



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE  
GOVERNOR

PATRICIA W. AHO  
COMMISSIONER

Columbia Forest Products, Inc.	)	Departmental
Aroostook County	)	Findings of Fact and Order
Presque Isle, Maine	)	Air Emission License
A-353-71-I-R/A (SM)	)	Renewal/Amendment #1

After review of the Air Emission License renewal/amendment 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. Columbia Forest Products, Inc. (Columbia) of Presque Isle, Maine has applied to renew their Air Emission License (License) permitting the operation of emission sources associated with their wood processing facility.
2. Columbia has applied to include an amendment in this License to include the removal of some equipment previously licensed at this facility. Also, Columbia has applied to include one additional piece of equipment as well as an increase in fuel use for Boilers #1 and #2 and a revision of the CO emission limit for Boiler #3.
3. The equipment addressed in this License is located at 395 Missile Street, Presque Isle, Maine.

### B. Emission Equipment

The following equipment is addressed in this air emission license:

#### Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Control Device</u>	<u>Stack #</u>
Boiler #1	15	1.7 tons/hr	wood	multiclone	1
Boiler #2	15	1.7 tons/hr	wood	multiclone	2
Boiler #3	24	2.7 tons/hr	wood	multiclone	B3
Proctor Dryer (Veneer Dryer #1)	15	107 gal/hr	#2 oil, 0.35%	None	V1

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826  
RAY BLDG., HOSPITAL ST.

BANGOR  
106 HOGAN ROAD, SUITE 6  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04679-2094  
(207) 764-0477 FAX: (207) 760-3143

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
2

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

### Process Equipment

<u>Equipment</u>	<u>Production Rate</u>	<u>Pollution Control Equipment</u>	<u>Stack #</u>
Veneer Dryer #3	160 feet per min.	None	V3
Splicing Process	~ 45,000 lbs. resin/year	None	fugitive
Wood Handling System	--	Cyclones #1, #2 & #3	--
*Process Building Air Handling		Baghouse	

\* - Denotes equipment new to this Air Emission License.

### C. Application Classification

This License is considered to be a renewal of current licensed emission units and has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). Some previously licensed equipment has been removed from the facility and subsequently from this License. Also, one additional piece of equipment (the Process Building Air Handling baghouse) is being added to this License as well as an increase in the annual fuel limit for Boilers #1 and #2.

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

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Sig. Level</u>
PM	52.7	50	-2.7	100
PM <sub>10</sub>	35.5	30.4	-5.1	100
SO <sub>2</sub>	57.4	10.3	-47.1	100
NO <sub>x</sub>	78.8	68.7	-10.1	100
CO	81.7	81.0	-0.7	100
VOC	38.8	37.9	-0.9	50

Based on the change in the emissions outlined in the above table, the modifications included in this Air Emission License renewal are determined to be minor modifications and have been processed as such. With the fuel limits in place for Boilers #1, #2 and #3 and Veneer Dryer #1, the facility is licensed below the major source thresholds and is considered a synthetic minor.

## 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.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

### B. Process Description

Columbia produces hardwood (mostly birch and maple with some poplar and oak) veneer in 8-foot and 10-foot lengths on two separate veneer lines. Pre-graded logs are received and sorted by species in the wood yard. The logs are then conditioned in one of nine steam heated "vats" for 42 to 66 hours. The "vats" are similar to wood kilns, without the fans. After treatment in the vats, the logs are debarked and cut to length. A laser reads the contour of the log and a computer calculates how to move the log to obtain the best cutting path.

A thin "sheet" of wood veneer is sliced off the log with a lathe and wound onto a spool. Veneer rejects are sent by conveyor belt to a hog to be ground up for use as fuel. The remaining tree cores are piled in the back lot for use by employees as fire wood.

The veneer is un-spooled into one of the facility's two Veneer Dryers. Veneer Dryer #1 (known as the Proctor Dryer) is a direct-contact dryer with three oil firing heaters (5 MMBtu/hr each) and serves the 10-foot veneer line. Veneer Dryer #3 is an indirect-contact unit which utilizes steam from the facility's boiler units and serves the 8-foot veneer line. The veneer passes through the dryer in a looping pattern, while steam at high pressure further dries the wood. The last section of each dryer is a cooler which uses ambient air to halt the drying process.

