



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

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COMMISSIONER

Enterprise Foundry, Inc. )
Androscoggin County )
Lewiston, Maine )
A-108-71-G-R )
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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

Enterprise Foundry, Inc. (EFI) of Lewiston, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their gray and ductile iron casting facility.

On January 2, 2008, EPA promulgated 40 CFR Part 63 Subpart ZZZZZ, National Emissions Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources.

The requirements of 40 CFR Part 63 Subpart ZZZZZ are included in Section II and the Order section of this license.

B. Emission Equipment

EFI is authorized to operate the following equipment:

Process Equipment

Table with 3 columns: Equipment, Production Rate, Pollution Control Equipment. Rows include Electric Coreless Melting Furnace #1-3303, #2-3303, and #3-3303, each with a production rate of 1 ton/hr and a baghouse #1 for pollution control.

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106 HOGAN ROAD, SUITE 6
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<u>Equipment</u>	<u>Pollution Control Equipment</u>
Sand Preparation	baghouses # 4, 5, 7, 8, 15
Shot Blasting	baghouses # 6, 9
Pattern Shop	baghouse #13
IMF Mixer	baghouses #10, 12, 14
Grinding Operations	baghouse # 3

EFI also operates the following equipment that is considered insignificant pursuant to 06-096 CMR 115 Appendix B. This equipment is listed for inventory purposes only.

<u>Emission Unit</u>	<u>Maximum Design Capacity (Btu/hr)</u>	<u>Fuel Type</u>
Boiler #1	350,000	Oil
Water Heater #2	155,000	Natural gas
Heater #3	250,000	Natural gas
Furnace #4	700,000	Oil
Oven #5	300,000	Oil
Heater #6	100,000	Natural gas
Heater #7	100,000	Natural gas
Heater #8	100,000	Natural gas
Oven #9	300,000	Natural gas
Oven #10	180,000	Natural gas
Heater #11	250,000	Natural gas
Heater #12	100,000	Natural gas
Heater #13	100,000	Natural gas

C. Application Classification

The application for EFI does not include the licensing of increased emissions. Therefore, the license is considered to be a renewal of current licensed emission units only.

**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 CMR 100 (as amended) of the Department regulations. 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.

Before proceeding with the control requirements for each unit, a general process description is provided to identify where the equipment fits into the process.

#### Process Description

EFI produces gray iron castings from scrap iron and foundry returns by melting, alloying and molding. The major production steps are raw materials handling and preparation, metal melting, mold core production, casting and finishing.

The electric induction furnaces are refractory lined vessels that are surrounded by electrical coils which, when energized with high frequency alternating current, produce a fluctuating electromagnetic field to heat the metal charge to 2900°F. The molten metal is transferred to molds where it solidifies to a specified form.

Castings attain their shape by the use of molds and cores. While molds are used to shape the exterior of the casting, the cores are used like molds to shape the internal voids in the castings.

Molds are prepared from a mixture of wet sand, clay and organic additives to make the mold shapes. The sand used to make the molds consists of virgin sand and sand recovered from pre-used molds. The recovered sand is broken down to a specified consistency and mixed with the virgin sand.

Cores are made by mixing sand with organic binders, molding the sand into a core, and baking the core in an oven.

After the castings have cured and been removed from the molds they are shot blasted to remove excess sand left from the molds. The castings are then ground to an acceptable form before they are shipped off-site.

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B. Electric Induction Furnaces

A maximum of two of the three electric induction furnaces can be operated at one time because there are only two electric power supplies for the three furnaces. Generally EFI operates only one furnace at a time. The operation of a maximum of two furnaces simultaneously and the use of a baghouse to control particulate emissions is considered BPT for this source. The baghouse vents inside and thus does not have a visible emissions requirement.

C. Sand Recycling Operation

BPT for the sand mixing operation shall be the use of a baghouse to control particulate emissions. The baghouse vents inside and thus does not have a visible emissions requirement.

D. Shot Blasting and Grinding Operations

BPT for the shot blasting and grinding operations shall be the use of baghouses to control particulate emissions. The baghouses vent inside and thus do not have visible emissions requirements.

- E. In response to 40 CFR Part 63 Subpart ZZZZZ, on January 12, 2009 EFI submitted to the Department a "Notice of Compliance Status," which indicated that they are an existing source in the "small foundry" category (less than or equal to 20,000 tons annual production) with a rate of 1220 tons in 2008.

