

**Cianbro Fabrication & Coating Corp.)
 Somerset County)
 Pittsfield, Maine)
 A-794-71-C-R**

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

I. REGISTRATION

A. Introduction

1. Cianbro Fabrication & Coating Corp. (Cianbro) has applied for an Air Emission License, permitting the operation of emission sources associated with their Pittsfield, Maine metal fabrication and coatings facility.
2. This renewal will also include an amendment to update the facility’s equipment inventory to include a new automated sand blast unit (Wheelabrator).

B. Emission Equipment

Cianbro is applying to operate the following equipment:

Fuel Burning Equipment

Equipment	Date of Construction	Maximum Capacity (MMBtu/hr)	Fuel Type, % Sulfur	Maximum Firing Rate (gal/hr)	Stack #
Boiler #1	1989	1.2	#2, 0.5%	8.5	1
Heater #1	1989	3.5	Propane	38.0	2
Heater #2	1989	5.5	Propane	58.0	3

Process Equipment

Equipment	Production Rate	Pollution Control Equipment
Paint Booth #1	1600 gal/month	Fabric filter
Paint Booth #2	900 gal/month	Fabric filter
Blast Booth	8 tons grit per month	Baghouse
Wheelabrator	75 tons grit per year	Baghouse

C. Application Classification

Cianbro is a licensed source with equipment that has not been addressed in the facility's previous air emissions licenses. The license renewal shall include the operation of the previously unlisted equipment. Therefore, the application for Cianbro is considered to be a renewal and amendment.

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 Chapter 100 of the Air Regulations.

BPT for existing 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.

B. Boiler

Cianbro operates a boiler unit, designated Boiler #1, at their Pittsfield metal fabrication and coating facility. Boiler #1 is a previously licensed boiler with a maximum design heat input capacity of 1.2 MMBtu/hr firing #2 with a sulfur content no greater than 0.5% sulfur by weight. It is located in a small boiler room adjacent to the paint shop and is utilized to provide heat and hot water to the paint shop building.

A summary of the BPT analysis for Boiler #1 is as follows:

1. BPT for firing #2 fuel oil is a sulfur content of no greater than 0.5% sulfur by weight.
2. BPT for the firing of #2 fuel oil is a PM limit of 0.12 lb/MMBtu. PM₁₀ limits are based on PM limits.
3. SO₂, NO_x, CO and VOC emission limits are based upon AP-42 data dated 9/98.
4. Visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average except, for no more than 1 six-minute block average in a 3-hour period.

Cianbro also operates a second boiler unit, designated Boiler #2, which is located in the new extension of the paint shop building. Boiler #2 has a maximum heat input capacity of 0.952 MMBtu/hr and is below licensing thresholds. Boiler #2 is mentioned for inventory purposes only.

C. Propane fired Heaters

Cianbro operates two propane fired heaters, designated Heaters #1 and #2, with maximum design heat input capacities of 3.5 MMBtu/hr and 5.5 MMBtu/hr, respectively. The units are located on the roof of the coating building and are utilized to heat the spray booths. The units were previously licensed at different capacities, however, recent facility inspections revealed the current information.

A summary of the BPT analysis for Heaters #1 and #2 is as follows:

1. BPT for the firing of propane is a PM limit of 0.05 lb/MMBtu. PM₁₀ limits are based on PM limits.
2. SO₂, NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96.
3. Visible emissions from Stack #1 shall not exceed 10% opacity on a six-minute block average except, for no more than 1 six-minute block average in a 3-hour period.

Cianbro also operates a third propane heater utilized to supply heat to the fabrication building. This heater has a maximum design heat input capacity of 0.933 MMBtu/hr. The heat input capacity of this unit is below the licensable threshold as given in Chapter 115 of the Department's regulations and is included in these findings for inventory purposes only.