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
4

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

After the veneer exits the dryer, the veneer passes through a quality assurance section where both human inspection and machine inspection looks for defects and cuts out imperfect pieces of veneer. A computer calculates the best way to cut the sheets to get the best value from the wood. Defect-free sheets are cut to width, taped for shipping, graded and sorted for shipment to customers who use the veneer to make plywood and for woodworking purposes. Sheets with defects must be cut to smaller sizes. These pieces pass through a jointer which applies glue to the thin edges and joins both sides of the wood. Another machine splices the pieces into whole sheet sizes. The splicing process may be used to obtain specific grain patterns. The spliced pieces are trimmed to size, taped, graded, sorted and shipped. Columbia operates three boilers to provide process steam and facility heat. All three boilers fire wood waste from throughout the process.

Columbia routinely records data based on ten (10) operating periods per year. Each period is between 5 and 6 weeks in duration. For this reason, Columbia Forest Products will record and report data for compliance purposes on a ten operating period per year basis rather than a monthly basis.

C. Boilers #1 and #2

Boilers #1 and #2 are operated for process steam and facility heating needs. Each boiler has a maximum capacity of 15 MMBtu/hr, firing wood waste (calculations are based on wood at 50% moisture with a heat capacity of 4500 Btu/lb.) Boilers #1 and #2 were manufactured in 1962 by ERIE and are therefore not subject to EPA's New Source Performance Standards (NSPS) Subpart Dc, for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989. Emissions from each boiler pass through multiclones and exhaust through separate 65-foot stacks (stacks #1 and #2).

Columbia was previously licensed to fire no greater than 10,000 tons wood fuel per year in Boilers #1 and #2. Columbia Forest Products has proposed an increase in this limit to 15,000 tons of wood fuel per year, in Boilers #1 and #2 on a ten-period rolling total basis. The Department has agreed to this fuel limit increase.

A summary of the BPT analysis for Boilers #1 (15 MMBtu/hr) and #2 (15 MMBtu/hr) is the following:

1. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103, (as amended) regulates PM emission limits. However, the PM emission limit of 0.35 lb/MMBtu, based on AP-42 data dated 9/03 for the combustion of bark and wet wood controlled with a mechanical collector, shall be considered BPT. PM<sub>10</sub> emission limit of 0.32 lb/MMBtu, also based on AP-42 data dated 9/03, shall be considered BPT.

2. SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emissions rates are based on AP-42 emission factors dated 9/03 for wood combustion.
3. Visible emissions from Stacks #1 and #2 are subject to *Visible Emissions Regulation*, 06-096 CMR 101 (as amended). Visible emissions from each of the boiler's stacks (Stacks #1 and #2) shall not exceed 30% opacity on a 6-minute block average, except for 2 six-minute block averages in a 3-hour period.

#### D. Boiler #3

Columbia installed Boiler #3 in 2003. The boiler has a maximum design heat input capacity of 24 MMBtu/hr firing wood at a rate of 2.7 tons per hour (calculations are based on wood at 50% moisture with a heat capacity of 4500 Btu/lb.).

Columbia's previous air emission license (A-353-71-H-R (SM)) included the use of #2 fuel oil for combustion in Boiler #3. The oil burning burner front and controls have been removed from this unit, therefore, this air emission license will no longer include language allowing for the use of #2 fuel oil in Boiler #3.

Since Boiler #3 has a maximum heat input capacity greater than 10 MMBtu/hr, and was manufactured in 2003, the boiler is therefore subject to NSPS Subpart Dc for steam generating units greater than 10 MMBtu/hr and manufactured after June 9, 1989. Columbia shall comply with the applicable reporting and record keeping requirements of 40 CFR Part 60.48c.