Additionally, as part of their submittal EFI has indicated the following, as required by the Subpart:

This facility has prepared and is operating in compliance with written material specifications for metallic scrap according to Section 63.10885(a)(1) of Subpart ZZZZZ;

This facility has prepared and is operating in compliance with written material specifications for general iron and steel scrap according to Section 63.10885(a)(2) of Subpart ZZZZZ;

This facility complies with the no methanol requirement for the catalyst portion of each binder chemical formulations for furfural alcohol warm box or core making line according to Section 63.10886 of Subpart ZZZZZ;

This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with Section 63.10885(b)(4) of Subpart ZZZZZ;

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And, this facility has prepared and is operating in compliance with written material specifications for the removal of mercury switches and a site-specific plan approved by the Administrator and implementing the material specifications according to Section 63.10885(b)(1) of Subpart ZZZZZ.

- F. Following the initial determination for an existing affected sources as a small foundry, if the annual metal melt production exceeds 20,000 tons during the preceding year, EFI must notify the Department and comply with the requirements for large foundries by the applicable dates as found in 40 CFR Part 63.10881(d)(1)(i) or (d)(1)(ii).
- G. EFI shall maintain records to demonstrate continued compliance with the requirements of Subpart ZZZZZ, as listed in Section II. E. above, and submit a semiannual report to the Department. Said report must clearly identify any deviation from the pollution prevention management practices and the corrective action taken.

**III. AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulations 06-096 CMR 115 (as amended,) the level of air quality analyses required for a renewal source shall be determined on a case-by case basis.

Bas on the facility emissions, EFI is not required to perform 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-108-71-G-R subject to the following conditions:

**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 MRSA §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 38 MRSA §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]

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- (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) **Electric Induction Furnaces**  
Emissions from the induction furnaces shall be vented through a baghouse, which shall be maintained in accordance with the manufacturer's specifications for optimal removal efficiency. A maintenance log shall be maintained for work done on the baghouse. The baghouse vents inside and thus does not have a visible emissions requirement.
- (17) **Process Operations**  
Emissions from the sand preparation, shot blasting, pattern shop, IMF mixer and grinding operations shall be vented through baghouses, which shall be maintained in accordance with the manufacturer's specifications for optimal removal efficiency. Logs shall be kept of all maintenance done on each baghouse. Baghouses #4 and #15 vent to ambient air, and are subject to the general process source opacity limitation of 20% opacity on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period. Baghouse #13 vents outdoors during the summer and indoors during the winter. At such times as it is venting to ambient air, it also shall meet the opacity limits noted above. All other baghouses vent indoors, and have no visible emission limitation.

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(18) **Parts Washer**

Parts washers at EFI are subject to 06-096 CMR 130 (as amended.)

- A. EFI shall keep records of the amount of solvent added to each parts washer. [06-096 CMR 115, BPT]
- B. The following are exempt from the requirements of 06-096 CMR 130 [MEDEP Chapter 130]:
  - 1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
  - 2. Wipe cleaning; and,
  - 3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
- C. The following standards apply to remote reservoir cold cleaning machines that are applicable sources under 06-096 CMR 130.
  - 1. EFI shall attach a permanent conspicuous label to each unit summarizing the following operational standards [06-096 CMR 130]:
    - (i) Waste solvent shall be collected and stored in closed containers.
    - (ii) Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
    - (iii) Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
    - (iv) The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
    - (v) Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
    - (vi) When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
    - (vii) Spills during solvent transfer shall be cleaned immediately. Sorbent material shall be immediately stored in covered containers.
    - (viii) Work area fans shall not blow across the opening of the degreaser unit.
    - (ix) The solvent level shall not exceed the fill line.
  - 2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [06-096 CMR 130, BPT]

(19) **General Process Sources**

Visible emissions from any general process source not specifically listed in this Order shall not exceed an opacity of 20% opacity on a 6-minute block average

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basis, except for no more than one 6-minute block average in a 1-hour period.  
[06-096 CMR 101]

- (20) Following the initial determination for an existing affected sources as a small foundry, if the annual metal melt production exceeds 20,000 tons during the preceding year, EFI must notify the Department and comply with the requirements for large foundries by the applicable dates as found in 40 CFR Part 63.10881(d)(1)(i) or (d)(1)(ii).
- (21) EFI shall maintain records to demonstrate continued compliance with the applicable requirements of 40 CFR Part 63 Subpart ZZZZZ, as listed in Section II. E. of this license. EFI shall submit a semiannual report to the Department which clearly identifies any deviation from the pollution prevention management practices and the corrective action taken.

DONE AND DATED IN AUGUSTA, MAINE THIS 28 DAY OF November 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Maia Allen Robert Case for  
PATRICIA W. AHO, COMMISSIONER

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

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration, then pursuant to Title 5 MRSA §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: June 23, 2009

Date of application acceptance: July 16, 2009

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Robert Hartley, Bureau of Air Quality.

