STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

Maine Turnpike Authority
Cumberland County
Cumberland, Maine
A-1010-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emissions license 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

The Maine Turnpike Authority (MTA) has applied for an Air Emission License permitting the operation of emission sources associated with their Cumberland South Bound (SB) service plaza.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Electrical Generation Equipment

Equipment	Design Capacity (MMBtu/hr)	Firing Rate (gal/hr)	Fuel Type, % sulfur
Generator #1	1.62	11.8	ULS diesel, 0.0015%

C. Application Classification

Generator #1 is the only significant emission unit at MTA's Cumberland SB plaza and this equipment is below the licensing thresholds of *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005).

However, MTA wishes to participate in ISO New England's Demand Response Program. This program offers financial incentives to customers to reduce electricity demand during peak periods. This program can significantly improve the reliability of the region-wide bulk power system and hopefully allow ISO New England to avoid drastic measures, such as brown outs. *Emissions from*

Smaller-Scale Electric Generating Resources, 06-096 CMR 148 (effective August 9, 2004) prohibits emergency generators which were installed after January 1, 2005 from participating in demand-reduction programs or any other interruptible supply arrangements with a utility, other market participant, or system operator.

Generator #1 was installed after January 1, 2005. It therefore must either meet the emission limits in 06-096 CMR 148 for non-emergency generators or be subjected to New Source Review requirements in order to participate in the Demand Response Program. Generator #1 cannot meet the emission limits set forth in 06-096 CMR 148 and thus has applied for this air emission license in order to be subject to New Source Review requirements.

A new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

Pollutant	Max. Future License (TPY)	Sig. Level
PM	0.1	100
PM_{10}	0.1	100
SO_2	0.1	100
NO_x	1.8	100
CO	0.4	100
VOC	0.1	50

The Department has determined the facility is a minor source and the application has been processed through 06-096 CMR 115.

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 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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 (last amended December 24, 2005). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Generator #1

MTA operates one back-up diesel fired generator (Generator #1).

In order for MTA to participate in the Demand Response Program, they need to start Generator #1 and run it prior to, or in lieu of, loss of off-site power. MTA will only operate in this manner if there is a documented request from ISO New England under their emergency OP-4 procedures. ISO New England's OP-4 is a procedure which establishes criteria and guidelines for actions during capacity deficiencies. OP-4 is implemented when there is determined to be a serious threat to the integrity of the bulk power system. Therefore, the Department has agreed to redefine the term "emergency" as it applies to MTA's generator to include ISO New England OP-4 emergencies.

Therefore "Emergency Generator", as it applies to MTA, is defined as any stationary internal combustion engine whose operation is limited to emergency situations, required testing and maintenance, and ISO New England OP-4 emergencies. Examples include stationary engines 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 engines used to pump water in the case of fire or flood.

Additionally, MTA shall only be permitted to operate their generator in response to an OP-4 emergency for a total of no more than 50 hours each calendar year.

Generator #1 was ordered after July 11, 2005 and manufactured after April 1, 2006. Therefore, Generator #1 is subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Generators*.

A summary of the BACT analysis for Generator #1 is the following:

1. Generator #1 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm.
2. Generator #1 shall be limited to 50 hr/yr of operation in response to OP-4 emergencies. Generator #1 shall be limited to 500 hours per year of total operation. Both of these limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours.
3. Generator #1 shall be equipped with a non-resettable hour meter.
4. The PM and PM_{10} limits are derived from 06-096 CMR 103.

5. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
6. MTA shall operate and maintain Generator #1 in accordance with the manufacturer's written instructions. MTA shall not change settings that are not approved in writing by the manufacturer.
7. Visible emissions from Generator #1 shall 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.

C. Annual Emissions

MTA shall be restricted to the following annual emissions, based on a calendar year:

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
Generator #1	0.1	0.1	0.1	1.8	0.4	0.1
Total TPY	**0.1**	**0.1**	**0.1**	**1.8**	**0.4**	**0.1**

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115, the level of air quality analyses required for a minor new source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

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,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1010-71-A-N 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. [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) **Generator #1**

A. Generator #1 is subject to, and shall comply with, the relevant parts of 40 CFR 60, Subpart IIII.

B. Generator #1 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm. [06-096 CMR 115, BACT and 40 CFR 60.4207(b)]

C. MTA shall only operate Generator #1 for periods of maintenance and readiness testing, emergencies when off-site power is unavailable, and ISO New England OP-4 emergencies. [06-096 CMR 115, BACT]

D. MTA shall keep records for OP-4 emergencies which include the date, start time and stop time for the generator, and documentation that MTA was contacted by ISO New England and asked to reduce consumption as part of an OP-4 event. [06-096 CMR 115, BACT]

E. Generator #1 shall be limited to 50 hours per year of operation in response to an OP-4 emergency. Generator #1 shall be limited to 500 hours per year of total operation. Both of these limits are based on a calendar year. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115, BACT]

F. Generator #1 shall be equipped with a non-resettable hour meter. [06-096 CMR 115, BACT]

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

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	0.19	0.19	7.14	1.54	0.57

H. Generator #1 is subject to PM, CO, and NO_x + VOC emission requirements set forth in 40 CFR 60, Subpart IIII. Compliance with these emission requirements shall be demonstrated by certification from the manufacturer that this engine class meets the appropriate Tier standards. [40 CFR 60, Subpart IIII]

I. MTA shall operate and maintain Generator #1 in accordance with the manufacturer's written instructions. MTA shall not change settings that are not approved in writing by the manufacturer. [40 CFR 60.4211(a)]

J. Visible emissions from Generator #1 shall 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]

(17) MTA 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 1st DAY OF May, 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brooks for
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/17/09
Date of application acceptance: 3/18/09

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.

FILED
MAY - 4 2009
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE