primary and secondary chamber shall be #2 fuel with a maximum sulfur content meeting the criteria in ASTM D396 (not to exceed 0.5% by weight. [06-096 CMR 115, BPT]
 1. Beginning January 1, 2016 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm). [38 MRSA §603-A(2)(A)(3)]
 2. Beginning January 1, 2018 or on the date specified in 38 MRSA §603-A(2)(A)(3), the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [38 MRSA §603-A(2)(A)(3)]
- D. SDI shall maintain a log detailing and quantifying the hours of operation on a daily basis for the Class IV-A Veterinary Incinerator. The log shall record a description of the waste, 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 CMR 115, BPT]
- E. SDI 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 CMR 115, BPT]
- F. The secondary chamber shall be preheated as specified by the manufacturer to a minimum of 1300°F prior to combusting any waste and shall be maintained at a minimum of 1300°F during the duration of the burn. [06-096 CMR 115, BPT]

- G. 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 1300°F in the secondary chamber. [06-096 CMR 115, BPT]
- H. 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 insure a flue gas retention time of not less than 0.75 seconds at the minimum of 1300°F. [06-096 CMR 115, BPT]
- I. SDI shall not exceed a particulate matter emission limit of 0.12 gr/dscf corrected to 12% CO₂ from the auxiliary fuel. Therefore, based on the maximum design combustion rate and continuous operation of the Class IV-A incinerator, emissions shall be limited to the following [06-096 CMR 115, BPT]:

<u>Pollutant</u>	<u>gr/dscf</u>	<u>lb/hr</u>
PM	0.12	0.16
PM₁₀	n/a	0.16
SO₂	n/a	0.34
NO_x	n/a	0.21
CO	n/a	0.13
VOC	n/a	0.01

- J. Visible emissions from the incinerator shall not exceed an opacity limit of 10% based on a six (6) minute block average basis. [06-096 CMR 115, BPT]
- K. The incinerator combustion gases shall vent to a stack which is at least 16.75 feet above ground level. [06-096 CMR 115, BPT]
- L. The ash shall be disposed of in accordance with the requirements of the Department's Bureau of Remediation and Waste Management. [06-096 CMR 115, BPT]
- M. 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 CMR 115, BPT]
- N. 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 CMR 115, BPT]

(17) **Emergency Generators**

- A. Generators #1, #2 and #3 are each limited to 500 hours per year total operation, based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115]
- B. Generators #1, #2 and #3 shall fire propane (LPG). [06-096 CMR 115, BPT]
- C. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.02	0.02	0.01	1.97	0.24	0.07
Generator #2	0.02	0.02	0.01	1.81	0.22	0.07
Generator #3	0.02	0.02	0.01	1.68	0.20	0.06

- D. Visible emissions from each of the LPG fired generators shall not exceed 10% opacity on a 6-minute block average basis, except for no more than two (2) six (6) minute block average in a 3-hour period. [06-096 CMR 115, BPT]
- E. SDI shall submit an amendment prior to running any of the emergency generators as a Displaceable Load Generator. [06-096 CMR 115, BPT]
- F. The emergency Generator #1 shall meet the applicable requirements of 40 CFR Part 60, Subpart JJJJ, including the following:
 - 1. Generator #1 shall be certified by the manufacturer as meeting the emission standards for new nonroad spark ignition engines found in 40 CFR Part 60, Subpart JJJJ, Table 1. [40 CFR §60.4233]
 - 2. A non-resettable hour meter shall be installed and operated on each generator. [40 CFR §60.4237 and 06-096 CMR 115, BPT]
 - 3. Generator #1 shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §60.4243(d)(3)(i) are met). The limits are based on a calendar year.

Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §60.4243(d) and 06-096 CMR 115]

4. Generator #1 shall be operated and maintained according to the manufacturer's written instructions or procedures developed by SDI that are approved by the engine manufacturer. SDI may only change those settings that are permitted by the manufacturer. [40 CFR §60.4243]
5. SDI shall keep records of the hours of operation of Generator #1 that is recorded through the non-resettable hour meter. SDI shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency. [40 CFR §60.4245(b)]

G. Generator #2 is only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Emergency Generator #2 is not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available for more than 15 hours per calendar year in a demand response program, during a period of deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity.

A non-resettable hour meter shall be installed and operated on Generator #2. [06-096 CMR 115, BPT]

H. The emergency Generator #3 shall meet the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, including the following:

1. No later than October 19, 2013, SDI shall meet the following operational limitations for the of the spark ignition emergency generator (Generator #3):
 - a. Change the oil and filter annually,
 - b. Inspect the spark plugs annually and replace as necessary, and
 - c. Inspect the hoses and belts annually and replace as necessary.

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

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

2. SDI 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, SDI must keep records of the

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

3. A non-resettable hour meter shall be installed and operated on Generator #3. [40 CFR §63.6625(f)]
4. Maintenance, Testing, and Non-Emergency Operating Situations
 - a. Generator #3 shall be limited to 100 hours/year for maintenance checks and readiness testing, emergency demand response, and periods of voltage or frequency deviation from standards. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, non-emergency demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity unless the conditions in §63.6640(f)(4)(ii) are met). These limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §63.6640(f) and 06-096 CMR 115]
 - b. SDI shall keep records that include maintenance conducted on the Generator #3 and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the hours spent for emergency operation, including what classified the operation as emergency and how many hours spent for non-emergency. If Generator #3 is operated during a period of demand response or deviation from standard voltage or frequency, or supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in §63.6640(f)(4)(ii), SDI must keep records of the notification of the emergency situation, and the date, start time, and end time of generator operation for these purposes. [40 CFR §63.6655(e) and (f)]
5. Generator #3 shall be operated and maintained according to the manufacturer's emission-related written instructions or SDI shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §63.6625(e)]
6. During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after

which time the non-startup emission limitations apply. [40 CFR §63.6625(h) & 40 CFR Part 63, Subpart ZZZZ Table 2d]

(18) **Fugitive Emissions**

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

(19) **General Process Sources**

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

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

DONE AND DATED IN AUGUSTA, MAINE THIS 19 DAY OF April, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 2/14/2013

Date of application acceptance: 2/19/2013

Date filed with the Board of Environmental Protection:

This Order prepared by Allison M. Hazard, Bureau of Air Quality.



