



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

BETH NAGUSKY
ACTING COMMISSIONER

**FMC Corporation,
Biopolymer Division
Knox County
Rockland, Maine
A-366-77-2-A**

**Departmental
Findings of Fact and Order
New Source Review**

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

FACILITY	FMC Corporation, Biopolymer Division
LICENSE TYPE	06-096 CMR 115, Minor Modification
NAICS CODES	2099, 2835
NATURE OF BUSINESS	Refined Hydrocolloid Products
FACILITY LOCATION	Crocketts Point, PO Box 308, Rockland, ME
NSR AMENDMENT ISSUANCE DATE	October 18, 2010

B. Amendment Description

FMC Corporation, Biopolymer Division (FMC) was issued Air Emission License A-366-70-F-R on September 22, 2009. FMC has requested an amendment to their License in order to add two Emergency Generators to their Rockland facility.

C. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Date of Manufacture</u>	<u>Fuel Type</u>
Building 2 Generator	6.0	42.8	1976	Diesel Fuel @ 0.05% Sulfur
Building 3/8 Generator	2.5	18.0	Pre-2002	Diesel Fuel @ 0.05% Sulfur

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AUGUSTA, MAINE 04333-0017
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106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
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PORTLAND, MAINE 04103
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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04679-2094
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D. Application Classification

The application for FMC does not violate any applicable federal or state requirements and does not reduce monitoring, reporting, testing or record keeping. This application does not seek to modify a Best Available Control Technology (BACT) analysis performed per New Source Review.

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as defined in the Department's regulations. This application is determined to be a minor modification under *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 1, 2005) 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 06-096 CMR 100. 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 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Building 2 and Building 3/8 Generators

The generators were manufactured before 2006 and are therefore not subject to New Source Performance Standards, 40 CFR, Part 60, Subpart IIII for Stationary Compression Ignition Internal Combustion Engines. Because the generators are classified as existing "Emergency Engines" located at an area HAP source, the generators are not subject to National Emission Standard for Hazardous Air Pollutants, 40 CFR, Part 63, Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines.

Due to the potential for tight electricity supplies, ISO New England has taken several precautionary steps to ensure the reliability of the region-wide bulk power system. One of those steps is the implementation of the Demand Response Program. This program offers financial incentives to customers, such as FMC, 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.

In order for FMC to participate in the Demand Response Program, they need to start their generators and run them prior to, or in lieu of, loss of off-site power. FMC 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 FMC generators to include ISO New England OP-4 emergencies.

Therefore "Emergency Generator", as it applies to FMC, 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.

To remain an "Emergency Engine" as defined by 40 CFR, Part 63, Subpart ZZZZ, each generator is limited to 15 hours of demand response operation per year. Therefore, FMC shall only be permitted to operate each generator in response to an OP-4 emergency for a total of no more than 15 hours each calendar year.

A summary of the BACT analysis for each generator is the following:

1. The generators shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm.
2. The generators shall be limited to 500 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. 06-096 CMR 106 regulates fuel sulfur content, however in this case a BACT analysis for SO₂ determined a more stringent limit of 15 ppm was appropriate and shall be used.
4. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits for the Building 2 Generator. However a PM emission limit of 0.12 lb/MMBtu is more stringent and shall be considered BACT for each generator. The PM₁₀ limits are derived from the PM limits.
5. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.

6. Visible emissions from each generator 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. Incorporation into the Part 70 Air Emission License

The requirements in this 06-096 CMR 115 New Source Review amendment shall apply to the facility upon amendment issuance. Per *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (last amended December 24, 2005), Section 2(J)(2)(d), for a modification that has undergone NSR requirements or been processed through 06-096 CMR 115, the source must then apply for an amendment to the Part 70 license within one year of commencing the proposed operations as provided in 40 CFR Part 70.5.

D. Facility Emissions

1. FMC shall be limited to firing 10,000,000 gallons of #6 fuel oil in Boilers #3, #4, and #5 on a 12 month rolling total.
2. The Emergency Generators shall each be limited to 500 hours of operation on a 12 month rolling total.

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

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boilers	150	150	1570	375	25.0	8.0
Unit #23	0.2	0.2	0.1	4.8	1.3	0.1
Unit #26	0.1	0.1	0.1	1.7	0.4	0.1
Building 2 Generator	0.2	0.2	0.1	4.7	1.3	0.1
Building 3/8 Generator	0.1	0.1	0.1	2.7	0.6	0.2
Hydrocolloid, Agarose, and Pilot Plant Processes	-	-	-	-	-	426.0
Total TPY	150.6	150.6	1570.4	388.9	28.6	434.5

III. AMBIENT AIR QUALITY ANALYSIS

FMC previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. An additional ambient air quality analysis is not required for this revision.

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-366-77-2-A pursuant to the preconstruction licensing requirements of 06-096 CMR 115 and subject to the standard and special conditions below.

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) Building 2 and Building 3/8 Generators

- A. FMC shall limit each generator to 500 hr/yr of operation (based on a 12 month rolling total). An hour meter shall be maintained and operated on each generator. [06-096 CMR 115, BACT]
- B. The generators shall fire diesel fuel with a sulfur limit not to exceed 15 ppm by weight. Compliance shall be based on fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. [06-096 CMR 115, BACT]
- C. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Building 2 Generator	PM	0.12	06-096 CMR 103(2)(B)(1)(a), BACT

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

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Building 2 Generator	0.72	0.72	0.01	19.20	5.10	0.54
Building 3/8 Generator	0.30	0.30	0.01	11.03	2.38	0.88

E. Visible emissions from each generator 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]

(2) **OP-4 Emergencies**

- A. FMC shall only operate the emergency generators 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]
- B. FMC shall keep records for OP-4 emergencies which include the date, which generators were operated, start time and stop time for each generator, and documentation that FMC was contacted by ISO New England and asked to reduce consumption as part of an OP-4 event. [06-096 CMR 115, BACT]
- C. FMC shall not operate the emergency generators for more than 15 hours each per calendar year in response to an OP-4 emergency. [06-096 CMR 115, BACT]

(3) FMC shall apply for an amendment to the Part 70 license within one year of commencing the operations proposed in this 06-096 CMR 115 amendment as provided in 40 CFR Part 70.5.

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A-366-77-2-A

Departmental
Findings of Fact and Order
New Source Review

7

- (4) FMC 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 18th DAY OF October 2010.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Beth Nagusky*
BETH NAGUSKY, ACTING COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/29/2010

Date of application acceptance: 5/12/2010

Date filed with the Board of Environmental Protection: _____

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



