



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI  
GOVERNOR

DAVID P. LITTELL  
COMMISSIONER

Douglas Dynamics, LLC.  
d/b/a Fisher Engineering )  
Knox County )  
Rockland, Maine )  
A-727-71-L-A )

**Departmental  
Finding of Fact and Order  
Air Emission License  
Amendment**

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

Douglas Dynamics, LLC. d/b/a Fisher Engineering (Fisher) of Rockland, Maine was issued Air Emission License A-727-71-I-R/A on May 4, 2009, permitting the operation of emission sources associated with their steel fabrication and coating facility. The company is a manufacturer of steel snowplows and associated attachments for 4x4 vehicles as well as state and town owned vehicles. The requested amendment involves the addition of new cure ovens and associated equipment.

B. Emission Equipment

The following fuel burning equipment is addressed in this minor modification air emissions license:

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate (gal/hr)	Fuel Type
Cure Oven	3.2	31.5	propane
Cure Oven #2	1.0	9.2	propane

\* A water heater rated at 0.6 MMBtu/hr will be installed in the ice products area of the facility. This unit is considered insignificant per 06-096 CMR 115 Appendix B.

Also, Fisher has requested to increase its licensed allowable propane limit from 435,000 to 626,000 gallons per rolling 12 month period.

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### C. Application Classification

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. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Sig. Level
PM	1.7	2.4	0.7	100
PM <sub>10</sub>	1.7	2.4	0.7	100
SO <sub>2</sub>	0.2	0.4	0.2	100
NO <sub>x</sub>	4.1	4.5	0.4	100
CO	0.7	1.0	0.3	100
VOC	5.0	5.0	0	50

This modification is determined to be a minor modification and has been processed as such. A Best Available Control Technology (BACT) analysis is required for the installation of the new equipment.

## II. REVISION DESCRIPTION

### New Equipment

Fisher is planning to expand its current facility and install pieces of equipment that will need to be included in its air license. The new and updated equipment is listed below with a brief explanation of the intended uses of the equipment.

- The facility plans to install an additional 3.2 MMBtus/hr heating unit into the newly expanded existing final cure oven. After powder coating is sprayed onto the plows or other metal parts using high-pressure air guns, the coating is cured using propane-fired powder coating cure ovens.
- In the Ice Products Area, Fisher plans to install a 1.0 MMBtu/hr cure oven with a maximum propane use of 9.2 gallons per hour.

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Best Available Control Technology (BACT)

Best Practical Treatment (BPT) for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

*Cure Ovens*

Fisher currently has one cure oven with a 3.2 MMBtus/hr heating unit that is used to cure the coatings after the powder coating is sprayed on. Fisher plans to install a new 3.2 MMBtus/hr heating unit into the newly expanded cure oven. Fisher also plans on installing a 1.0 MMBtus/hr heating unit in a new cure oven located within the ice products area. The resulting cure ovens will have a capacity of 6.4 MMBtus/hr and 1.0 MMBtus/hr, respectively, and will have short-term emission limits along with being included in the overall new facility-wide propane fuel use limit of 625,000 gal/yr. The current fuel use limit is 435,000 gallons per year but because of the recent expansion at the facility, Fisher has requested an increase of their propane limit.

The regulated pollutants emitted from the cure ovens are particulate matter (PM), particulate matter with a diameter smaller than ten microns (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC). Based on the relatively small size of the cure ovens and the quantity of pollutants that could potentially be emitted, it is determined by the Bureau of Air Quality that any add on pollution control device would be economically unjustified. BACT for these units will be the use of propane and meeting the facility-wide fuel use limit of 625,000 gallons of propane per year based on a 12 month rolling total.

a. *PM and PM<sub>10</sub>*

Fisher has proposed combustion of propane and good combustion practices as BACT for particulate matter. 06-096 CMR 103 of the Department's regulations is applicable to Fisher; however the BACT emission limit of 0.08 lb/MMBtu is more stringent than this regulation. Compliance with the BACT limit is compliance with 06-096 CMR 103.

b. *SO<sub>2</sub>*

Fisher has proposed combustion of propane, which inherently has a low sulfur fuel content associated with it, as BACT. Fisher shall keep fuel records for compliance with applicable fuel use limits.

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c. *NOx*

Fisher has proposed combustion of propane and good combustion practices as BACT for NOx.

d. *CO*

Fisher has proposed combustion of propane and good combustion practices as BACT for CO.

e. *VOC*

Fisher has proposed combustion of propane and good combustion practices as BACT for VOC.

f. *Opacity*

06-096 CMR 101 of the Department's regulations (Visible Emissions) is applicable to Fisher. Visible Emissions shall not exceed 10% opacity on a six minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

**Periodic Monitoring**

Recordkeeping of propane use in the cure ovens on a monthly basis to be included in the facility-wide total fuel use calculations.

**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, or increment standards either alone or in conjunction with emissions from other sources.

Therefore the Department grants this minor revision A-727-71-L-A, subject to the conditions found in air emission license A-727-71-I-R/A, subsequent amendments, and in addition to the following conditions:

**The following shall replace Condition (23) of Air Emission License A-727-71-I-R/A:**

(23) Facility Fuel Cap:

Fisher shall not exceed 625,000 gallons per year, based on a 12-month rolling total, of propane fuel to be used in the make-up air heaters, the preheat oven, wash system, and cure ovens. Fisher shall maintain monthly fuel use records to document compliance with this limit.

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The following are new Conditions to Air Emission License A-727-71-I-R/A:

- (1) Fisher is licensed to install one new 3.2 MMBtus/hr heating unit in the existing cure oven and one new 1.0 MMBtu/hr cure oven. Emissions from the cure ovens shall not exceed the following:

Pollutant	lb/MMBtu	3.2 MMBtu/hr Cure Oven (lb/hr)	1.0 MMBtu/hr Cure Oven (lb/hr)
PM	0.08	0.3	0.1
PM <sub>10</sub>	-	0.3	0.1
SO <sub>2</sub>	-	0.1	0.1
NO <sub>x</sub>	-	0.5	0.3
CO	-	0.1	0.1
VOC	-	0.1	0.1

[06-096 CMR 115, BACT]

- (2) Visible emissions from each cure oven shall not exceed an opacity of 10% 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.

DONE AND DATED IN AUGUSTA, MAINE THIS *16th* DAY OF *July*, 2010.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *James P. Brooks*  
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DAVID P. LITVELL, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-727-71-I-R/A

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 28, 2010

Date of application acceptance: June 28, 2010

Date filed with the Board of Environmental Protection:

This Order prepared by Edwin Cousins, Bureau of Air Quality.



