



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

Downeast Machine & Engineering, Inc.
Androscoggin County
Mechanic Falls, Maine
A-1101-71-A-N

Departmental
Findings of Fact and Order
Air Emission License

FINDINGS OF FACT

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 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Downeast Machine & Engineering, Inc. (DM&E) has applied for an Air Emission License permitting the operation of emission sources associated with their machine design, engineering, and construction facility.

The equipment addressed in this license is located at 26 Maple Street, Mechanic Falls, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Process Equipment

<u>Equipment</u>	<u>Pollution Control Equipment</u>
Spray Booth	Particulate Filters HVLP Spray Guns
Sandblasting	Tarps
Parts Washer	none

DM&E has other equipment, including a plasma cutter which vents inside the building and several small furnaces, which are considered insignificant activities.

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17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
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106 HOGAN ROAD, SUITE 6
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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
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C. Application Classification

DM&E is classified as an existing source that is applying for its first air emission license. The Department has determined the facility 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). With the hazardous air pollutant (HAP) limits associated with the paint booths and sandblasting operation the facility is licensed below the major source thresholds for HAPs and is considered an area source of HAP.

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 (as amended). Separate control requirement categories exist for new and existing equipment.

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 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Spray Booth

DM&E operates a spray booth for the coating/finishing of miscellaneous metal parts manufactured at the facility.

1. Control Equipment

The spray booth is equipped with filters for control of emissions of particulate matter (PM). Emissions of PM from the spray booth are considered unquantifiable. However, DM&E shall maintain the filters so as to minimize PM emissions such that visible emission from the spray booth do not exceed 10% opacity on a six (6) minute block average basis.

DM&E uses High Volume Low Pressure (HVLP) spray guns which have a higher transfer efficiency than conventional spray guns. Use of HVLP guns significantly reduces the amount of paint used and thereby reduces emissions of VOC and HAP from the painting process.

2. 06-096 CMR 129

DM&E is subject to 06-096 CMR 129, *Surface Coating Facilities*. DM&E is a facility which performs surface coating of miscellaneous metal parts and products.

To date, total emissions of VOC from DM&E have never exceeded 1,666 lb in any calendar month. DM&E has accepted a license restriction of 1,666 lb of VOC per month from all surface coating operations. Therefore, DM&E is exempted from the emission limitations in 06-096 CMR 129, Section 3. DM&E shall maintain monthly records on site which document the following:

- a. Name and identification of each coating used or stored on site.
- b. Mass of VOC per volume of each coating, excluding water and exempt compounds, as applied.
- c. Amount of each coating used each month.
- d. Total emissions of VOC and HAP from the coating facility on a monthly basis.

The VOC/HAP content of each coating may be derived from Safety Data Sheets provided by the supplier.

DM&E is subject to the work practices contained in Section 4 of 06-096 CMR 129. These requirements include:

- a. Vapor-tight containers shall be used for the storage of spent or fresh VOC containing compounds and for the storage or disposal of cloth or paper impregnated with VOC that are used for surface preparation, clean up, or coating removal.
- b. The use of VOC is prohibited for cleanup operations unless equipment is used to collect the cleaning compounds and to minimize their evaporation to the atmosphere.
- c. DM&E shall collect all organic solvent used to clean spray guns into a normally closed container. (See 06-096 CMR 129 for definition of "normally closed container.")
- d. DM&E shall pump or drain all organic solvent used for line cleaning into a normally closed container.
- e. DM&E shall not use compounds containing more than 8.0% by weight VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, and/or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth coating or other material used to cover the booth is being replaced, DM&E may not use more than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating.
- f. DM&E shall control emissions from washoff operations by using normally closed tanks for washoff and minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible.

3. BACT

BACT for the spray booth is determined to be the following:

- a. Use of fabric filters to limit emissions of PM.
- b. Use of HVLP paint guns to minimize emissions of VOC and HAP.
- c. A limit of 1,666 lb of VOC per month from all surface coating operations.
- d. Compliance with the work practices contained in 06-096 CMR 129.
- e. Visible emissions from the spray booth shall not exceed 10% on a six (6) minute block average basis.

C. Sandblasting Operations

DM&E occasionally does sandblasting to prepare parts for finishing. This operation is performed outside and has the potential for PM and HAP emissions. These emissions are considered unquantifiable. However, work practices such as limiting sandblasting to periods of calm winds or the use of a shroud can minimize emissions of these pollutants.