Boiler #3 is equipped with a high efficiency multiclone collector for particulate control. The multiclone has a manufacturer's guarantee to have higher control efficiency than standard conventional multi-tube cyclones.

Air Emission License A-353-71-H-R established the BACT determination for CO emissions from Boiler #3 which was based on the Industrial Boiler MACT standard for CO. That version of the Industrial Boiler MACT was repealed. The Industrial Boiler MACT that has since been promulgated does not contain CO restrictions equivalent to that which was included in Columbia previous License, therefore, this License will establish a new CO limit which will be based on CO factors found in EPA's AP-42, *Compilation of Air Pollutant Emission Factors*.

A summary of the BPT analysis for Boiler #3 (24 MMBtu/hr firing wood) is the following:

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
6

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

1. 06-096 CMR 103 (as amended) regulates PM emission limits. However, BPT for emissions of PM from the firing of wood in boiler #3 is 0.17 lb/MMBtu as guaranteed by the cyclone manufacturer. BPT for emissions of PM<sub>10</sub> from the firing of wood in Boiler #3 is 0.10 lb/MMBtu as guaranteed by the cyclone manufacturer.
2. SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emissions rates are based on AP-42 emission factors dated 9/03 for wood combustion.
3. Visible emissions from Stack #B3 are subject to 06-096 CMR 101 (as amended). Visible emissions from the Stack #B3 shall not exceed 30% opacity on a 6-minute block average, except for 2 six-minute block averages in a 3-hour period.

E. 40 CFR Part 63 Subpart JJJJJ

Boilers #1, #2 and #3 may be subject to the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR Part 63 Subpart JJJJJ).

For informational purposes, a summary of the current applicable federal 40 CFR Part 63 Subpart JJJJJ requirements is listed below. At this time, the Maine Department of Environmental Protection has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA, however Boilers #1, #2 and #3 located at the Columbia facility are still subject to the requirements. Notification forms and additional rule information can be found on the following website:  
<http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. Compliance Dates, Notifications, and Work Practice Requirements

i. Initial Notification of Compliance

An Initial Notification submittal to EPA was due on September 17, 2011.  
[40 CFR Part 63.11225(a)(2)]

ii. Boiler Tune-Up Program – Initial and Biennial

- (a) A boiler tune-up program shall be implemented to include the tune-up of applicable boilers by March 12, 2012 according to the rule currently in place. [40 CFR Part 63.11196(a)(1)] However, a No Action Assurance letter was issued on March 13, 2012 stating that EPA will exercise its enforcement discretion to not pursue enforcement action for failure to complete the required tune-up by the stated compliance date. The rule is expected to have a future compliance date of either 2013 or 2014 once the final rule revisions are promulgated.

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
7

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

- (b) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:
1. As applicable, inspect the burner and clean or replace any component of the burner necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; however, the burner must be inspected at least once every 36 months. [40 CFR Part 63.11223 (b)(1)]
  2. Inspect the flame pattern, as applicable and adjust the burner as necessary to optimize the flame pattern consistent with the manufacturer's specifications. [40 CFR Part 63.11223 (b)(2)]
  3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. [40 CFR Part 63.11223 (b)(3)]
  4. Optimize total emissions of CO consistent with manufacturer's specifications. [40 CFR Part 63.11223 (b)(4)]
  5. Measure the concentration in the effluent stream of CO in parts per million (ppm), by volume, and oxygen in volume percent, before and after adjustments are made. [40 CFR Part 63.11223 (b)(5)]
  6. If a unit is not operating on the required date of tune-up, the tune-up must be conducted within one week of start-up. [40 CFR Part 63.11223 (b)(7)]
- (c) A Notification of Compliance Status shall be submitted to EPA no later than 120 days after conducting the initial boiler tune-up. [40 CFR Part 63.11225 (a)(4) and 40 CFR Part 63.11214 (b)]
- (d) The facility shall implement a biennial boiler tune-up program after the initial tune-up and initial compliance report has been submitted.
1. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up. [40 CFR Part 63.11223 (a)]
  2. The biennial report shall be maintained onsite and submitted to the EPA if requested. The report shall contain the concentration of CO in the effluent stream (ppmv) and oxygen in volume percent, measured before and after the boiler tune-up. A description of any corrective actions taken as part of the tune-up of the boiler and the type and amount of fuel used over the 12-months prior to the biennial tune-up of the boiler. [40 CFR Part 63.11223 (b)(6)]