D. Paint Booths #1 and #2

The paint shop includes two spray paint booths each equipped with fabric filters to control particulate matter emissions. In these units Cianbro paints a variety of equipment and material from motor vehicles to structural components for construction. The spray booths are equipped with fabric filter beds to control particulate emissions. Emissions from the spray paint booths are drawn out through the fabric filter beds and blown to atmosphere

Pollutants associated with the operation of painting equipment are PM, PM₁₀, volatile organic compounds (VOC) and Hazardous Air Pollutants (HAPs). BPT for the painting processes shall include good house keeping practices to minimize fugitive emissions.

Good house keeping practices include covering paint storage containers when these containers are not in use, maintaining the seal around the suction hose from the paint drum when painting is being performed, cleaning excess and/or spilt material, proper containment and disposal of cleaning fluids from equipment cleaning processes and proper disposal of contaminated working equipment (gloves, coveralls, tools etc).

Cianbro shall establish a system of maintenance, inspection and repair for the spray booth filter beds, which shall allow for periodic inspection of the filters. Cianbro shall document compliance by means of a maintenance, inspection and repair log, in which Cianbro shall record all routine maintenance as well as all inspection dates and findings and subsequent actions.

The painting operations at Cianbro are subject to the requirements of Chapter 129, to the extent that Cianbro paints metal parts and products that are fabricated on-site. Under this regulation, Cianbro must comply with certain emission limits based on the type of coating applied. For completeness and to allow for flexibility at the facility the following limits shall apply:

Category	VOC lb/gal
Clear coating	4.3
Steel pail/drum interior	4.3
Air-dried coating	3.5
Extreme performance coating	3.5
All other coatings	3.0

To comply with the recordkeeping requirements Cianbro must maintain monthly records of the name and identification of each coating and the mass of VOC per volume of each coating, excluding water and exempt compounds, as applied, used in each paint booth and the total emissions from the facility. Should Cianbro exceed a monthly VOC emission rate of 1,666 lbs, then records shall be maintained on a daily basis.

E. Blast Booth

Cianbro utilizes a blast booth process to remove paint and rust from items before repainting. During the blast process, dust-laden air is exhausted at a rate of 20,000 cfm through a series of 56 filter dust collectors with a rated efficiency of 99.99% for particles 0.5 microns and larger. The collectors are equipped with an automatic filter blow-down function based on the measure of pressure drop across the filters to help ensure higher efficiency.

Pollutants associated with shot blasting are particulate matter (PM) and particulate matter 10 microns and smaller in size (PM₁₀). BPT for PM and PM₁₀ for the shot blast process shall be closed doors in the shot blast room during shot blast operations, proper operation and maintenance of the blower system including duct work, blowers and dust collection equipment and frequent changing of the 55 gallon drums that collect the paint and shot blast dust. BPT is also good housekeeping in the shot blast operations areas. Good housekeeping includes the cleaning and proper disposal of used or spilt material and proper storage of unused material and equipment.

BPT for visible emissions from the shot blast process and dust collection equipment shall not exceed an opacity of 10% on a 6 minute block average basis.

Cianbro shall establish a system of maintenance, inspection and repair for the blast booth particulate control equipment, which shall allow for periodic inspection of the blowers and baghouse. Cianbro shall document compliance by means of a maintenance, inspection and repair log, in which Cianbro shall record all routine maintenance as well as all inspection dates and findings and subsequent actions.

F. Wheelabrator Unit

Cianbro has applied to include a new automated sandblast unit called a Wheelabrator to the facility's equipment inventory. The new automated sandblast unit is an 8 wheel blast cleaning machine manufactured by Blast Cleaning Products LTD. The unit was manufactured in 1993 and was recently purchased by Cianbro from Fisher Engineering in Rockland, Maine. Cianbro plans to run approximately 75 tons of grit per year through the unit processing structural steel and steel plates. Emissions from the unit are controlled by a cartridge type dust collector (bag house) rated at 6000 cubic feet per minute (cfm) utilizing 16 cartridges. Dust from the Wheelabrator is pulled through ductwork, via a 42 inch fan driven by a 50 HP electric motor, into the dust collector and dust collects on the cloth filter cartridges. The filter cartridges are shaken by timed vibrators and the accumulated dust drops into 55 gallon drums via cones.

