PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

The Jordan Grand at Sunday River Owners Association
Oxford County
Newry, Maine
A-711-71-F-A

Departmental
Findings of Fact and Order
Air Emission License
Amendment #1

FINDINGS OF FACT

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

I. REGISTRATION

A. Introduction

The Jordan Grand at Sunday River Owners Association (Jordan Grand) was issued Air Emission License A-711-71-E-R on March 19, 2013 permitting the operation of emission sources associated with the Jordan Grand Hotel.

Jordan Grand has requested an amendment to their existing license in order to replace existing Boilers #3 and #4, each rated at 5.7 MMBtu/hour, with two new propane-fired boilers rated at 3.9 and 4.0 MMBtu/hour, respectively. In addition, Jordan Grand has also requested that one 0.65 MMBtu/hour generator be added. This generator was inadvertently left off of Jordan Grand's last license.

The equipment addressed in this license amendment is located at 27 Grand Circle in Newry, Maine.

B. Emission Equipment

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

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Fuel Type	Maximum Firing Rate (gal/hr)	% Sulfur	Manufacture Date	Stack #
Boiler #3	3.9	Propane	42.3	negligible	2012	1
Boiler #4	4.0	Propane	43.8	negligible	2016	1

Generator

Equipment	Power Output (kW)	Maximum Capacity (MMBTU/hr)	Maximum Firing Rate (gal/hr)	Fuel Type, % Sulfur
Generator #1	60	0.65	4.7	Distillate fuel, 0.0015%S

C. Definitions

Distillate Fuel means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials 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

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emission" levels as defined in the Department's *Definitions Regulation*, 06-096 CMR 100 (as amended). The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Significant Emission Levels (TPY)
PM	5.0	4.5	-0.5	100
PM_{10}	5.0	4.5	-0.5	100
SO_2	0.1	0.5	0.4	100
NO_x	14.2	12.2	2.0	100
CO	8.2	7.1	1.1	100
VOC	1.1	1.1	0.0	50
CO_2e	<100,000	<100,000	0.0	100,000

The application for Jordan Grand for the addition of two boilers, rated at 3.9 and 4.0 MMBtu/hour, and 0.65 MMBtu/hour generator is considered to be a minor modification. Therefore, this application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). Jordan Grand is licensed below the major source thresholds for criteria pollutants and is considered a minor source. Jordan Grand is also 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 *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boilers # 3 and #4

Jordan Grand has requested to add two boilers, designated Boiler #3 and Boiler #4, to its existing license. Boiler #3 was manufactured in 2012 and is rated at 3.9 MMBtu/hour, firing propane at a maximum rate of 42.3 gallons/hour. Boiler #4 was manufactured in 2016 and is rated at 4.0 MMBtu/hour, firing propane at a maximum rate of 43.8 gallons/hour. Boilers #3 and #4 will replaces two existing 5.7MMbtu/hour boilers, which will be removed from service.

1. BACT Findings

The BACT emission limits for Boilers #3 and #4 were based on the following:

PM/PM_{10}	0.05 lb/MMBTU based on 06-096 CMR 115, BPT
SO_2	0.018 lb/1000 gal based on AP-42 dated 7/08
NO_x	13 lb/1000 gal based on AP-42 dated 7/08
CO	7.5 lb/1000 gal based on AP-42 dated 7/08
VOC	1.0 lb/1000 gal based on AP-42 dated 7/08
Opacity	06-096 CMR 101

The BACT emission limits for Boilers #3 and #4 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)
Boiler #3	0.19	0.19	0.01	0.55	0.32	0.04
Boiler #4	0.20	0.20	0.01	0.57	0.33	0.04

Visible emissions from Stack #1, which services Boilers #1, #2, #3 and #4, shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a continuous three-hour period.

2. 40 CFR Part 60, Subpart Dc

Since the maximum design heat input capacity of Boilers #3 and #4 are each less than 10 MMBtu/hour, Boilers #3 and #4 are 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/hour manufactured after June 9, 1989.

3. 40 CFR Part 63, Subpart JJJJJJ

Boilers #3 and #4 are exclusively gas-fired boilers, as defined in 40 CFR §63.11237, and is located at or is part of an area source of HAP, as defined in §63.2. As such, Boilers #3 and #4 are not subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 CFR Part 63, Subpart JJJJJJ. [40 CFR § 63.11195 (e)]

C. Generator #1

Jordan Grand operates one emergency generator, designated Generator #1, which is rated at 0.65 MMBTU/hour (60 kW) and fires distillate fuel with a sulfur content not to exceed 0.0015%, by weight. The generator is a stationary unit which was installed in 2000.