BACT for the sandblasting operation is determined to be the following:

- 1. Limiting sandblasting activity to periods of calm winds (5 mph or less) or through the use of a shroud which encloses the operation on at least 3 sides and top.
- 2. Visible emissions from sandblasting shall not exceed 20% opacity on a six (6) minute block average basis, except for one (1) six (6) minute block average in a 1-hour period.

D. Parts Washer

DM&E operates a parts washer subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended) and records shall be kept documenting compliance.

E. Annual Emissions

1. Total Annual Emissions

DM&E shall be restricted to the following annual emissions, based on a calendar year total. The tons per year limits were calculated based on limiting emissions from facility surface coating operations to 1,666 lb of VOC per month.

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC	Total HAP
Surface Coating	—	—	—	—	—	10.0	—
Facility Wide Limit	—	—	—	—	—	—	3.0
Total TPY	—	—	—	—	—	10.0	3.0

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through ‘Tailoring’ revisions made to EPA’s *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21 Prevention of Significant Deterioration of Air Quality rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO₂e).

Based on the facility’s fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, DM&E is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
PM ₁₀	25
SO ₂	50
NO _x	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

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, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1101-71-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 (38 M.R.S.A. §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 Title 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 emissions 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) Spray Booth

- A. DM&E shall install and maintain filters for control of PM from the spray booth. [06-096 CMR 115, BACT]
- B. DM&E shall only use HVLP spray guns in the spray booth. [06-096 CMR 115, BACT]

- C. Visible emissions from the spray booth shall not exceed 10% on a six (6) minute block average basis. [06-096 CMR 115, BACT]
- D. DM&E shall not exceed emissions of 1,666 lb of VOC per month from all surface coating operations. [06-096 CMR 115, BACT]
- E. DM&E shall maintain monthly records on site which document the following:
 - 1. Name and identification of each coating used or stored on site.
 - 2. Mass of VOC per volume of each coating, excluding water and exempt compounds, as applied.
 - 3. Amount of each coating used each month.
 - 4. Total emissions of VOC and HAP from the coating facility on a monthly basis. [06-096 CMR 129]
- F. Vapor-tight containers shall be used for the storage of spent or fresh VOC containing compounds and for the storage or disposal of cloth or paper impregnated with VOC that are used for surface preparation, clean up, or coating removal. [06-096 CMR 129]
- G. The use of VOC is prohibited for cleanup operations unless equipment is used to collect the cleaning compounds and to minimize their evaporation to the atmosphere. [06-096 CMR 129]
- H. DM&E shall collect all organic solvent used to clean spray guns into a normally closed container (as defined by 06-096 CMR 129). [06-096 CMR 129]
- I. DM&E shall pump or drain all organic solvent used for line cleaning into a normally closed container. [06-096 CMR 129]
- J. DM&E shall not use compounds containing more than 8.0% by weight VOC for cleaning spray booth components other than conveyors, continuous coaters and their enclosures, and/or metal filters, unless the spray booth is being refurbished. If the spray booth is being refurbished, that is, the spray booth coating or other material used to cover the booth is being replaced, DM&E may not use more than 1.0 gallon of organic solvent to prepare the booth prior to applying the booth coating. [06-096 CMR 129]
- K. DM&E shall control emissions from washoff operations by using normally closed tanks for washoff and minimizing dripping by tilting or rotating the part to drain as much organic solvent as possible. [06-096 CMR 129]

(17) **Sandblasting Operations**

- A. DM&E shall limit sandblasting activity to periods of calm winds (5 mph or less) or shall perform sandblasting within a shroud which encloses the operation on at least 3 sides and top. [06-096 CMR 115, BACT]
- B. Visible emissions from sandblasting shall not exceed 20% opacity on a six (6) minute block average basis, except for one (1) six (6) minute block average in a 1-hour period. [06-096 CMR 101]

(18) **Parts Washer**

Parts washers at DM&E are subject to *Solvent Cleaners*, 06-096 CMR 130 (as amended).

- A. DM&E 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 [06-096 CMR 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 cold cleaning machines that are applicable sources under Chapter 130.
 - 1. DM&E 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 used to clean spills shall then 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]
- (19) DM&E 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 14 DAY OF October, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Cone 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 of this license, 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: 7/17/14

Date of application acceptance: 7/30/14

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.

