STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Sanford Sewerage District **York County** **Sanford, Maine** **A-1066-71-B-R (SM)**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Renewal**

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

The Sanford Sewerage District (SSD) has applied to renew their Air Emission License for the operation of emission sources associated with their waste water treatment facility.

The equipment addressed in this license is located at 192 Gavel Road in Sanford, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hour)	Fuel Type, % S	Installation Date	Stack #
Boiler #1	1.27	9.3	Distillate Fuel, 0.5% S	2005	1

Emergency Generators

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hour)	Fuel Type, % sulfur	Installation Date
Generator #1	7.32	54	Distillate Fuel, 0.0015% S	2005
Generator #2	2.93	22		1980

C. Definitions

Distillate Fuel. For the purposes of this license, *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.

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 application for SSD 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 Code of Maine Rules (C.M.R.) ch. 115.

With the operating hours restriction on SSD's emergency generators, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor.

SSD is licensed below the major source thresholds for hazardous air pollutants (HAP) and is considered an area source of HAP.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in 06-096 C.M.R. ch. 100. 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

SSD operates one boiler, designated Boiler #1, to provide heat to their facility.

Boiler #1 has a maximum design capacity of 1.27 MMBtu/hour, fires distillate fuel at a rate of 9.3 gallons/hour and was installed in 2005.

Boiler #1 exhausts through its own stack, designated Stack #1.

1. BPT Findings

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

PM/PM_{10}	0.12 lb/MMBtu based on 06-096 C.M.R. ch. 115, BPT
SO_2	0.5 lb/MMBtu, firing 0.5% S distillate fuel
NO_X	20 lb/1000 gallons, AP-42, Table 1.3-1, dated 5/10
CO	5.0 lb/1000 gallons, AP-42, Table 1.3-1, dated 5/10
VOC	0.34 lb/1000 gallons, AP-42, Table 1.3-3, dated 5/10
Opacity	06-096 C.M.R. ch. 115, BPT

Emissions from Boiler #1 shall not exceed the following:

Equipment	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.2	0.2	0.7	0.2	0.1	0.1

Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis.

Fuel Sulfur Content Requirements

Boiler #1 is licensed to fire distillate fuel which, by definition, has a sulfur content of 0.5% or less by weight. Per 38 M.R.S. § 603-A(2)(A)(3), as of July 1, 2018, no person shall import, distribute, or offer for sale any distillate fuel with a sulfur content greater than 0.0015% by weight (15 ppm). Therefore, beginning July 1, 2018, the distillate fuel purchased or otherwise obtained for use in Boiler #1 shall not exceed 0.0015% by weight (15 ppm).

2. Periodic Monitoring

   Periodic monitoring for Boiler #1 shall include recordkeeping to document the type of fuel used and sulfur content of the fuel.

3. New Source Performance Standards (NSPS): 40 C.F.R. Part 60, Subpart Dc

   Due to its maximum capacity (1.27 MMBtu/hour), Boiler #1 is not subject to the New Source Performance Standards (NSPS) 40 C.F.R. Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hour manufactured after June 9, 1989. [40 C.F.R. §60.40c]

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

   40 CFR Part 63 Subpart JJJJJJ exempts boilers that meet the criteria of hot water heaters. The definition of a hot water heater is as follows:

   > *Hot water heater* means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous or liquid fuel and hot water is withdrawn for use external to the vessel. Hot water boilers (i.e., those that do not generate steam) combusting gaseous or liquid fuel with a heat input capacity of less than 1.6 MMBtu/hour are included in this definition.

   Boiler #1 and SSD's two smaller boilers, each rated at 0.54 MMBtu/hour, each meet the *hot water heater* definition. Therefore, these boilers are exempt from requirements set forth in 40 C.F.R. Part 63, Subpart JJJJJJ.

   Future changes to the exemption criteria and/or to the *hot water heater* definition provided for in 40 CFR Part 63 Subpart JJJJJJ may result in SSD's boilers becoming subject to this rule at a later date.

C. Generators #1 and #2

SSD operates two emergency generators.

Generator #1 is rated at 7.32 MMBtu/hour (750kW) and fires 0.0015%S distillate fuel at a rate of 54 gallons/hour.

Generator #2 is rated at 2.93 MMBtu/hour (300kW) and fires 0.0015%S distillate fuel at a rate of 22 gallons/hour.

Generators #1 and #2 were manufactured in 2004 and 1980, respectively.

1. BPT Findings

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

PM/PM_{10}	0.12 lb/MMBtu, 06-096 C.M.R. ch. 103
SO_2	Combustion of 0.0015% sulfur distillate fuel
NO_X	3.2 lb/MMBtu, AP-42, Table 3.4-1 (dated 10/96)
CO	0.85 lb/MMBtu, AP-42, Table 3.4-1 (dated 10/96)
VOC	0.09 lb/MMBtu, AP-42, Table 3.4-1 (dated 10/96)
Opacity	06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Generator #2 are based on the following:

PM/PM_{10}	0.12 lb/MMBtu, 06-096 C.M.R. ch. 115, BPT
SO_2	Combustion of 0.0015% sulfur distillate fuel
NO_X	4.41 lb/MMBtu, AP-42, Table 3.3-1 (dated 10/96)
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	06-096 C.M.R. ch. 115, BPT

The BPT emission limits for Generator #1 are the following:

Equipment	Pollutant	lb/MMBtu
Generator #1	PM	0.12

The BPT emission limits for Generators #1 and #2 are the following:

Equipment	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.9	0.9	0.1	23.4	6.2	0.7
Generator #2	0.4	0.4	0.1	12.9	2.8	1.0

Visible emissions from Generators #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis.

