



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PAUL MERCER
COMMISSIONER

**BB Development LLC
d/b/a Oxford Casino
Oxford County
Oxford, Maine
A-1114-71-B-A (SM)**

**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

BB Development LLC, d/b/a Oxford Casino, was issued Air Emission License A-1114-71-A-N on September 11, 2015, for the operation of emission sources associated with their Oxford Casino facility.

Oxford Casino has requested an amendment to their license in order to install one new, distillate fuel-fired emergency generator.

The equipment addressed in this license amendment is located at 777 Casino Way, Oxford, Maine.

B. Emission Equipment

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

Generators

| <u>Equipment</u> | <u>Max. Input Capacity (MMBtu/hr)</u> | <u>Rated Output Capacity (kW)</u> | <u>Fuel Type, % sulfur</u> | <u>Firing Rate (gal/hr)</u> | <u>Date of Manuf.</u> | <u>Date of Install.</u> | <u>Stack #</u> |
|------------------|---------------------------------------|-----------------------------------|----------------------------|-----------------------------|-----------------------|-------------------------|----------------|
| Generator #3 | 4.96 | 500 | Distillate Fuel, 0.0015% | 36.2 | TBD | TBD | Generator #3 |

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

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 PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

C. Definitions

Distillate Fuel. For the purposes of this license, *distillate fuel* means the following:

1. 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;
2. Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
3. Kerosene, as defined in ASTM D3699;
4. Biodiesel, as defined in ASTM D6751; or
5. 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 Code of Maine Rules (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 |
|------------------|----------------------------------|---------------------------------|-----------------------------|--|
| PM | 0.1 | 0.2 | 0.1 | 100 |
| PM ₁₀ | 0.1 | 0.2 | 0.1 | 100 |
| SO ₂ | 0.1 | 0.2 | 0.1 | 100 |
| NO _x | 1.6 | 2.0 | 0.4 | 100 |
| CO | 0.4 | 0.6 | 0.2 | 100 |
| VOC | 0.1 | 0.2 | 0.1 | 50 |

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

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. Generator #3

Oxford Casino has requested the addition of one new emergency generator to their existing air emission license. The emergency generator is a generator set consisting of an engine and an electrical generator. The engine for this emergency generator is rated at 4.96 MMBtu/hr and fires distillate fuel at a maximum rate of 36.2 gallons per hour. Oxford Casino is targeting an installation date of November of 2016 for Generator #3.

1. BACT Findings

The BACT emission limits for Generator #3 are based on the following:

- PM/PM₁₀ - 0.2 g/kWH, per 40 CFR 60 Subpart III, CFR §89.112.
- SO₂ - 0.00154 lb/MMBtu, based on combustion of distillate fuel with a maximum sulfur content not to exceed 15 ppm (0.0015% sulfur by weight). The value was derived from mass balance calculations.
- NO_x - 6.4 g/kWH of Non-Methane Hydrocarbon (NMHC) and NO_x, per 40 CFR 60 Subpart III, CFR §89.112. The calculations assume the worst case loading for NO_x, that 100% of allowable NMHC and NO_x emissions is NO_x.
- CO - 0.85 lb/MMBtu, per AP-42, from Table 3.4-1. This value results in calculated emission limits more stringent than the limits calculated using the emission factors stipulated by 40 CFR 60 Subpart III, CFR §89.112. The AP-42 value shall be used to establish BACT.
- VOC - 0.09 lb/MMBtu, per AP-42, Table 3. 4-1. This value results in calculated emission limits more stringent than the limits calculated using the emission factors stipulated by 40 CFR 60 Subpart III, CFR §89.112. The AP-42 value shall be used to establish BACT.
- Opacity - Visible emissions from Generator #3 shall not exceed 20% opacity on a six-minute block average basis.
[06-096 CMR 115, BACT]

The BACT emission limits for this generator are as follows:

| Unit | Pollutant | g/kWH |
|--------------|-----------|-------|
| Generator #3 | PM | 0.2 |

| Unit | PM (lb/hr) | PM ₁₀ (lb/hr) | SO ₂ (lb/hr) | NO _x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|--|---------------|-----------------------------|----------------------------|----------------------------|---------------|----------------|
| Generator #3 (4.96 MMBtu/hr) Distillate Fuel | 0.26 | 0.26 | 0.01 | 8.20 | 4.22 | 0.45 |

2. 40 CFR Part 60, Subpart IIII

The federal regulation 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)* is applicable to Generator #3 since the unit was/will be ordered after July 11, 2005, and manufactured after April 1, 2006. [40 CFR §60.4200] By meeting the requirements of Subpart IIII, the unit will 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. [40 CFR §63.6590(c)]

a. Emergency Engine Designation and Operating Criteria

Under Subpart IIII, a stationary reciprocating internal combustion engine (ICE) is considered an emergency stationary ICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under Subpart IIII, resulting in the engine being subject to requirements applicable to non-emergency engines.