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
8

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

3. The biennial compliance report shall also include the company name and address; a compliance statement signed by a responsible official certifying truth, accuracy and completeness; and a description of any deviations and corrective actions. [40 CFR Part 63.11223 (b)]

iii. Energy Assessment

- (a) A one-time energy assessment shall be performed by a qualified energy assessor on the applicable boilers by March 21, 2014 [40 CFR Part 63.11196 (a)(3)]
- (b) The energy assessment shall include a visual inspection of the boiler system; and evaluation of operating characteristics of energy using systems, operating and maintenance procedures and unusual operating constraints; an inventory of major systems consuming energy from affected boiler(s); a review of available architectural and engineering plans; facility operation and maintenance procedures and logs and fuel usage; a list of major energy conservation measures identified; and a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits and the time frame for recouping those investments. [40 CFR Part 63, Table 2(4)]
- (c) A notification of Compliance Status shall be submitted to EPA no later than 120 days after conducting the energy assessment [40 CFR Part 63.11225 (a)(4) and 40 CFR Part 63.11214(c)]

b. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63 Subpart JJJJJJ including the following [40 CFR Part 63.11225(c)]: copies of notifications and reports with supporting compliance documentation; identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned; documentation of fuel type(s) used monthly by each boiler; the occurrence and duration of each malfunction of the boiler; and actions taken during periods of malfunction to minimize emissions and actions taken to restore the malfunctioning boiler to its usual manner of operation. Records shall be in a form suitable and readily available for expeditious review.



**F. Veneer Dryer #1**

Columbia's current license allows for the operation of a direct contact veneer dryer designated Veneer Dryer #1 which utilizes the exhaust gases from the combustion of #2 fuel oil to dry veneer. The dryer was manufactured in 1973 by Proctor Schwartz to burn oil and was later modified in 1986 to also burn wood. The wood firing equipment and controls were designated the Energex burner in the facility's previous air emission license (A-353-71-H-R (SM)), this equipment is no longer in place and this air emission license will no longer allow firing wood for the operation of Veneer Dryer #1.

Veneer Dryer #1 makes use of three #2 fuel oil firing burner units (designated Heaters #1, #2 and #3) to supply combustion gases to the dryer. The three #2 fuel oil firing burners have maximum design heat input capacities of 5.0 MMBtu/hr each for a total maximum design heat input capacity of 15 MMBtu/hr.

Veneer Dryer #1 exhausts to a 28.6 foot high stack. A recent ambient air quality analysis determined that Columbia does not exceed Maine Ambient Air Quality Standards at this stack height during periods of firing #2 fuel oil with a sulfur content of no greater than 0.35% sulfur by weight. The Department has determined that BPT, prior to January 1, 2016, is the use of #2 fuel oil with a maximum sulfur content of no greater than 0.35% by weight. As established by 38 MRSA §603-A(2)(A)(3), beginning January 1, 2016, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm).

Veneer Dryer #1 is equipped with a high efficiency multiclone collector for particulate control. The multiclone has a manufacturer's guarantee to have higher control efficiency than standard conventional multi-tube cyclones.

Columbia was previously licensed to fire no greater than 250,000 gallons per year of #2 fuel oil in Veneer Dryer #1. Columbia has not proposed an increase in this limit and shall continue to be limited to firing no greater 250,000 gallons per year of #2 fuel oil in Veneer Dryer #1 on a ten-period rolling total basis

VOC lb/hr emission rates for Veneer Dryer #1 while firing #2 fuel oil characterize emissions from the combustion process only and do not include VOC emissions from the drying of hardwood veneer. Emissions from the drying of veneer are addressed in the 'Veneer Drying Process VOCs' section of this license.