Pollutants associated with shot blasting are particulate matter (PM) and particulate matter 10 microns and smaller in size (PM₁₀). BPT for PM and PM₁₀ for the shot blast process shall be closed doors in the shot blast room during shot blast operations, proper operation and maintenance of the blower system including duct work, blowers and dust collection equipment and frequent changing of the 55-gallon drums that collect the paint and shot blast dust. BPT is also good housekeeping in the shot blast operations areas. Good housekeeping includes the cleaning and proper disposal of used or spilt material and proper storage of unused material and equipment.

BPT for visible emissions from the shot blast process and dust collection equipment shall not exceed an opacity of 10% on a 6 minute block average basis.

Cianbro shall establish a system of maintenance, inspection and repair for the Wheelabrator particulate control equipment, which shall allow for periodic inspection of the blowers and baghouse. Cianbro shall document compliance by means of a maintenance, inspection and repair log, in which Cianbro shall record all routine maintenance as well as all inspection dates and findings and subsequent actions.

G. Fugitive Emissions

Visible emissions from potential sources of fugitive particulate matter emissions, including material stockpiles and unpaved roadways, shall not exceed an opacity of 20%, except for no more than 5-minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20% in any 1-hour.

H. Annual Facility Emissions

Cianbro shall be restricted to the following annual emissions, based on a twelve-month rolling total:

- Potential emission calculations for Boiler #1 and Heaters #1 & #2 are based on year round operation of the units (8760 hours per year).

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

Pollutant	Tons/Year			
	Boiler #1	Heaters #1 & #2	Coating	Total
PM	0.9	2.0		2.9
PM ₁₀	0.9	2.0	-	2.9
SO ₂	2.6	0.3	-	2.9
NO _x	2.6	5.9	-	8.5
CO	0.2	0.8	-	1.0
VOC	0.02	0.2	49.7	49.9
Individual HAP	-	-	9.9	9.9
Total HAPs	-	-	24.9	24.9

❖ HAPs are identified by the EPA in regulations pursuant to Section 112(b) of the Clean Air Act (CAA).

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III. AMBIENT AIR QUALITY ANALYSIS

According to Maine Regulations Chapter 115, the level of air quality analyses required for a minor 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-794-71-C-R subject to the following conditions:

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 (Title 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.
- (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.

- (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.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (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.
- (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.
- (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.
- (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.
- (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:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. 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

- b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) 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
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (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:
- (i) 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
 - (ii) 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
 - (iii) 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.
- (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.
- (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.

- (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.

SPECIFIC CONDITIONS

- (16) Boiler #1

- A. Boiler #1 shall be limited to firing #2 fuel oil with a sulfur content no greater than 0.5% sulfur by weight. [MEDEP Chapter 115, BPT]
- B. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and supplier certification demonstrating the percent sulfur of the fuel. [MEDEP Chapter 115, BPT]
- C. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.2	0.2	0.6	0.6	0.04	0.005

[MEDEP Chapter 115, BPT]

- D. Visible emissions.

Visible emissions from the boiler stack shall not exceed 20% opacity on a six-minute block average except, for no more than 2 six minute block averages in a 3 hour period. [MEDEP Chapter 101]

- (17) Heaters #1 and #2

- A. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Heater #1	lb/MMBtu	0.05	-	-	-	-	-
	lb/hr	0.2	0.2	0.02	0.5	0.07	0.02
Heater #2	lb/MMBtu	0.05	-	-	-	-	-
	lb/hr	0.3	0.3	0.04	0.8	0.1	0.03

[MEDEP Chapter 115, BPT]

B. Visible emissions from the each heater stack shall not exceed 10% opacity on a six-minute block average except, for no more than 1 six-minute block average in a 3-hour period. [MEDEP Chapter 101]

(18) Paint Booths #1 and #2

A. Cianbro shall not exceed total annual emissions of 49.7 tons per year of VOCs and 9.9 tons per year of any single HAP or 24.9 tons per year of any combination of HAPs from the facility's coating processes based on a twelve-month rolling total. [MEDEP Chapter 115, BPT]

