

Andover Wood Products, Inc.)	Departmental
Oxford County)	Findings of Fact and Order
Andover, Maine)	Air Emission License
A-317-71-I-R (SM))	

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

Andover Wood Products, Inc. (Andover Wood), a division of Ethan Allen has submitted an air emission license renewal application for the operation of emission sources associated with the lumber and furniture panel manufacturing facility located in Andover, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Boilers

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Fuel Type, %Sulfur</u>	<u>Max. Firing Rate</u>	<u>Post Combustion Control</u>	<u>Stack #</u>
Boiler 2	14.6	#2 oil, 0.3% S	97 gal/hr	None	2
Boiler 3	12.0	Wood	0.65 tons/hr	Separator	1

Note: There is no Boiler 1 on site – it was previously removed.

Diesel Generator

<u>Power Output</u>	<u>Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Max. Input Capacity</u>
170 kW	10 gal/hr	Diesel, 0.05% S	1.4 MMBtu/hr

C. Application Classification

The application for Andover Wood does not include the licensing of additional increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only and has been processed through Chapter 115 of the Department’s regulations. With the fuel limit on boiler 2 and the operating hours restriction on the emergency generator, the facility is licensed below the major source thresholds and is considered a synthetic minor.

The license does include various emission clarifications based on updated AP-42 emission values. The facility emissions using the new emission factors for SO₂, CO, and VOC have decreased and NO_x has increased as compared to the previous license.

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 Chapter 100 of the Department’s regulations. 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 emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

Process Description

Andover Wood manufactures lumber and furniture panels. The facility includes the sawmills, dry kilns, process area, fuel storage, and two boilers. Bark, grit, and high moisture material from the sawmill operations is sold rather than burned in the boilers. Boiler fuel consists of oil for one boiler and dried wood waste from the sawing and planing operations for the main boiler. Boiler 2 (oil) and 3 (wood) exhaust through separate stacks.

The logs, mostly maple, enter the sawmill and are rough cut into boards. Following the sawmill, the boards are brought to one of the 8 kilns where drying occurs. From the kilns, the boards go to the process area. The boards are cut to

size, planed, and glued together per specific order requirements and are shipped to another facility for assembly.

The majority of wood waste from the sawmill (high moisture) is hogged and piled for sale.

The wood rejects from the process area are hogged and used as boiler fuel.

The fines from a large portion of the process area are collected, sent through a baghouse, and sold. This collection system consists of pulling the fine-laden air from the individual pieces of equipment, piping it to the baghouse unit located outside of the process building, exhausting the clean air, and then piping the fines to a storage building where the fines are then sold.

The wood waste for the boiler comes from a number of different areas. On the boiler house, there are 5 cyclones that are part of the fuel transport system. One cyclone is for the dried hogged wood waste coming from the process area. Two cyclones are for the wood waste from those saws in the process area that aren't collected by the baghouse system. One cyclone is for wood from the sawmill that is occasionally mixed in with the dry wood. The fifth cyclone is for feeding the boiler.

B. Boiler 2

Boiler 2 is a Cleaver Brooks fire tube package boiler rated at 14.6 MMBtu/hr. The boiler fires #2 fuel oil and exhausts through it's own stack. Boiler 2 shall be limited to 300,000 gallons/year of fuel oil, based on a 12 month rolling total. Monthly fuel use and the 12 month rolling total fuel use records shall be maintained.

Andover Wood shall meet the following BPT emission limits for Boiler 2:

- PM/PM₁₀ – 0.2 lb/MMBtu – based on Chapter 103
- SO₂ – Use of #2 fuel with 0.3% sulfur
- NO_x – 0.5 lb/MMBtu – based on previous license
- CO - good combustion, 0.5 lb/hr – based on the newest AP-42 factor dated 9/98 (5 lb/1000 gal)
- VOC - good combustion, 0.02 lb/hr – based on the newest AP-42 factor dated 9/98 (0.2 lb/1000 gal)
- Opacity - Visible emissions from Boiler 2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a 3-hour period, based on Chapter 101 of the Department's regulations.

Andover Wood Products, Inc.)
Oxford County)
Andover, Maine)
A-317-71-I-R (SM) 4

**Departmental
Findings of Fact and Order
Air Emission License**

C. Boiler 3

Boiler 3 is a 1924 Dillon boiler rated at 125 psig and 12 MMBtu/hr. In 1992 when the boiler was installed at Andover Wood, a new Dutch oven, underfire air, overfire air and fuel feed system were installed on the boiler. The majority of wood burned in the boiler is kiln dried sawdust and shavings with a mixture of green sawdust for a moisture content of approximately 10% (8100 Btu/lb).

