



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

JAMES P. BROOKS
ACTING COMMISSIONER

Patrick Thibodeau
d/b/a A&M Redi-Mix
Waldo County
Prospect, Maine
A-1056-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

After review of the air emission 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

Patrick Thibodeau d/b/a A&M Redi-mix (A&M), located in Prospect, Maine has applied for a new Air Emission License, permitting the operation of their concrete batch plant. The plants physical location is Route 1A Prospect, Maine.

B. Emission Equipment

Concrete Batch Plant

Equipment	Process Rate	Design Capacity	Fuel Type & Firing Rate	Manufacturer	Date of Manufacture	Control Device
Concrete Batch Plant	80 cubic yards/hr	--	--	Erie	1990	baghouse
Boiler #1	--	1.4 MMBtu/hr	#2 fuel *	Pearson	2008	none

* fuel which meets the criteria in ASTM D396 for #2 fuel oil

C. Application Classification

The 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 emission for the new source are determined by the maximum future license allowed emissions, as follows:

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 04679-2094
(207) 764-0477 FAX: (207) 760-3143

Pollutant	Future License (TPY)	Sig. Level
PM	0.5	100
PM ₁₀	0.5	100
SO ₂	3.1	100
NO _x	2.5	100
CO	0.3	100
VOC	0.1	50

The Department has determined A&M Redi-Mix is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

II. BEST PRACTICAL TREATMENT

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 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. Concrete Batch Plant

A&M Redi-Mix operates a concrete batch plant at the Prospect site. This concrete plant has a maximum finished material process rate of 80 cubic yards per hour and is controlled with a curtain wall and its three associated cement silos are controlled with baghouses. The Erie Concrete Batch Plant was constructed in 1990. To meet the requirements of BACT for control of particulate matter (PM) emissions from the cement silos, particulate emissions shall be vented through baghouses maintained for 99% removal efficiency. Visible emissions from the cement silo baghouses are each limited to no greater than 10% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period. The facility shall take corrective action if visible emissions from the baghouses exceed 5% opacity.

All components of the concrete batch plant shall be maintained so as to prevent PM leaks. Visible emissions from concrete batching operations shall not exceed 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period.

C. Boiler #1

A&M Redi-Mix operates a boiler for the facility's concrete batching operations. The boiler is rated less than 10 MMBtu/hr and is therefore not subject to the *New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989. The boiler is subject to National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR Part 63 Subpart JJJJJ).

The regulated pollutants emitted from the #2 oil-fired boiler are particulate matter (PM), particulate matter with a diameter smaller than ten microns (PM₁₀), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC).

A summary of the BACT analysis for Boiler #1 at A&M Redi-Mix is the following:

1. The SO₂ emission limits are based on the firing of fuel which meets the criteria in ASTM D396 for #2 fuel oil.
2. Fuel Burning Equipment Particulate Emission Standard, 06-096 CMR 103 (as amended) regulates PM emission limits for boilers greater than 3.0 MMBtu/hr. The boiler at A&M Redi-Mix is less than 3.0 MMBtu/hr and therefore 06-096 CMR is not applicable. However, the BACT limit is more stringent and will require PM emissions limit to meet 0.08 lb/MMBtu. The PM₁₀ limits are derived from the PM limits.
3. NO_x emission limits are based on data from similar #2 oil fired boilers of this size and age.
4. CO and VOC emission limits are based upon AP-42 data dated 9/98.
5. Visible emissions from the boiler shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.
6. The boiler at A&M Redi-Mix is subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The unit is rated less than 10 MMBtu/hr and is thus not subject to PM, CO, or mercury emission limits from 40 CFR Part 63 Subpart JJJJJ.

For informational purposes, a summary of the applicable federal 40 CFR Part 63 Subpart JJJJJ requirements are listed below. The Maine Department of Environmental Protection has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA, however A&M Redi-Mix is still subject to the requirements.

