Northeast Pellets, LLC	)	**Departmental**
Aroostook County	)	**Findings of Fact and Order**
Ashland, Maine	)	**Air Emission License**
A-929-71-B-R/A		

After review of the air emissions license renewal 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. Northeast Pellets, LLC has applied to renew the Air Emission License permitting the operation of emission sources associated with the operation of their wood pelletizing facility.

2. The Northeast Pellets, LLC facility is located at 53 Reality Road, Ashland, Maine.

B. Emission Equipment

The following equipment is addressed in this Air Emission License:

Fuel Burning Equipment

Equipment	Maximum Capacity	Maximum Firing Rate	Fuel Type	Stack #
Rotary Dryer	*12.0 MMBtu/hr	**0.8 ton/hr	Sawdust	#1

* In the facility's initial Air Emission License (A-929-71-A-N), the Rotary Dryer's heat input capacity was given as 25.0 MMBtu/hr, this capacity has been corrected in this Air Emission License.

** Fuel capacities, firing rates and emissions calculations based on a moisture value of 12%.

Process Equipment

Equipment	Stack #
Screen	Fugitive
Fuel Conveying System	Fugitive

C. Application Classification

The application for Northeast Pellets, LLC of Ashland, Maine does not include the licensing of increased emissions or the installation of new or modified equipment. However, this renewal shall incorporate changes correcting the heat input capacity of the facility's rotary dryer as well as corresponding corrections to the facility's hourly and annual emissions calculations. Therefore, the license is considered to be a renewal and amendment of current licensed emission units only and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended).

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

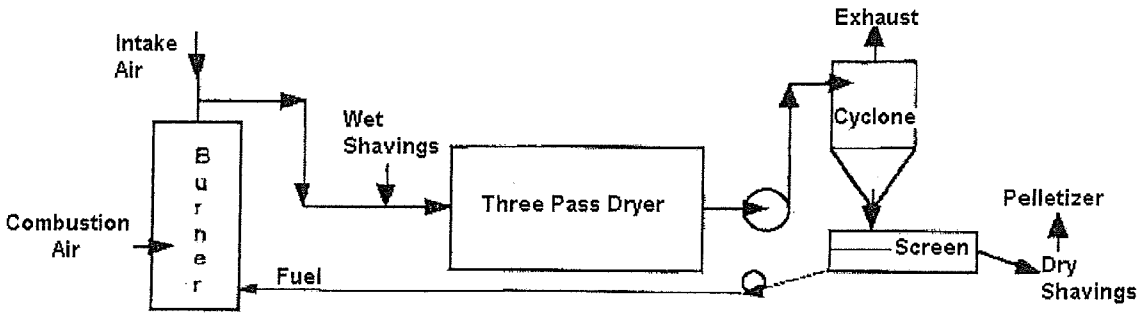
In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

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 emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Process Description

Northeast Pellets produces wood pellets to be used as fuel for pellet-fired wood stoves. The facility operates a triple-pass biomass (sawdust and shavings) fired rotary dryer with a maximum heat input of 12.0 MMBtu/hr.



Wet sawdust and shavings are received at the facility and introduced into the triple-pass dryer with the hot combustion air. The dryer reduces the moisture content of the wood to 12% or lower. The exhaust from the dryer enters a cyclone, which separates the dried shavings from the undersized particles. The shavings are pelletized and sold as wood fuel. The dried sawdust-like wood particles are conveyed back to the burner as fuel, where they are fired in semi-suspension to enhance complete combustion.

C. Rotary Dryer

Northeast Pellets, LLC has, on site, a direct contact, triple-pass biomass (sawdust) fired rotary dryer with a maximum heat input of 12.0 MMBtu/hr, which is used to dry wood shavings to be pelletized for fuel. This unit is not currently operated, however, Northeast Pellets, LLC believes that in the future, this unit will be equipped to be operational. Northeast Pellets, LLC shall notify the regional Department office before fitting the dryer to be operational.

The dryer's burner operates with automatic combustion controls and maintains a combustion temperature of 1400°F. Due to the combination of high combustion temperatures and the use of dry wood residues as fuel, the burner will produce very low amounts of sulfur dioxide (SO_2), carbon monoxide (CO) and volatile organic compounds (VOC). Combustion temperatures are not so high as to cause the creation of thermal NOx (generally requiring temperatures of 2000°F or higher.) Ash that is generated from combustion is carried along with the hot flue gases into the dryer where the gases and ash come into direct contact with the wet shavings being dried. This removes much of the ash from the exhaust stream. The burner gases exhaust to the atmosphere through a cyclone which removes more of the fine particles from the exhaust stream.

