



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

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COMMISSIONER

**IDEXX Laboratories, Inc.
Cumberland County
Westbrook, Maine
A-981-71-B-R (SM)**

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

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 Department finds the following facts:

I. REGISTRATION

A. Introduction

IDEXX Laboratories, Inc. (IDEXX) has applied to renew their Air Emission License permitting the operation of emission sources associated with their customer service and technical support call center facility for animal/veterinary technology-based products.

The equipment addressed in this license is located at 1 Thomas Drive, Westbrook, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (scf/hr)</u>	<u>Fuel Type</u>	<u>Mfg. Date</u>	<u>Install. Date</u>	<u>Stack #</u>
Boiler #1	2.5	2427	Natural Gas	2002	2002	1

Generators

<u>Equipment</u>	<u>Maximum Horse Power (KW)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Mfg. Date</u>	<u>Install. Date</u>	<u>Stack #</u>
Generator #1	600	42.7	Diesel, 0.0015%	2007	2007	2

C. Application Classification

The application for IDEXX does not include the licensing of increased emissions or the installation of new or modified equipment. 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). With the restriction on the operating hours for the emergency generator, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

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

BPT for 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. Boiler #1

IDEXX operates Boiler #1 for heat and hot water. The boiler is rated at 2.5 MMBtu/hr and fires natural gas. The boiler was manufactured and installed in 2002 and exhausts through its own stack, designated Stack #1. Stack #1 is 27.33 feet above ground and has an inside square dimension of 1 foot by 1 foot.

Due to Boiler #1's size, the boiler is not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

1. BPT Findings

The BPT emission limits for the boiler were based on the following:

- PM/PM₁₀ – Emissions are to be based on the BPT determined PM emission limit of 0.05 lb/MMBtu when firing natural gas [06-096 CMR 115, BPT]

- SO₂ – 0.6 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)
- NO_x – 100 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
- CO – 84 lb/MMscf: AP-42, Table 1.4-1 (dated 7/98)
- VOC – 5.5 lb/MMscf: AP-42, Table 1.4-2 (dated 7/98)
- Opacity – Visible emissions from the boiler firing natural gas shall not exceed an opacity of 10% on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

Emissions from Boiler #1 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)
Boiler #1 2.5 MMBtu/hr Natural gas	0.13	0.13	0.001	0.24	0.20	0.01

2. Periodic Monitoring

Periodic monitoring for the boiler shall include recordkeeping to document fuel use both on a monthly and calendar year basis. Documentation shall include the quantity and type of fuel used.

3. 40 CFR Part 63 Subpart JJJJJ

Boiler #1 fires only natural gas and is therefore not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ).

C. Emergency Generator #1

IDEXX operates an emergency back-up generator, designated Generator #1. Generator #1 has a maximum design capacity of 600 KW, or 5.85 MMBtu/hr, and fires diesel. The generator was manufactured and installed in 2007. Generator #1 exhausts to Stack #2 which has a height 35 feet above ground and an inside diameter of 0.833 feet.

1. BPT Findings

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

- PM/PM₁₀ – 0.12 lb/MMBtu based on 06-096 CMR 103
- SO₂ – based on firing 0.0015% sulfur, 0.0015 lb/MMBtu
- NO_x – 5.06 lb/MMBtu based on manufacturer's data
- CO – 0.95 lb/MMBtu, AP-42, Table 3.3-1 (dated 10/96)

VOC – 0.35 lb/MMBtu, AP-42, Table 3.3-1 (dated 10/96)
Opacity – Visible emissions from the diesel generator shall not exceed 20% opacity on a 6-minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period.

Emissions from Generator #1 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 600KW, 5.85 MMBtu/hr Diesel, 0.0015% Sulfur	0.70	0.70	0.01	29.60	5.56	2.05

Generator #1 shall be limited to 500 hours of operation a year, based on a calendar year. IDEXX shall keep records of the hours of operation for the unit.

2. 40 CFR Part 60, Subpart III

The federal regulation 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to the emergency generator listed above since the unit was ordered after July 11, 2005 and manufactured after April 1, 2006. By meeting the requirements of Subpart III, the unit also meets the applicable requirements found in the *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, 40 CFR Part 63, Subpart ZZZZ [40 CFR Part 63, §63.6590 (c)(1)].

Emergency Definition:

Emergency stationary internal combustion engine is defined in 40 CFR Part 60, Subpart III as any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE 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 ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

40 FR Part 60, Subpart IIII Requirements:

- a) The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in 40 CFR §60.4202. [40 CFR §60.4205(b)]
- b) The diesel fuel fired in the generator shall not exceed 15 ppm sulfur (0.0015% sulfur). [40 CFR §60.4207(b)]
- c) A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4209(a)]
- d) The generator shall be limited to 100 hours/year for maintenance and testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving or generating income or a financial arrangement with another entity). [40 CFR §60.4211(f)]
- e) The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by IDEXX that are approved by the engine manufacturer. IDEXX may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]
- f) No initial notification is required for emergency engines. [40 CFR §60.4214(b)]

D. Annual Emissions

1. Total Annual Emissions

IDEXX shall be restricted to the following annual emissions, based on a calendar year. The tons per year limits were calculated based on 500 hr/yr for the emergency generator and a maximum operation time of 8,760 hr/yr for Boiler #1:

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
Boiler #1	0.55	0.55	0.01	1.06	0.89	0.06
Generator #1	0.18	0.18	0.002	7.40	1.39	0.51
Total TPY	0.73	0.73	0.01	8.46	2.28	0.57

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, IDEXX 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

According to 06-096 CMR 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling is not required for a renewal if the total emissions of any pollutant released do not exceed the following and there are no extenuating circumstances:

Pollutant	Tons/Year
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the total facility licensed emissions, IDEXX is below the emissions level required for modeling.

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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-981-71-B-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 emission 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) **Boiler #1**

A. Fuel

1. Boiler #1 shall fire only natural gas.
2. Compliance shall be demonstrated by fuel records from the supplier showing the quantity and type of the fuel delivered. Records of annual fuel use shall be kept on a monthly and calendar year basis. [06-096 CMR 115, BPT]

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

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.13	0.13	0.001	0.24	0.20	0.01

- C. Visible emissions from the boiler firing natural gas shall not exceed 10% opacity on a 6-minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period. [06-096 CMR 101]

(17) **Emergency Generator #1**

- A. Generator #1 is 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. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #1	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

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

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1 (600KW, 5.85 MMBtu/hr) Diesel, 0.0015% S	0.70	0.70	0.01	29.60	5.56	2.05

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

E. The emergency generator, Generator #1, shall meet the applicable requirements of 40 CFR Part 60, Subpart IIII, including the following:

1. The generator shall be certified by the manufacturer as meeting the emission standards for new nonroad compression ignition engines found in §60.4202. [40 CFR §60.4205(b)]
2. The diesel fuel fired in the generator shall not exceed 15 ppm sulfur (0.0015% sulfur). Compliance with the fuel sulfur content limit shall be based on fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [40 CFR §60.4207(b) and 06-096 CMR 115]
3. A non-resettable hour meter shall be installed and operated on the generator. [40 CFR §60.4209(a)]
4. The generator shall be limited to 100 hours/year for maintenance and testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving or generating income or a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]
5. The generator shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by IDEXX that are approved by the engine manufacturer. IDEXX may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

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- (18) IDEXX 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 27th DAY OF September, 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie L. 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, 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: 8/3/2012

Date of application acceptance: 8/22/2012

Date filed with the Board of Environmental Protection:

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