A summary of the BPT analysis for Veneer Dryer #1 (15 MMBtu/hr firing oil) is the following:

1. 06-096 CMR 103 (as amended) regulates PM emission limits, however, BPT for emissions of PM is 0.17 lb/MMBtu as guaranteed by the cyclone manufacturer. BPT for emissions of PM<sub>10</sub> is 0.10 lb/MMBtu as guaranteed by the cyclone manufacturer.
2. *Low Sulfur Fuel Regulation*, 06-096 CMR 106 regulates the sulfur content of the fuel oil fired in Veneer Dryer #1. BPT for Veneer Dryer #1 prior to January 1, 2016 is the use of #2 fuel oil with a sulfur content no greater than 0.35% by weight, which meets the requirements of 06-096 CMR 106. Beginning January 1, 2016, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). SO<sub>2</sub> emission limits established in this License are based on the firing of #2 fuel oil with 0.35% sulfur, by weight.
3. NO<sub>x</sub> and VOC emissions from the firing of oil are based on AP-42 emission factors dated 9/98. The VOC lb/hr emission rate does not include VOC emissions from the drying of hardwood veneer.
4. CO emissions rates are based on manufacturer's data provided to the Department by Columbia Forest Products.
5. Visible emissions from the Veneer Dryer #1 stack (Stack #V1) are subject to 06-096 CMR 101 (as amended). Visible emissions from Stack #V1 shall not exceed 20% opacity on a 6-minute block average, except for two 6-minute block averages in a 3-hour period.

#### G. Veneer Drying Process VOCs

Along with the #2 fuel oil firing Veneer Dryer #1, Columbia Forest Products is also currently licensed to operate an indirect contact veneer drying kiln (designated Veneer Dryer #3). Veneer Dryer #3 is manufactured by Babcock and utilizes steam heat exchange coils (radiators) to heat the interior of the dryer. Columbia was previously licensed to operate Veneer Dryer #2 which was also an indirect contact dryer, however, Veneer Dryer #2 has since been removed and this air emission license will not contain language allowing the operation of the formally permitted Veneer Dryer #2.

Columbia currently dries wood in five to six week drying cycle periods, with 10 drying cycle periods occurring in a 12-month period. Columbia expects to exclusively dry hard woods in Veneer Dryers #1 and #3, which will include oak, maple, birch and possibly poplar. VOCs are the criteria pollutant associated with the drying of wood. Columbia shall be restricted to the following VOC emissions from the drying of wood:

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
11

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

Equipment	VOC Emissions	
	Pounds per hour (lb/hr)	Tons per year (ton/yr)
Veneer Dryer #1	3	13.1
Veneer Dryer #3	3	13.1

Due to lack of existing data for emissions from hardwood species, VOC emissions calculations are based on emissions testing performed on the Veneer Dryers #1 (and the previously licensed Veneer Dryer #2) at the Columbia's Presque Isle facility in 1995. Columbia has proposed an emission factor for the drying of hardwood veneer at their Presque Isle facility of 0.0234 pounds of VOC per 1,000 square feet of veneer dried (lb/ft<sup>2</sup>) based on the above mentioned emission testing.

In order to demonstrate compliance with the VOC emissions limits, Columbia Forest Products shall maintain VOC emission records for the facility's veneer drying units. VOC emission calculations shall be based on the above mentioned emission factor for the drying of hardwood veneer and the square feet of veneer dried. The records shall be maintained on a ten-period rolling total basis. The records shall be updated on a schedule that coincides with the facility's drying cycle schedule.

#### H. Wood Dust Handling System

Columbia utilizes three cyclones in their Wood Dust Handling System to control wood dust. Wood waste and dust-laden air are blown to one of three cyclones to separate the wood particles from the air. Cyclones #1, #2 and #3 are located just outside the boiler house above where dust drops from the pneumatic wood dust delivery piping into the conveyor belt that feeds the boiler day hopper.