The dryer manufacturer indicates that at high temperatures (temperatures in excess of 850°F), hot gases may cause the resin in the wood shavings to "cook out" creating a blue, hazy visible emission. To preclude the emission of this blue haze, upon start-up of the unit, Northeast Pellets, LLC shall establish an optimum inlet air temperature range that the dryer shall be operated so that visible emissions are maintained within the limits established by this permit. In order to demonstrate compliance with this inlet air temperature range, Northeast Pellets, LLC shall monitor and record the inlet air temperature and maintain records of inlet temperatures for six years.

A summary of the BACT analysis for the Rotary Dryer is the following:

a. SO_2, NOx, CO and VOC lb/MMBtu emission limits based on AP-42 data dated 7/01 for wood fired units.
b. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (as amended) regulates PM emission limits. PM_{10} limits are based on PM limits.
c. *Visible Emissions Regulation*, 06-096 CMR 101 (as amended) regulates visible emission limits. Visible emissions from the Rotary Dryer cyclone (Stack #1) shall not exceed 20% opacity on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period.

D. Process Source Fugitive Emissions

As established by 06-096 CMR 101, visible emissions from a fugitive emission sources (including the screening operation, the fuel conveying system, fuel stockpiles and roadways) shall not exceed 20 percent opacity, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

E. Annual Emission Restrictions

- Emissions calculations for wood firing in the Rotary Dryer are based on 8760 hours per year of operations while firing wood.

- The initial Air Emission License for Northeast Pellets, LLC contained a proposed heat input capacity for the facility's rotary dryer, this value has been corrected in this permit as well as the hourly and annual emissions calculations including the emissions found in the following table.

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

	PM	PM_{10}	SO_2	NO_x	CO	VOC
Rotary Dryer	15.8	15.8	1.31	11.6	31.5	0.7

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 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. Based on the total facility emissions, Northeast Pellets, LLC is below the emissions level required for modeling and monitoring.

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-929-71-B-R/A 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 06-096 CMR 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. [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 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. [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) Rotary Dryer

A. The Rotary Dryer shall not exceed a maximum heat input of 12.0 MMBtu/hr. [06-096 CMR 115, BPT]

B. Emissions from the Rotary Dryer shall not exceed the following:

Equipment		PM	PM_{10}	SO_2	NO_x	CO	VOC
Rotary Dryer	lb/MMBtu	0.3	n/a	n/a	n/a	n/a	n/a
	lb/hr	3.6	3.6	0.3	2.6	7.2	0.2

[06-096 CMR 103, 06-096 CMR 115, BPT]

C. Prior to being fitted to be operational, Northeast Pellets, LLC shall notify the regional Department office. [06-096 CMR 115, BPT]

D. When the dryer is made operational, Northeast Pellets, LLC shall establish an inlet air temperature range that the dryer shall be operated so that visible emissions are maintained within the limits established by this permit and obtain approval in writing of this temperature range from the Department. [06-096 CMR 115, BPT]

E. In order to demonstrate compliance with the inlet air temperature range requirements, Northeast Pellets, LLC shall monitor and record the inlet air temperature with records being maintained for six years. [06-096 CMR 115, BPT]

F. Visible emissions from the Rotary Dryer cyclone (Stack #1) shall not exceed 20% opacity on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period. [06-096 CMR 101]

(17) Process Source Fugitive Emissions

Visible emissions from a fugitive emission source (including the screening operation, the fuel conveying system, fuel stockpiles and roadways) shall not exceed 20 percent opacity, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [06-096 CMR 101]

(18) *Emissions Statements*, 06-096 CMR 137 Reporting

Annual Emission Statement

In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), the licensee shall annually report to the Department 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

2) A written emission statement containing the information required in 06-096 CMR 137.

The emission statement must be submitted as specified by the date in 06-096 CMR 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

(19) Northeast Pellets, LLC 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).

DONE AND DATED IN AUGUSTA, MAINE THIS 14th DAY OF February 2012.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie Loyzim for
PATRICIA W. AHO, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

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

Date of initial receipt of application: **January 20, 2011**
Date of application acceptance: **January 26, 2011**

Date filed with the Board of Environmental Protection:

Filed
FEB 17 2012
State of Maine
Board of Environmental Protection

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