1. BPT Findings

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

PM/PM_{10}	0.12 lb/MMBtu based on 06-096 CMR 115, BPT
SO_2	0.0015 lb/MMBtu, firing 0.0015%S (15ppm) diesel fuel
NO_X	4.41 lb/MMBtu from AP-42, Table 3.4-1, dated 10/96
CO	0.95 lb/MMBtu from AP-42, Table 3.4-1, dated 10/96
VOC	0.35 lb/MMBtu from AP-42, Table 3.4-1, dated 10/96
Opacity	06-096 CMR 101

The BPT emission limits for Generator #1 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	0.08	0.08	0.01	2.87	0.62	0.23

Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period.

2. 40 CFR Part 60, Subpart IIII

   Generator #1 was ordered before July 11, 2005 and manufactured before April 1, 2006. Therefore, Generator #1 is not subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

3. 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 is not applicable to the emergency engine listed above. Generator #1 is considered an existing, emergency stationary reciprocating internal combustion engines at an area HAP source. However, Generator #1 is considered exempt from the requirements of Subpart ZZZZ since it is categorized as a residential, commercial, or institutional emergency engine and it does not operate and is not 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 as specified in §63.6640(f)(4)(ii).

   Operation of Generator #1 such that it exceeds 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 as specified in §63.6640(f)(4)(ii), would cause the engine to be subject to 40 CFR Part 63, Subpart ZZZZ, and require compliance with all applicable requirements.

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

Generator #1 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 #1 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.

D. Annual Emissions

1. Total Annual Emissions

Jordan Grand shall be restricted to the following annual emissions which are based on the maximum operation of 8,760 hours per year for each boiler and the operation of 100 hours/year for Generator #1:

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 – 5.7 MMBtu/hr	1.3	1.3	0.1	3.6	2.1	0.3
Boiler #2 – 5.7 MMBtu/hr	1.3	1.3	0.1	3.6	2.1	0.3
Boiler #3 – 3.9 MMbtu/hr	0.9	0.9	0.1	2.4	1.4	0.2
Boiler #4 – 4.0MMBtu/hr	0.9	0.9	0.1	2.5	1.4	0.2
Generator #1	0.1	0.1	0.1	0.1	0.1	0.1
Total TPY	**4.5**	**4.5**	**0.5**	**12.2**	**7.1**	**1.1**

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 (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;
- the facility's fuel use limit;

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

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 Amendment A-711-71-F-A subject to the conditions found in Air Emission License A-711-71-E-R and 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.

SPECIFIC CONDITIONS

The following shall replace Specific Condition (16) and (17) in Air Emission License A-711-71-E-R.

(16) Boilers #1, #2, #3 and #4

A. Fuel

1. Jordan Grand shall fire propane in Boilers #1, #2, #3 and #4. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following [06-096 CMR 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	0.29	0.29	0.01	0.81	0.47	0.06
Boiler #2	0.29	0.29	0.01	0.81	0.47	0.06
Boiler #3	0.19	0.19	0.01	0.55	0.32	0.04
Boiler #4	0.20	0.20	0.01	0.57	0.33	0.04

C. Visible emissions from Stack #1, which services Boilers #1, #2, #3 and #4, shall not exceed 10% opacity on a six-minute block average basis, except for no more than one six-minute block average in a continuous three-hour period. [06-096 CMR 101(2)(B)(1)(b)]

(17) Generator #1

A. Generator #1 shall fire distillate fuel with a sulfur content not to exceed 0.0015%, by weight. [06-096 CMR 115, BPT]

B. Compliance shall be demonstrated by fuel records from the supplier showing the type, amount and the percent sulfur of the fuel delivered, if applicable. [06-096 CMR 115, BPT]

C. Generator #1 is limited to 100 hours per year of non-emergency operation, on a calendar-year basis. Compliance shall be demonstrated by records of all generator use, with the records specifying both non-emergency and emergency hours of operation. [06-096 CMR 115, BPT]

D. Emissions from Generator #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	0.08	0.08	0.01	2.87	0.62	0.23

E. Visible emissions from Generator #1 shall not exceed 20% opacity on a six-minute block average basis, except for no more than two six-minute block averages in a three-hour period. [06-096 CMR 101 (2)(B)(d)]

Specific Condition (17) in Air Emission License A-711-71-E-R has been renumbered to (18).

(18) Jordan Grand 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 23 DAY OF May , 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone for
PAUL MERCER, COMMISSIONER

The term of this license shall be concurrent with the term of Air Emission License A-711-71-E-R.

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 3, 2016
Date of application acceptance: February 3, 2016

Date filed with the Board of Environmental Protection:

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

Filed
MAY 24 2016
State of Maine
Board of Environmental Protection