Generators #1 and #2 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. There is no limit on emergency operation. Generators #1 and #2 shall each be equipped with a non-resettable hour-meter to record operating time. To demonstrate compliance with the operating hours limit, SSD shall keep records of the total hours of operation and the hours of emergency operation for Generators #1 and #2.

Generators #1 and #2 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the

control of the source. Generators #1 and #2 are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available 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.

2. New Source Performance Standards (NSPS)

   Since Generators #1 and #2 were manufactured prior to April 1, 2006, Generators #1 and #2 are not subject to the New Source Performance Standards (NSPS) *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE),* 40 C.F.R. Part 60, Subpart IIII. [40 C.F.R. § 60.4200]

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

   National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 C.F.R. Part 63, Subpart ZZZZ, is not applicable to Generators #1 and #2. Generators #1 and #2 are considered existing, emergency stationary reciprocating internal combustion engines at an area HAP source. Generators #1 and #2 are also considered exempt from the requirements of 40 C.F.R. Part 63, Subpart ZZZZ since they are categorized as institutional emergency engines and they do not operate or are not contractually obligated to be available in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii).

   Operation of Generators #1 and/or #2 in a demand response program, during a period of deviation from standard voltage or frequency, or for supplying power during a non-emergency situation as part of a financial arrangement with another entity as specified in 40 C.F.R. § 63.6640(f)(4)(ii), would cause Generators #1 and/or #2 to be subject to 40 C.F.R. Part 63, Subpart ZZZZ and require compliance with all applicable requirements.

D. Fugitive Emissions

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

E. Annual Emissions

1. Total Annual Emissions

SSD shall be restricted to the following annual emissions, on a calendar-year basis.

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

Equipment	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boiler #1	0.7	0.7	2.9	0.8	0.2	0.1
Generators #1 & #2	0.1	0.1	0.1	1.8	0.5	0.1
Total TPY	**0.8**	**0.8**	**3.0**	**2.6**	**0.7**	**0.2**

The tons per year limits were calculated based on Boiler #1 operating 8,760 hours/year and Generators #1 and #2 each being limited to 100 hours/year of operation.

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 C.M.R. 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 (CO_2e).

The quantity of CO_2e emissions from this facility is less than 100,000 tons per year, based on the following:

- the types of fuel being fired;
- operating hour limits for the generators;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

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	25
PM_{10}	25
SO_2	50
NO_x	100
CO	250

The total licensed annual emissions for SSD 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-1066-71-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.

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

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

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

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

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S. § 353-A. [06-096 C.M.R. ch. 115]

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

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

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

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 C.M.R. ch. 115]

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

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

A. Perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

1. Within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or

2. Pursuant to any other requirement of this license to perform stack testing.

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

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

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

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

A. Within thirty (30) days following receipt of 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 C.F.R. Part 60 or other method approved or required by the Department; and

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

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

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

(13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 C.M.R. ch. 115]

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

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

SPECIFIC CONDITIONS

(16) Boiler #1

A. Fuel

1. Boiler #1 is licensed to fire distillate fuel only. [06-096 C.M.R. ch. 115, BPT]

2. Prior to July 1, 2018, SSD shall fire distillate fuel in Boiler #1 with a maximum sulfur content not to exceed 0.5% by weight. [06-096 C.M.R. ch. 115, BPT]

3. Beginning July 1, 2018, SSD shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm). [06-096 C.M.R. ch. 115, BPT]

4. Compliance shall be demonstrated by fuel records from the supplier showing the quantity, type, and the percent sulfur of the fuel delivered. [06-096 C.M.R. ch. 115, BPT]

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

Equipment	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #1	0.2	0.2	0.7	0.2	0.1	0.1

C. Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

(17) Generators #1 and #2

A. Generators #1 and #2 shall each be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 C.M.R. ch. 115, BPT]

B. SSD shall keep records that include maintenance conducted on Generators #1 and #2 and the hours of operation recorded through the non-resettable hour meter. Documentation shall include the number of hours Generators #1 and #2 operated for emergency purposes, the number of hours Generators #1 and #2 operated for non-emergency purposes, and the reason the engine was in operation during each time. [06-096 C.M.R. ch. 115, BPT]

C. The fuel sulfur content for Generators #1 and #2 shall be limited to 0.0015% sulfur by weight. Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 C.M.R. ch. 115, BPT]

D. Emissions for Generator #1 shall not exceed the following:

Equipment	Pollutant	lb/MMBtu	Origin and Authority
Generator #1	PM	0.12	06-096 C.M.R. ch. 103, § (2)(B)(1)(a)

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

Equipment	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.9	0.9	0.1	23.4	6.2	0.7
Generator #2	0.4	0.4	0.1	12.9	2.8	1.0

F. Visible Emissions

Visible emissions from Generators #1 and #2 shall each not exceed 20% opacity on a six-minute block average basis. [06-096 C.M.R. ch. 115, BPT]

G. Generators #1 and #2 are only to be operated for maintenance purposes and for situations arising from sudden and reasonably unforeseeable events beyond the control of the source. Generators #1 and #2 are not to be used for prime power when reliable offsite power is available; nor to operate or to be contractually obligated to be available 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.

(18) Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any one-hour period. Compliance shall be determined by an aggregate of the individual fifteen-second opacity observations which exceed 20% in any one hour. [06-096 C.M.R. ch. 115, BPT]

(19) SSD 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).

DONE AND DATED IN AUGUSTA, MAINE THIS 23 DAY OF March , 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PAUL MERCER, COMMISSIONER

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

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 8, 2016
Date of application acceptance: August 10, 2016

Date filed with the Board of Environmental Protection:

This Order prepared by Kevin J Ostrowski, Bureau of Air Quality.

Filed
MAR 23 2017
State of Maine
Board of Environmental Protection