



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

**Corinth Pellets, LLC
Penobscot County
Corinth, Maine
A-956-71-E-A (SM)**

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

FINDINGS OF FACT

After review of the air emissions 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 Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

Air emission license A-956-71-C-R was issued to Corinth Wood Pellets, LLC on September 18, 2013 permitting the operation of emission sources associated with their wood pellet manufacturing facility. The license was subsequently transferred to Corinth Pellets, LLC (Corinth Pellets) on February 5, 2014.

Corinth Pellets has requested an amendment to their license in order to increase the annual emission limit for particulate matter (PM) from 25 to 46 tons per year.

The equipment addressed in this license is located at 74 Hob Road, Corinth, Maine.

B. Amendment Description

Corinth Pellets operates two wood pellet processing lines, each consisting of a triple-pass rotary dryer capable of processing 11.1 oven-dried tons (ODT) per hour of wood chips, shavings, and sawdust. (ODT is based on a moisture content of 0% by weight.) Each dryer has a direct wood-fired burner with a maximum heat input capacity of 20 MMBtu/hr.

Annual PM emissions are calculated based on the amount and species of the wood processed according to the following equation.

$$\begin{aligned} \text{Tons of PM} = & [(ODT \text{ of Pine Processed}) * ((1.8 \text{ lbs of PM})/ODT)] \\ & + [(ODT \text{ of Other Softwood Processed}) * ((2.3 \text{ lbs of PM})/ODT)] \\ & + [(ODT \text{ of Hardwood Processed}) * ((1.1 \text{ lbs of PM})/ODT)] \end{aligned}$$

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1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
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The amount of ODT processed means the total amount of the particular species which is run through the dryers converted to 0% moisture. It includes both wood that is sent to the pelletizers and wood that is dried and later used to fuel the burners.

Actual (wet) tonnage of wood is converted to ODT using the following formula where M% is the moisture content of the wet wood:

$$ODT = (\text{wet tons}) \times \left(\frac{100 - M\%}{100} \right)$$

Currently, Corinth Pellets is limited to an annual 12-month rolling total of 25 tons of PM. They have requested an increase in this limit to 46 tons based on a 12-month rolling total.

C. Application Classification

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 CMR 100 (as amended). 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	25.0	46.0	+21.0	100
PM ₁₀	25.0	46.0	+21.0	100
SO ₂	0.6	0.6	0	100
NO _x	6.5	6.5	0	100
CO	75.5	75.5	0	100
VOC	48.0	48.0	0	50

This modification is determined to be a minor modification and has been processed as such.

D. Annual Emissions

1. Total Annual Emissions

Corinth Pellets shall be restricted to the following annual emissions, based on a 12-month rolling total.

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	HAPS (Single/ Total)
Rotary Dryers #1 & #2 and Burners #1 & #2	46.0	46.0	0.6	6.5	75.5	48.0	9.9 / 24.9
Total TPY	46.0	46.0	0.6	6.5	75.5	48.0	9.9 / 24.9

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, Corinth Pellets 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.

II. 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 proposed licensed annual emissions for PM₁₀ are above the emission level contained in the table above. Corinth Pellets intends to submit a subsequent license modification which will make significant changes to the facility's emissions equipment. Corinth Pellets has agreed to submit a modeling analysis that demonstrates compliance with ambient air quality standards, either for the current equipment configuration or for proposed changes, within 12 months of the date of this amendment.

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-956-71-E-A subject to the conditions found in Air Emission License A-956-71-C-R, in transfer document A-956-71-D-T, and in 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.

The following shall replace Condition (16)(A) of Air Emission License A-956-71-C-R:

(16) Rotary Dryers #1 & #2 and Burners #1 & #2

- A. Rotary Dryers #1 & #2 shall not exceed combined 12-month rolling total processing rates that cause either one of the following two equations to be incorrect. These processing rates shall include all the wood that passes through the rotary dryer, including the fraction that is returned to Burners #1 & #2. The amount of wood processed as well as the type in terms of pine, other softwood, and hardwood shall be determined and recorded on a monthly and 12-month rolling total basis. The 12-

month rolling total processing rates shall be determined based on monthly raw material consumption determinations calculated using wood delivery receipts, recorded moisture contents, and weekly raw material inventory records.
[06-096 CMR 115, BPT]

VOC Equation

$$\begin{aligned} & [(ODT \text{ of Pine Processed}) * ((4.4 \text{ lbs of VOC})/ODT)] \\ & + [(ODT \text{ of Other Softwood Processed}) * ((2.1 \text{ lbs of VOC})/ODT)] \\ & + [(ODT \text{ of Hardwood Processed}) * ((1.0 \text{ lbs of VOC})/ODT)] \\ & \leq 48.0 \text{ tons per year of VOC on a 12 month rolling total basis} \end{aligned}$$

PM Equation

$$\begin{aligned} & [(ODT \text{ of Pine Processed}) * ((1.8 \text{ lbs of PM})/ODT)] \\ & + [(ODT \text{ of Other Softwood Processed}) * ((2.3 \text{ lbs of PM})/ODT)] \\ & + [(ODT \text{ of Hardwood Processed}) * ((1.1 \text{ lbs of PM})/ODT)] \\ & \leq 46.0 \text{ tons per year of PM on a 12 month rolling total basis} \end{aligned}$$

The following are NEW Conditions:

- (27) Within 12 months of the signature date of this amendment, Corinth Pellets shall submit to the Department an analysis which demonstrates compliance with ambient air quality standards for either their current or future proposed configuration of emissions equipment. [06-096 CMR 115]

DONE AND DATED IN AUGUSTA, MAINE THIS 7 DAY OF August, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Maia Allen Robert Case for
PATRICIA W. AHO, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-956-71-C-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 7/16/14
Date of application acceptance: 7/16/14

Date filed with the Board of Environmental Protection:

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