Boiler 3 shall meet the following BPT emission limits:

PM/PM₁₀ – 0.3 lb/MMBtu – based on Chapter 103

SO₂ – use of wood, 0.3 lb/hr - based on the newest AP-42 emission factor dated 9/03 (0.025 lb/MMBtu)

NO_x – 0.49 lb/MMBtu – based on the newest AP-42 emission factor for dry wood dated 9/03 (0.49 lb/MMBtu, less than 20% moisture)

CO - good combustion, 7.2 lb/hr – based on the newest AP-42 emission factor dated 9/03 (0.6 lb/MMBtu)

VOC - good combustion, 0.2 lb/hr – based on the newest AP-42 emission factor dated 9/03 (0.017 lb/MMBtu)

Opacity - Visible emissions from Boiler 3 shall not exceed 30% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period, based on Chapter 101 of the Department's regulations.

Boiler 3 exhausts through a Breslove Separator and then up the 48 foot stack (the stack height is measured from the top of the separator, which is elevated). The separator is a regenerative fly ash separator that works on the principle of cyclonic separation.

D. Emergency Generator

The emergency diesel generator is rated at 170 KW (approximately 1.4 MMBtu/hr), burns diesel fuel, and is used for emergency back-up generation. The generator fires 0.05% sulfur oil and is limited to 500 hours/year based on a 12 month rolling total.

“Emergency” is defined in Chapter 100 of the Department's regulations and throughout this document as: “... any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.”

Andover Wood Products, Inc.)
Oxford County)
Andover, Maine)
A-317-71-I-R (SM) 5

**Departmental
Findings of Fact and Order
Air Emission License**

The emergency generator shall meet the following BPT emission limits:

PM/PM₁₀ – 0.43 lb/hr – based on the AP-42 emission factor dated 10/96 (0.31 lb/MMBtu)

SO₂ – use of 0.05% sulfur fuel

NO_x – 6.2 lb/hr – based on the AP-42 emission factor dated 10/96 (4.41 lb/MMBtu)

CO - good combustion, 1.3 lb/hr – based on the AP-42 emission factor dated 10/96 (0.95 lb/MMBtu)

VOC - good combustion, 0.5 lb/hr – based on the AP-42 emission factor dated 10/96 (0.36 lb/MMBtu)

Opacity - Visible emissions from the emergency generator shall not exceed 30% opacity on a 6 minute block average basis, except for no more than 2 six minute block averages in a 3-hour period, based on Chapter 101 of the Department's regulations.

E. Material Handling and Storage

The material transport system for dried sawdust and shavings consists of enclosed conveyor systems, cyclones, and a baghouse system. Routine maintenance at the facility includes inspections so that any leakage is quickly repaired and spilled sawdust is collected to prevent wind entrainment.

Andover Wood has a few different stockpiles of wood waste at the facility. Steps should be taken to minimize fugitive air emissions from these piles; including placing the piles in sheltered areas, cleaning up wind blown or spilled particulate matter, or using another minimization method(s).

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, except for no more than five (5) minutes in any 1-hour period, based on Chapter 101 of the Department's regulations. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

F. Gluing Operations

The manufacturing of seats and other furniture products requires the gluing of dimension stock. The adhesive used by Andover Wood is a water borne product with a VOC content less than 5 g/l. The product is considered non-hazardous, has no known chronic effects, and contains no substance at or above the SARA Section 313 reportable thresholds. Use of a water borne adhesive represents BPT for the gluing operations. Andover Wood shall not exceed 5 tons/year VOC from

Andover Wood Products, Inc.)
 Oxford County)
 Andover, Maine)
 A-317-71-I-R (SM) 6

**Departmental
 Findings of Fact and Order
 Air Emission License**

gluing operations, based on a 12 month rolling total and shall keep records documenting compliance with the VOC limit.

G. Annual Emissions

Andover Wood shall be restricted to the following annual emissions, based on a 12 month rolling total:

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

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boiler 2	4.5	4.5	6.8	10.8	0.8	0.03
Boiler 3	15.8	15.8	1.3	25.8	31.5	0.9
Emergency Generator	0.1	0.1	0.02	1.5	0.3	0.1
Gluing Operations						5

Total TPY	20.4	20.4	8.1	38.1	32.6	6.0
------------------	-------------	-------------	------------	-------------	-------------	------------

III. AMBIENT AIR QUALITY ANALYSIS

According to Chapter 115 of the Department’s regulations, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	25
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the above total facility emissions, Andover Wood 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-317-71-I-R (SM) subject to the following conditions:

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 MRSA §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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S.A. §353. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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.[MEDEP Chapter 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:

Andover Wood Products, Inc.)
Oxford County)
Andover, Maine)
A-317-71-I-R (SM) 9

Departmental
Findings of Fact and Order
Air Emission License

- 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.

[MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 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. [MEDEP Chapter 115]

SPECIFIC CONDITIONS

(16) **Boiler 2**

- A. Boiler 2 (14.6 MMBtu/hr) shall not exceed 300,000 gal/yr of #2 fuel oil, on a 12 month rolling total. The maximum sulfur content of the #2 fuel shall not exceed 0.3% by weight. Compliance shall be demonstrated by fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. Records of fuel use shall be kept on a monthly and 12-month rolling total basis. [MEDEP Chapter 115, BPT]
- B. Emissions from boiler 2 shall not exceed the following [MEDEP Chapters 103 and 115, BPT]:

Pollutant	lb/MMBtu	lb/hr
PM	0.2	2.9
PM ₁₀	-	2.9
SO ₂	-	4.4
NO _x	-	7.0
CO	-	0.5
VOC	-	0.02

- C. Visible emissions from Boiler 2 shall not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block averages in a 3-hour period. [MEDEP Chapter 101]

(17) **Boiler 3**

- A. Boiler 3 (12 MMBtu/hr) shall fire wood waste. Fuel use records shall be kept on a monthly and 12-month rolling total basis. [MEDEP Chapter 115, BPT]
- B. Emissions from boiler 3 shall not exceed the following [MEDEP Chapters 103 and 115, BPT]:

Pollutant	lb/MMBtu	lb/hr
PM	0.3	3.6
PM ₁₀	-	3.6
SO ₂	-	0.3
NO _x	-	5.9
CO	-	7.2
VOC	-	0.20

- C. Visible emissions from Boiler 3 shall not exceed 30% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period. [MEDEP Chapter 101]

(18) Emergency Generator

- A. Andover Wood shall limit the emergency generator to 500 hr/yr of operation (based on a 12 month rolling total). An hour meter shall be maintained and operated on the emergency generator. [MEDEP Chapter 115, BPT]
- B. The generator shall be utilized only in emergencies and for short periods of periodic test firing of the unit for maintenance purposes. A log documenting the dates, times, and reason of operation for the emergency generator shall be kept. [MEDEP Chapter 115, BPT]
- C. The emergency generator shall fire diesel fuel oil with a sulfur limit not to exceed 0.05% by weight. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. [MEDEP Chapter 115, BPT]
- D. Emissions from the emergency generator shall not exceed the following [MEDEP Chapter 115, BPT]:

Pollutant	lb/hr
PM	0.4
PM ₁₀	0.4
SO ₂	0.07
NO _x	6.2
CO	1.3
VOC	0.5

- E. Visible emissions from the emergency generator shall not exceed 30% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a 3-hour period. [MEDEP Chapter 101]

(19) Gluing Operations

Andover Wood shall be limited to 5 tons/year VOC from gluing operations, based on a 12 month rolling total. Records shall be maintained documenting the amount of adhesive used, the VOC content of the adhesive, the total monthly VOC emissions, and the 12 month rolling total of VOC emissions. [MEDEP Chapter 115, BPT]

(20) **General Process Sources**

Visible emissions from any general process source shall not exceed an opacity of 20% 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. [MEDEP Chapter 101, BPT]

(21) **Fugitive Emissions**

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20%, 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. [MEDEP Chapter 101, BPT]

(22) **Malfunction/Breakdown**

Andover Wood 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).

(23) **Annual Emission Statement**

In accordance with MEDEP Chapter 137, 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 MEDEP Chapter 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

The emission statement must be submitted by the date specified in Chapter 137.

Andover Wood Products, Inc.)
Oxford County)
Andover, Maine)
A-317-71-I-R (SM) 13

**Departmental
Findings of Fact and Order
Air Emission License**

(24) Payment of Annual License Fee

Andover Wood shall pay the annual air emission license fee within 30 days of December 31 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under section 341-D, subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

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

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 29, 2004

Date of application acceptance: February 17, 2004

Date filed with the Board of Environmental Protection: _____

This Order prepared by Kathleen E. Molokie, Bureau of Air Quality.