(1) Emergency Situation Operation (On-Site)

There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation. Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster or equipment failure;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

- (i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE more than 100 hours per calendar year.
- (ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, 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:

- (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 North American Electric Reliability Corporation (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.

b. 40 CFR Part 60, Subpart III Requirements

(1) Manufacturer Certification Requirement

The engine 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)]

(2) Ultra-Low Sulfur Fuel Requirement

The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur by weight), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 CFR §60.4207(b)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 CFR §60.4209(a)]

(4) Operation and Maintenance Requirements

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Oxford Casino that are approved by the engine manufacturer. Oxford Casino may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

(5) Annual Time Limit for Maintenance and Testing

As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, 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 §60.4211(f)(3)(i) are met). [40 CFR §60.4211(f)]

(6) Initial Notification Requirement

No initial notification is required under Subpart III for emergency engines. [40 CFR §60.4214(b)]

(7) Recordkeeping

Oxford Casino shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, including what classified the operation as emergency, and the number of hours the unit operated for non-emergency purposes. If the engine is operated to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4211(f)(3)(i), Oxford Casino shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [40 CFR §60.4214(b)]

(8) Annual Reporting Requirements for Demand Response Availability Over 15 Hours Per Year

If Oxford Casino operates or is contractually obligated to be available for more than 15 hours per calendar year to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4211(f)(3)(i), the facility shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The annual report for each calendar year must be submitted no later than March 31st of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

[40 CFR §60.4214(d)]

C. Annual Emissions

Total Annual Emissions

Oxford Casino shall be restricted to the following annual emissions, based on a calendar year total. The new tons per year limits were calculated by adding the emission limits for Generator #3, that are based on 100 hours per year of non-emergency operating time, to the existing limits previously established for Generators #1 and #2 in the original air emission license issued on September 11, 2015.

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

| Unit | PM | PM₁₀ | SO₂ | NO_x | CO | VOC |
|----------------------|-----------|------------------------|-----------------------|-----------------------|-----------|------------|
| Generators #1 and #2 | 0.1 | 0.1 | 0.1 | 1.6 | 0.4 | 0.1 |
| Generator #3 | 0.1 | 0.1 | 0.1 | 0.4 | 0.2 | 0.1 |
| Total TPY | 0.2 | 0.2 | 0.2 | 2.0 | 0.6 | 0.2 |

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 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 ₁₀ | 25 |
| SO ₂ | 50 |
| NO _x | 50 |
| CO | 250 |

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license 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-1114-71-B-A subject to the conditions found in Air Emission License A-1114-71-A-N, and the following conditions.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment 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 is a new Specific Condition in addition to those found in the original Air Emission License A-1114-71-A-N (September 11, 2015).

(18) **Generator #3**

- A. Generator #3 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [06-096 CMR 115]
- B. Emissions shall not exceed the following:

| Unit | Pollutant | g/kWH | Origin and Authority |
|--------------|------------------|--------------|---|
| Generator #3 | PM | 0.2 | 40 CFR 60 Subpart III, 40 CFR 89.112 |

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

| Unit | PM (lb/hr) | PM₁₀ (lb/hr) | SO₂ (lb/hr) | NO_x (lb/hr) | CO (lb/hr) | VOC (lb/hr) |
|--|-----------------------|------------------------------------|-----------------------------------|-----------------------------------|-----------------------|------------------------|
| Generator #3 (4.96 MMBtu/hr) Distillate Fuel | 0.26 | 0.26 | 0.01 | 8.20 | 4.22 | 0.45 |

- D. Visible Emissions

Visible emissions from Generator #3 shall not exceed 20% opacity on a six-minute block average basis. [06-096 CMR 115, BACT]

- E. Generator #3 shall meet the applicable requirements of 40 CFR Part 60, Subpart IIII, including the following:
1. **Manufacturer Certification**
The engine 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. **Ultra-Low Sulfur Fuel**
The fuel fired in the engine shall not exceed 15 ppm sulfur (0.0015% sulfur), except that any existing fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. 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. **Non-Resettable Hour Meter**
A non-resettable hour meter shall be installed and operated on the engine. [40 CFR §60.4209(a)]
 4. **Annual Time Limit for Maintenance and Testing**
 - a. As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, 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 §60.4211(f)(3)(i) are met). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written log) of all engine operating hours. [40 CFR §60.4211(f) and 06-096 CMR 115]
 - b. Oxford Casino shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, including what classified the operation as emergency, and the number of hours the unit operated for non-emergency purposes. If the engine is operated to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4211(f)(3)(i), Oxford Casino shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

5. Operation and Maintenance

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions or procedures developed by Oxford Casino that are approved by the engine manufacturer. Oxford Casino may only change those emission-related settings that are permitted by the manufacturer. [40 CFR §60.4211(a)]

6. Annual Reporting For Demand Response Availability Over 15 Hours Per Year

If Oxford Casino operates or is contractually obligated to be available for more than 15 hours per calendar year to supply power during a non-emergency situation as part of a financial arrangement with another entity as specified in §60.4211(f)(3)(i), Oxford Casino shall submit an annual report containing the information in §60.4214(d)(1)(i) through (vii). The annual report for each calendar year must be submitted no later than March 31st of the following calendar year. The annual report must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form is not available in CEDRI at the time that the report is due, the written report must be submitted to the following address:

U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100 (OES04-2)
Boston, MA 02109-3912
Attn: Air Compliance Clerk

[40 CFR §60.4214(d)]

DONE AND DATED IN AUGUSTA, MAINE THIS 22 DAY OF August, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Paul Allen Robert Case for*
PAUL MERCER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-1114-71-A-N.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 07/05/2016

Date of application acceptance: 07/07/2016

Date filed with the Board of Environmental Protection:

This Order prepared by Patric J. Sherman, Bureau of Air Quality.