B. To demonstrate compliance with VOC and HAP emissions limits, Cianbro shall maintain a record of coating material use. The record shall include type of coatings used, volume of coatings used and VOC and HAP content of the coatings based on facility usage and MSDS. The record shall be maintained on a monthly as well as a twelve-month rolling total. [MEDEP Chapter 115, BPT]

C. If at any time Cianbro exceeds a monthly emission rate of 1,666 lb of VOC (based on a calendar month), coating records shall be maintained on a daily basis to include a total VOC emission rate as calculated using the applicable equation under Chapter 129 Section 7(A)(1)(d). [MEDEP Chapter 129]

D. Cianbro shall utilize only those coatings that comply with the following limits for the painting operations at the Cianbro facility that are subject to Chapter 129 of the Department's regulations, as determined using the calculation method set forth in Chapter 129, Section 5, of the Department's regulations:

Category	VOC lb/gal
Clear coating	4.3
Steel pail/drum interior	4.3
Air-dried coating	3.5
Extreme performance coating	3.5
All other coatings	3.0

[MEDEP Chapter 129]

E. Vapor-tight containers shall be utilized for the storage of new or used VOC and HAP containing materials. This shall include cloth or paper materials impregnated with solvents and/or coating material. [MEDEP Chapter 115, BPT]

F. Cianbro shall also make use of good housekeeping practices in the cleaning and proper disposal of used or spilt material and proper storage of unused coating and solvent material and equipment. [MEDEP Chapter 115, BPT]

- G. Paint booths #1 and #2 shall be operated so as to minimize emissions. Cianbro shall establish a system of maintenance, inspection and repair for the spray booth filter beds, which shall allow for periodic inspection of the filters. Cianbro shall document compliance by means of a maintenance, inspection and repair log, in which Cianbro shall record all routine maintenance as well as all inspection dates and findings and subsequent actions. [MEDEP Chapter 115, BPT]
- H. Visible emissions from the spray paint booths shall not exceed 10% opacity based on a six-minute block average. [MEDEP Chapter 101]
- (19) Shot Blasting Processes
- A. Cianbro shall keep all doors closed in the shot blast room during shot blast operations (Blast Booth and Wheelabrator). [MEDEP Chapter 115, BPT]
- B. Cianbro shall establish a system of maintenance, inspection and repair for the blast booth particulate control equipment, which shall allow for periodic inspection of the blowers and baghouse. Cianbro shall document compliance by means of a maintenance, inspection and repair log, in which Cianbro shall record all routine maintenance as well as all inspection dates and findings and subsequent actions. [MEDEP Chapter 115, BPT]
- C. Cianbro shall also make use of good housekeeping practices in the cleaning and proper disposal of used or spilt material and proper storage of unused shot blast material and equipment. [MEDEP Chapter 115, BPT]
- D. Visible emissions from the shot blast processes and shot blast dust collection equipment shall not exceed an opacity of 10% on a 6 minute block average basis, except for no more than 1 six minute block average in a 1 hour period. [MEDEP Chapter 101]

(20) Annual Emission Statement

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department by September 1, the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;
- Or

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- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

- (21) Visible emissions from potential sources of fugitive particulate matter emissions, including material stockpiles and unpaved roadways, shall not exceed an opacity of 20%, except for no more than 5-minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20% in any 1-hour. [MEDEP Chapter 101]
- (22) Visible emissions from any general process source, including shot blasting and shot blast handling shall not exceed an opacity of 10% on a 6 minute block average basis. [MEDEP Chapter 101]
- (23) Cianbro 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 MRSA §605-C).

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(24) Cianbro shall pay the annual air emission license fee within 30 days of October 31 of each year. Pursuant to 38 MRSA 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for the revocation of the license under 38 MRSA 341-D, Subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

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

Date of initial receipt of application: **May 31, 2005**

Date of application acceptance: **June 6, 2005**

Date filed with the Board of Environmental Protection: _____

This Order prepared by, Peter G. Carleton, Bureau of Air Quality