- An initial notification must be submitted to EPA no later than September 17, 2011. [40 CFR Part 63.11225(a)(2)]
- A boiler tune-up program shall be implemented to include the tune-up of all applicable boilers by March 21, 2012. [40 CFR Part 63.11196(a)(1)]
- A Notification of Compliance Status shall be submitted to EPA no later than 120 days after conducting the initial boiler tune-up. [40 CFR Part 63.11225(a)(4)] The Notification of Compliance Status form developed by EPA may be used to submit the required information.
- After the initial tune-up and initial compliance report has been submitted, A&M Redi-Mix shall implement a biennial boiler tune-up program and submit biennial compliance reports. The following are requirements of the boiler tune-up program:
 - Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up. [40 CFR Part 63.11223(a)]
 - Each biennial tune-up shall include the following, as applicable:
 - Inspection of the burner, cleaning/replacing any component of the burner, as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; however, the burner must be inspected at least once every 36 months. [40 CFR Part 63.11223(b)(1)]
 - Inspection of the flame pattern, and adjustment of the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
 - Inspection of the system controlling the air-to-fuel ratio, to ensure proper calibration and that it is functioning properly. [40 CFR Part 63.11223(b)(3)]
 - Optimization of total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
 - Measurement of concentration in the effluent stream of CO in parts per million (ppm), by volume, and oxygen in volume percent, before and after adjustments are made. [40 CFR Part 63.11223(b)(5)]
 - If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of start-up. [40 CFR Part 63.11223(b)(7)]
- Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]: copies

of compliance reports; identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation.

D. Stock Piles and Roadways

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

E. Facility Emissions and Fuel Use Caps

Facility emissions are based on the maximum fuel usage for Boiler #1 operating 24/7 at 87,600 gallons of ASTM D396 #2 fuel oil in a year. The emissions from the concrete batch plant are determined unquantifiable.

Total Allowable Annual Emissions for the Facility
(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	0.5	0.5	3.1	2.5	0.3	0.1
Concrete Batch Plant	--	--	--	--	--	--
Total TPY	0.5	0.5	3.1	2.5	0.3	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-1056-71-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. [06-096 CMR 115]
- (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 M.R.S.A. § 353-A. [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) Concrete Batch Plant

- A. Particulate emissions from the cement silo shall be vented through a baghouse and all components of the batch plant shall be maintained so as to prevent PM leaks. [06-096 CMR 115, BACT]
- B. To document maintenance of the cement silo baghouse, the licensee shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. The maintenance log shall be kept on-site at the concrete batch plant location. [06-096 CMR 115, BACT]
- C. Opacity from the cement silo baghouse is limited to no greater than 10% on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. A&M Redi-Mix shall take corrective action if visible emissions from the baghouse exceed 5% opacity. [06-096 CMR 101]
- D. PM emissions from the concrete batching operation shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(17) Boiler #1

- A. A&M Redi-Mix shall use #2 fuel oil which meets the criteria in ASTM D396 for #2 oil. Compliance shall be demonstrated by fuel records from the supplier showing the type of fuel delivered. [06-096 CMR 115, BACT]
- B. A&M Redi-Mix shall limit emissions from the Boiler #1 to the following: [06-096 CMR 115, BACT]

Pollutant	lb/MMBtu	lb/hour
PM	0.08	0.11
PM10	--	0.11
SO ₂	--	0.71
NO _x	--	0.56
CO	--	0.05
VOC	--	0.01

- C. Visible emissions from Boiler #1 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]
- D. A&M Redi-Mix shall meet the applicable requirements of 40 CFR Part 63 Subpart JJJJJ; including but not limited to the recordkeeping, reporting/notification requirements, and the implementation of a boiler tune-up program. [06-096 CMR 115, BACT]

(18) Stockpiles and Roadways

Visible emissions from a fugitive emission source shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20% in any one (1) hour. [06-096 CMR 101]

(19) Equipment Relocation [06-096 CMR 115, BPT]

- A. A&M Redi-Mix shall notify the Bureau of Air Quality, by a written notification at least 48 hours prior to relocation of any equipment carried on this license. Written notice may be sent by mail, facsimile (fax), or e-mail. Notification sent by mail shall be sent to the address below or to a Department Regional Office:

Attn: Relocation Notice
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Equipment relocation notification can also be done on-line with e-notice at www.maine.gov/dep/air/compliance/forms/relocation.

The notification shall include the address of the equipment's new location, an identification of the equipment and the license number pertaining to the relocated equipment.

- B. Written notification shall also be made to the municipality where the equipment will be relocated, except in the case of an unorganized territory where notification will be made to the respective county commissioners.
- (20) A&M Redi-Mix shall keep a copy of this Order on site, and have the operator(s) be familiar with the terms of this Order. [06-096 CMR 115, BPT]**

Patrick Thibodeau
d/b/a A&M Redi-Mix
Waldo County
Prospect, Maine
A-1056-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

11

- (21) A&M Redi-Mix 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-C].

DONE AND DATED IN AUGUSTA, MAINE THIS 31st DAY OF May, 2011.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie S. Fox
JAMES P. BROOKS, ACTING 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: August 10, 2010

Date of application acceptance: August 24, 2010

Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality



