



DEPARTMENT ORDER

**Pleasant River Lumber Company
Piscataquis County
Dover-Foxcroft, Maine
A-704-71-I-A (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

FINDINGS OF FACT

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Pleasant River Lumber Company (Pleasant River) was issued Air Emission License A-704-71-H-R/A on March 31, 2014, for the operation of emission sources associated with their Dover-Foxcroft, Maine lumber mill.

Pleasant River is currently licensed to combust 14,500 total tons of biomass per year in Boiler #3A containing no more than 10% kiln-dried (approximately 12% moisture by weight) wood chips with the remainder being green saw dust (approximately 50% moisture by weight). The facility has requested an amendment to increase the fuel limit on Boiler #3A to 18,500 tons of biomass per year containing no more than 35% kiln-dried wood chips. At 35% kiln dried wood chips the fuel will have an average moisture content of 36.7% by weight.

The equipment addressed in this license amendment is located at 42 Milo Road, Dover-Foxcroft, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license amendment:

Boiler

<u>Equipment</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Date of Manuf.</u>	<u>Date of Install.</u>	<u>Stack #</u>
Boiler #3A	*24.62	2.15 ton/hr	Wood	1992	2006	#3A

*Based on an average moisture content for wood of 36.7%, by weight.

C. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

The modification of a minor source is considered a major or minor modification based on whether or not expected emission increases exceed the "Significant Emission" levels as defined in the Department's *Definitions Regulation*, 06-096 Code of Maine Rules (C.M.R.) ch. 100. The emission increases are determined by subtracting the current licensed annual emissions preceding the modification from the maximum future licensed annual emissions, as follows:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Significant Emission Levels</u>
PM	16.9	27.2	10.3	100
PM ₁₀	15.5	24.7	9.2	100
SO ₂	2.7	3.5	0.8	100
NO _x	20.0	35.9	15.9	100
CO	42.6	63.9	21.3	100
VOC	48.8	49.4	0.6	50

This modification is determined to be a minor modification 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 *Definitions Regulation*, 06-096 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment.

BPT for existing emissions 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 #3A

Pleasant River operates Boiler #3A to provide steam for the drying kilns and sawmill. The boiler is rated at 24.62 MMBtu/hr and fires wood. The boiler was installed in 2006.

Exhaust from Boiler #3A is controlled by a centrifugal separator to reduce particulate matter (PM) emissions. Boiler #3A exhausts through its own stack, a 50 foot above ground level stack designated Stack #3A.

Boiler #3A was previously licensed to burn 14,500 tons/yr of biomass consisting of 10% kiln-dried wood chips (approximately 12% moisture) and 90% green saw dust (approximately 50% moisture). Changing market conditions have led to Pleasant River increasing sales of green saw dust and burning more kiln-dried wood chips. Pleasant River also has larger quantities of biomass available for use in Boiler #3A. The facility has requested their annual fuel limit for Boiler #3A be raised to 18,500 tons/yr containing no more than 35% kiln-dried wood chips for an average moisture content of 36.7% by weight.

1. BPT Findings

The BPT emission limits for the boiler were based on the following emission factors which are weighted to reflect 65% wet/35% dry fuel and represent the worst-case emission scenario:

Wood

PM	–	0.25 lb/MMBtu based on AP-42 Table 1.6-1 dated 9/03
PM ₁₀	–	0.22 lb/MMBtu based on AP-42 Table 1.6-1 dated 9/03
SO ₂	–	0.025 lb/MMBtu based on AP-42 Table 1.6-2 dated 9/03
NO _x	–	0.31 lb/MMBtu based on AP-42 Table 1.6-2 dated 9/03
CO	–	0.60 lb/MMBtu based on AP-42 Table 1.6-2 dated 9/03
VOC	–	0.017 lb/MMBtu based on AP-42 Table 1.6-3 dated 9/03
Visible Emissions	–	06-096 C.M.R. ch. 115, BPT

The BPT emission limits for the boiler are the following:

<u>Unit</u>	<u>PM</u> <u>(lb/hr)</u>	<u>PM₁₀</u> <u>(lb/hr)</u>	<u>SO₂</u> <u>(lb/hr)</u>	<u>NO_x</u> <u>(lb/hr)</u>	<u>CO</u> <u>(lb/hr)</u>	<u>VOC</u> <u>(lb/hr)</u>
Boiler #3A	6.11	5.53	0.62	7.74	14.77	0.42

Visible emissions from the boiler shall not exceed 20% opacity on a six-minute block average basis, except for no more than two (2) six-minute block averages in a three hour period during which time visible emissions shall not exceed 50% opacity.

Pleasant River shall be limited to 18,500 tons/year of wood fuel combusted in Boiler #3A, containing no more than 35% kiln-dried wood for a total average moisture content of 36.7% by weight.

C. Annual Emissions

1. Total Annual Emissions

Pleasant River shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on a fuel use limit for Boiler #3A of the equivalent of 18,500 tons/yr based on an average moisture content of 36.7% by weight, and previously licensed emissions for Boiler #3 and the drying kilns:

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boiler #3A	26.3	23.8	2.6	33.3	63.5	1.8
Boiler #3	0.9	0.9	0.9	2.6	0.4	0.1
Drying Kilns	--	--	--	--	--	47.5
Total TPY	27.2	24.7	3.5	35.9	63.9	49.4

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source is determined by the Department on a case-by case basis. In accordance with 06-096 C.M.R. ch. 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:

Pollutant	Tons/Year
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 Amendment A-704-71-I-A subject to the conditions found in Air Emission License A-704-71-H-R/A, and the following conditions.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

The following shall replace Condition (16) A-C of Air Emission License A-704-71-H-R/A:

(16) Boiler #3A

A. Fuel

1. Total fuel use for Boiler #3A shall not exceed the equivalent of 18,500 ton/yr of wood fuel containing no more than 35% kiln-dried wood, for a total average moisture content of no less than 36.7% by weight.
[06-096 C.M.R. ch. 115, BPT]
2. Compliance shall be demonstrated by recordkeeping documenting fuel use both on a monthly and 12-month rolling total basis. Documentation shall include the type of fuel used and the moisture content of the fuel.
[06-096 C.M.R. ch. 115, BPT]

B. Emissions shall not exceed the following [06-096 C.M.R. ch. 115, BPT]:

Emission Unit	PM (lb/hr)	PM₁₀ (lb/hr)	SO₂ (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3A	6.11	5.53	0.62	7.74	14.77	0.42

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C. Visible emissions from the boiler shall not exceed 20% opacity on a six-minute block average basis, except for no more than two (2) six-minute block averages in a three hour period during which time visible emissions shall not exceed 50% opacity.
[06-096 C.M.R. ch. 115, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS 27 DAY OF October, 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Paul Allen Robert Cove for
PAUL MERCER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-704-71-H-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 22, 2017

Date of application acceptance: June 1, 2017

Date filed with the Board of Environmental Protection:

This Order prepared by Benjamin Goundie, Bureau of Air Quality.

