



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

**General Electric Company
dba GE Energy
Penobscot County
Bangor, Maine
A-404-71-R-M**

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

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., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

GE Energy (GE) of Bangor, Maine was issued Air Emission License A-404-71-Q-R/A on October 6, 2009, permitting the operation of emission sources associated with their steam turbine manufacturing facility.

GE has requested a minor revision to their license in order to add three Thermal Spray Cells to their production process.

B. Emission Equipment and Activities

Process Equipment

<u>Equipment</u>	<u>Maximum Production Rate</u>	<u>Pollution Control Equipment</u>
Thermal Spray Cell #1, #2 and #3	20 lb/hr (each)	2 stage fabric filter

C. Application Classification

This amendment will increase emissions by less than 4 ton/year for each single pollutant and less than 8 ton/year for all pollutants combined. Therefore, this modification is determined to be a minor revision and has been processed as such.

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AUGUSTA, MAINE 04333-0017
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106 HOGAN ROAD
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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
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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. Thermal Spray Cells #1, #2 and #3

Each Thermal Spray Cell is an enclosed, robotically operated coating process that uses powdered metal coatings and a High Velocity on Flame (HVOF) or plasma spray to transfer the coatings to metal parts. Each cell is equipped with a pulse jet dust collector equipped with high-efficiency nano-fiber filters, and is followed by a set of High Efficiency Particulate Arrestance (HEPA) filters. This combination results in a 99.99% control of Particulate Matter (PM) from each Cell. At maximum production, the three Thermal Spray Cells are calculated to emit approximately 1.58×10^{-3} lbs of PM per year, and therefore are a negligible source of metallic PM HAPs.

The Thermal Spray Cells are subject to 40 CFR Part 63, Subpart WWWW, National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations. Control requirements are set forth in 40 CFR Part 63.11507(f)(2):

1. Operation of a capture system that collects PM from the spraying process and transports the emissions to a fabric or HEPA filter.
2. Operate all control devices in accordance with the manufacturer's specifications and instructions.
3. Keep the manufacturer's instructions at the facility at all times in a location where they can be easily accessed by the operators.

In addition to these control requirements, the following management principles are applicable per 40 CFR Part 63.11507(g):

1. Perform regular maintenance, and preventative maintenance of rack, barrels, and other equipment associated with affected sources, as practical.

2. Perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practical.
3. Perform regular inspections to identify leaks and other opportunities for pollution prevention.

Because the Thermal Spray Cells use exclusively powder based coatings, GE is exempt from *Surface Coating Facilities*, 06-096 CMR 129 (last amended March 3, 1998) per section 1(E)(2).

GE is also subject to *Hexavalent Chromium Particulate Emission Standard*, 06-096 CMR 135 (last amended November 3, 1990). The emission of chromium particulate from the HEPA filters has been calculated to be 0.84 ng/m³. This emission rate is well below the 25 ng/m³ standard required by 06-096 CMR 135. The use of HEPA filters also demonstrates the lowest achievable emission rate that is technologically achievable for the equipment as is set forth in 06-096 CMR 135. Therefore, compliance with the requirements in 40 CFR, Part 63, Subpart WWWWWW shall also meet the requirements set forth in 06-096 CMR 135.

BACT for the Thermal Spray Cells shall be compliance with the requirements set forth in 40 CFR, Part 63, Subpart WWWWWW.

III. AMBIENT AIR QUALITY ANALYSIS

According to the 06-096 CMR 115, the level of air quality analyses required for a new source shall be determined on a case-by case basis. Based on the total facility emissions, GE is below the emissions level required for modeling and monitoring.

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-404-71-R-M 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.

SPECIFIC CONDITIONS

- (1) Thermal Spray Cells #1, #2 and #3 [40 CFR Part 63.11507, 06-096 CMR 135, 06-096 CMR 115, BACT]
 - A. For each Thermal Spray Cell which is a new affected source subject to 40 CFR Part 63, Subpart WWWW, GE shall operate a capture system that collects PM emissions from the thermal spraying process and transports the emission to a fabric or HEPA filter, according to conditions B and C of this Order.
 - B. For each Thermal Spray Cell which is a new affected source subject to 40 CFR Part 63, Subpart WWWW, GE shall operate all capture and control devices in accordance with the manufacturer's specifications and instructions.
 - C. GE shall keep the manufacturer's operating instructions at the facility at all times in a location where they can be easily accessed by the operators.
 - D. GE shall perform regular repair, maintenance, and preventive maintenance of the equipment associated with the affected source, as practical. Records of this maintenance shall be kept for a period of 5 years following the date of the maintenance and presented to the Department upon request.
 - E. GE shall perform general good housekeeping, such as regular sweeping or vacuuming, if needed, and periodic washdowns, as practical.
 - F. GE shall perform regular inspections to identify leaks and other opportunities for pollution prevention. Inspection records shall be kept for a minimum of 5 years and presented to the Department upon request.

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- (2) GE shall notify the Department within 48 hours from identification of the malfunction 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 (Title 38 MRSA §605).). The written report is required to be submitted one time within 30 days from the end of the calendar quarter in which the malfunction was identified.

DONE AND DATED IN AUGUSTA, MAINE THIS 18th DAY OF June 2010.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:



DAVID P. LITTELL, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-404-71-Q-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/21/10

Date of application acceptance: 5/11/10

Date filed with the Board of Environmental Protection: _____

This Order prepared by Jonathan Voisine, Bureau of Air Quality.