Columbia shall establish a system of maintenance, inspection and repair for the Wood Dust Handling Systems, which shall allow for a monthly inspection of the each system and Columbia shall document compliance by means of a maintenance, inspection and repair log.

Visible emissions from any cyclone shall not exceed 10% opacity on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period.

**Columbia Forest Products, Inc.**  
**Aroostook County**  
**Presque Isle, Maine**  
**A-353-71-I-R/A (SM)**

)  
)  
)  
12

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

**I. Process Building Air Handling System**

Columbia scavenges air from the process building to minimize the dust load in the ambient air (clean air is blown at the same time) and blows the dusty air through a cartridge filter bag house. The bag house utilizes filter cartridges (64 in total) to filter the air before release outside. The baghouse utilizes pulse jets to intermittently blow built up dust from the surface of the cartridge filters, the dust drops down into a hopper and is carted to the fuel area for inclusion into the fuel stream.

Columbia shall establish a system of maintenance, inspection and repair for the Process Building Air handling System, which shall allow for a monthly inspection of the system and Columbia shall document compliance by means of a maintenance, inspection and repair log.

Visible emissions from the cartridge filter baghouse shall not exceed 10% opacity on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period.

**J. Crate Making/Core Saw Dust Handling System**

Columbia also makes use of a dust control system to handle dust generated from sawing of veneer cores, designated the Crate Making/Core Saw cyclone and dust collector.

Columbia shall establish a system of maintenance, inspection and repair for the Crate Making/Core Saw cyclone and dust collector, which shall allow for a monthly inspection of the each system and Columbia shall document compliance by means of a maintenance, inspection and repair log.

Visible emissions from any cyclone shall not exceed 10% opacity on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period.

**K. Splicing Process VOCs and HAPs**

VOC emissions are generated as a result of the resin applied as part of the splicing process. Columbia reports the annual use of about 45,000 lbs of splicing resin with a VOC content of 0.35% by weight. The splicing resin also contains formaldehyde, a hazardous air pollutant (HAP), at about the same weight percent. Assuming 100% of the volatile components and hazardous pollutants in the resin are emitted, actual VOC and HAP emissions from resin application are each less than 1 ton/year.

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
13

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

Columbia shall limit VOC emissions from the Splicing Process to no greater than 2.0 tons/year each and HAP emissions from the Splicing Process to no greater than 2.0 tons/year.

**L. Fugitive Emissions**

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

**M. Annual Emissions**

**1. Annual emissions were calculated based on the following:**

- Columbia shall be restricted to firing no more than 250,000 gallons of #2 fuel oil in Veneer Dryer #1.
- Columbia shall be restricted to firing no more than 15,000 tons of wood in Boilers #1 and #2 and 15,000 tons of wood in Boiler #3 both based on a ten-period rolling total.

**Total Annual Licensed Emissions for the Facility**  
(Annual licensed emissions are used to calculate license fees)

Pollutant	Emissions in Tons/year					
	Boilers #1 and #2	Boiler #3	Proctor Burner (Veneer Dryer #1)	Veneer Dryers	Splicing	Total
Fuel Type	Wood	Wood	#2 Fuel Oil	-	-	-
PM	36.5	11.5	2.0	-	-	50
PM <sub>10</sub>	21.6	7.0	1.8	-	-	30.4
SO <sub>2</sub>	1.7	1.7	6.9	-	-	10.3
NO <sub>x</sub>	33.1	33.1	2.5	-	-	68.7
CO	40.5	40.5	0.6	-	-	81.0
VOC	2.6	2.6	0.1	30.6	2.0	37.9
HAPs	-	-	-	-	2.0	2.0

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
14

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

## 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) means the aggregate group of the following gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gases (GHG) for purposes of licensing are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub> e).

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, Columbia Forest Products is below the major source threshold of 100,000 tons of CO<sub>2</sub> e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

## III. AMBIENT AIR QUALITY ANALYSIS

Columbia previously submitted an ambient air quality analysis for air emission license A-353-71-H-R (SM) (dated June 27, 2006) demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards. An additional ambient air quality analysis is not required for this renewal.

## 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-353-71-I-R/A (SM) 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]

**Columbia Forest Products, Inc.**  
**Aroostook County**  
**Presque Isle, Maine**  
**A-353-71-I-R/A (SM)**

)  
)  
)  
16

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

- (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



**Columbia Forest Products, Inc.**  
**Aroostook County**  
**Presque Isle, Maine**  
**A-353-71-I-R/A (SM)**

)  
)  
)  
17

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

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) Boilers #1 & #2

A. Total annual fuel use for Boilers #1 and #2 combined shall not exceed 15,000 tons of wood on a ten-period rolling total basis. To demonstrate compliance with the fuel cap, Columbia shall maintain a fuel use record for the wood fired in the two boilers. The fuel use record shall be maintained on a ten-period rolling total basis. [06-096 CMR 115, BPT]

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
18

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

B. Emissions shall not exceed the following:

Equipment		PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boiler #1	lb/MMBtu	0.54	-	-	-	-	-
	lb/hr	8.1	4.8	0.4	7.4	9.0	0.6
Boiler #2	lb/MMBtu	0.54	-	-	-	-	-
	lb/hr	8.1	4.8	0.4	7.4	9.0	0.6

[06-096 CMR 103, Section 2(A)(3)(a) and 06-096 CMR 115, BPT]

C. Visible emissions from Stacks #1 and #2 each shall not exceed 30% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(17) Boiler #3

A. Total annual fuel use for Boiler #3 shall not exceed 15,000 tons of wood on a ten-period rolling total basis. To demonstrate compliance with the fuel restrictions, Columbia shall maintain a fuel use record for the wood fired in Boiler #3. The fuel use record shall be maintained on a ten-period rolling total basis. [06-096 CMR 115, BPT]

B. Emissions shall not exceed the following:

Equipment		PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boiler #3 (Firing Wood)	lb/MMBtu	0.17	-	-	-	-	-
	lb/hr	4.1	2.5	0.6	11.8	14.4	0.9

[06-096 CMR 115, BPT]

C. Visible emissions from Stack #B3 shall not exceed 30% opacity on a 6-minute block average, except for no more than two 6-minute block averages in a 3-hour period. [06-096 CMR 101]

D. Boiler #3 is subject to Federal New Source Performance Standards, Subpart Dc. Columbia shall comply with the reporting and recordkeeping requirements established in 40 CFR Part 60.48c(g).

(18) Veneer Dryer #1

A. Total annual fuel use for Veneer Dryer #1's fuel-fired Proctor Dryer (Heaters #1, #2 & #3) shall not exceed 250,000 gallons per year of #2 fuel oil based on a ten period rolling total basis.

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
19

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

- B. Prior to January 1, 2016, Columbia shall be restricted to the use of #2 fuel oil with a sulfur content no greater than 0.35% by weight. Beginning January 1, 2016, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.005% by weight (50 ppm), and beginning January 1, 2018, the facility shall fire #2 fuel oil with a maximum sulfur content limit of 0.0015% by weight (15 ppm). [06-096 CMR 115, BPT, 38 MRSA §603-A(2)(A)(3)]
- C. Compliance shall be demonstrated by fuel records from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel. The fuel use record shall be maintained on a ten-period rolling total basis.  
[06-096 CMR 115, BPT]
- D. Emissions for heaters #1, #2 and #3 each shall not exceed the following:

Equipment		PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Heaters #1, #2 and #3 each	lb/MMBtu	0.1	-	-	-	-	-
	lb/hr	1.2	1.2	8.4	2.1	0.5	0.1

[06-096 CMR 101, Section 2(A)(B)(1) and 06-096 CMR 115, BPT]

- E. Visible emissions from Veneer Dryer #1 during periods of oil firing shall not exceed 20% opacity on a 6-minute block average, except for two 6-minute block averages in a 3-hour period. [06-096 CMR 101]

(19) Veneer Drying Process

- A. Columbia shall be restricted to the following VOC emissions from the drying of hardwood veneer in Veneer Dryers #1 and #3:

Equipment	VOC Emissions	
	Pounds per hour (lb/hr)	Tons per year (tons/yr)
Veneer Dryer #1	3	13.1
Veneer Dryer #3	3	13.1

[06-096 CMR 115, BPT]

- B. Columbia shall maintain process VOC emission records for the facility's veneer drying units. VOC emission calculations shall be based on an emission factor of 0.0234 pounds of VOC per 1,000 square feet of veneer dried, and the square footage of veneer actually dried. The Department may approve the use of an alternative emission factor if additional testing leads to the generation of a more appropriate emission factor. VOC emission records shall be maintained on a drying cycle and ten-period rolling total basis.  
[06-096 CMR 115, BPT]

**Columbia Forest Products, Inc.**  
**Aroostook County**  
**Presque Isle, Maine**  
**A-353-71-I-R/A (SM)**

)  
)  
)  
20

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

(20) Splicing Process

- A. Columbia shall not exceed 2.0 tons/year of VOC emissions from the Splicing Process. [06-096 CMR 115, BPT]
- B. Columbia shall not exceed 2.0 tons/year of total HAP emissions from the Splicing Process. [06-096 CMR 115, BPT]
- C. Columbia shall maintain process VOC and HAP emission records for the Splicing Process. VOC and HAP emission calculations from the Splicing Process shall be based on the VOC and HAP weight percentages from the MSDS sheet and the amount of Splicing resin used. Emission records from the Splicing Process shall be maintained on a ten-period rolling total basis. [06-096 CMR 115, BPT]

(21) Wood Dust Handling System

- A. Columbia shall establish a system of maintenance, inspection and repair for the Wood Dust Handling System, which shall allow for a monthly inspection of the system and Columbia shall document compliance by means of a maintenance, inspection and repair log. [06-096 CMR 115, BPT]
- B. Columbia shall operate and maintain the cyclones in a manner that minimizes emissions from the cyclones. [06-096 CMR 115, BPT]
- C. Visible emissions from the Wood Dust Handling System equipment (including Cyclones #1, #2 and #3 and the wood fuel conveyor system) shall each not exceed 10% 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 and 06-096 CMR 115, BPT]

(22) Process Building Air Handling System

- A. Columbia shall establish a system of maintenance, inspection and repair for any dust/air handling piping or equipment associated with the Process Building Air Handling System that is outside of the process building, including the cartridge filter baghouse, which shall allow for a monthly inspection of the system and Columbia shall document compliance by means of a maintenance, inspection and repair log. [06-096 CMR 115, BACT]
- B. Visible emissions from the cartridge filter baghouse shall not exceed 10% 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]

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
21

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

(23) Crate Making/Core Saw Dust Handling System

A. Columbia shall establish a system of maintenance, inspection and repair for any dust/air handling piping or equipment associated with the Process Building Air Handling System Crate Making/Core Saw Dust Handling System that is outside of the process building, which shall allow for a monthly inspection of the system and Columbia shall document compliance by means of a maintenance, inspection and repair log. [06-096 CMR 115, BACT]

B. Visible emissions from the Crate Making/Core Saw Dust Handling System shall not exceed 10% 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]

(24) Visible emissions from any fugitive emission sources (including stockpiles and roadways) shall not exceed 20% opacity, except for no more than five minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual 15-second opacity observations which exceed 20% in any 1-hour. [06-096 CMR 101]

(25) 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.

Columbia Forest Products, Inc.  
Aroostook County  
Presque Isle, Maine  
A-353-71-I-R/A (SM)

)  
)  
)  
22

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

- (26) Columbia 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).

DONE AND DATED IN AUGUSTA, MAINE THIS 14 DAY OF January 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marc Allen Robert Corne for  
PATRICIA W. AHO, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

**The term of this license shall be ten (10) years from the signature date above.**

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration, then pursuant to Title 5 MRSA §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

Date of initial receipt of application: May 24, 2011

Date of application acceptance: June 14, 2011

Date filed with the Board of Environmental Protection:

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

