STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

Hancock Lumber Company, Inc.
Cumberland County
Casco, Maine
A-629-71-K-R

Departmental
Findings of Fact and Order
Air Emission License

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., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Hancock Lumber Company, Inc. (Hancock Lumber) has applied to renew their Air Emission License permitting the operation of emission sources associated with their lumber manufacturing facility. The renewal includes an update to allow the firing of American Society of Testing and Materials (ASTM) D396 #2 compliant fuel oil. The renewal also removes the ability to fire coffee grounds in Boiler #3 as a supplemental fuel.

The equipment addressed in this license is located at 1260 Poland Spring Road in Casco, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Maximum Firing Rate	Fuel Type	Post Combustion Control(s)	Stack #
Boiler #2	13.6	97 gal/hr	#2 oil	None	1
Boiler #3	10.8	1.2 ton/hr	wood waste	Cyclone Fly-Ash Re-injection	2

Process Equipment

Equipment/Process	Production Rate	Control Device(s)	Stack #
Kilns (5)	23.5 MMBFT/yr	None	Fugitive

C. Application Classification

The application for Hancock Lumber does not include the licensing of 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 *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 emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boiler #2

Boiler #2 is a 13.6 MMBTU/hr 'Cleaver Brooks' boiler manufactured in 1982 and fires ASTM D396 compliant #2 fuel oil. Boiler #2, which has a maximum firing rate of 97 gallons per hour, is typically used in the winter for additional heat to the kilns and vents through stack #1 (30 feet AGL).

Since Boiler #2 was manufactured in 1982, the boiler is not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

The BPT emission limits for Boiler #2 were based upon the following:

PM/PM_{10} – 0.12 lb/MMBtu, 06-096 CMR 103
SO_2 – 0.5 lb/MMBtu, firing ASTM D396 #2 compliant fuel oil
NO_X – 0.35 lb/MMBtu, previous license

CO – 5.0 lb/1000 gallons, AP-42, Table 1.3-1, dated 5/10
VOC – 0.34 lb/1000 gallons, AP-42, Table 1.3-3, dated 5/10
Opacity – Visible emissions from Stack #1 (serving boiler #2) shall not exceed 20% opacity on a six-minute block average, except for no more than one six-minute block average in a continuous three-hour period.

The BPT emission limits for Boiler #2 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #2 – 13.6 MMBTU/hr - #2 fuel	1.63	1.63	6.80	4.76	0.50	0.03

Until December 31, 2015, Boiler #2 shall fire ASTM D396 compliant #2 fuel oil. Per 38 MRSA §603-A(2) and MRSA §603-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).

The total fuel use for Boiler #2 shall not exceed 200,000 gallons/year of ASTM D396 compliant #2 fuel oil, based on a twelve-month rolling total.

Periodic Monitoring

Periodic monitoring for the boiler shall include recordkeeping to document fuel use on a twelve-month rolling total basis.

C. Boiler #3

Boiler #3 is a 10.8 MMBTU/hr 'Industrial Boiler' boiler manufactured in 1986 and fires wood waste with an average moisture content of 50% by weight. Wood waste includes sawdust, shavings, trim pieces, and bark. Boiler #3 has a maximum firing rate of 1.2 tons wood/hour and vents through Stack #2 (71 feet AGL).

Since Boiler #3 was manufactured in 1986, the boiler is not subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

The BPT emission limits for Boiler #3 was based upon the following:

PM/PM_{10} – 0.3 lb/MMBtu, 06-096 CMR 103
SO_2 – 0.025 lb/MMBTU, AP-42, Table 1.6-2, dated 9/03

NO_X – 0.22 lb/MMBtu , AP-42, Table 1.6-2, dated 9/03
CO – 0.6 lb/ MMBtu , AP-42, Table 1.6-2, dated 9/03
VOC – 0.017 lb/ MMBtu , AP-42, Table 1.6-2, dated 9/03
Opacity – Visible emissions from stack #2 (serving boiler #3) shall not exceed 30% opacity on a six-minute block average, except for no more than two six-minute block averages in a continuous three-hour period.

The BPT emission limits for Boiler #2 are the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3 – 10.8 MMBTU/hr - Wood	3.24	3.24	0.27	2.38	6.48	0.18

The total fuel use for Boiler #3 shall not exceed 10,500 ton/year (based on a twelve-month rolling total) of wood based on a moisture content of 50%. Hancock Lumber shall use the following formula, when necessary, to convert fuel use records to 50% moisture:

Tons Wood at 50% = (Tons Wood at M%) x [(100-M)/50]

where M = the moisture content of the actual wood fired

Hancock Lumber shall continuously operate the fly ash re-injection on Boiler #3 when Boiler #3 is in operation.

Periodic Monitoring

Periodic monitoring for the boiler shall include recordkeeping to document fuel use on a twelve-month rolling total basis.

D. 40 CFR Part 63 Subpart JJJJJJ

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

For informational purposes, a summary of the current applicable federal 40 CFR Part 63 Subpart JJJJJJ 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 Hancock Lumber is 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 21, 2012. [40 CFR Part 63.11196(a)(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 as 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 for a 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 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)] 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 63.11225(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; an 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; a list of the energy savings potential of the 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.

E. Kilns

Hancock Lumber operates five kilns for drying eastern white pine lumber. Heat for the kilns is provided by Boilers #2 and/or #3. Yearly throughput is limited to 23.5 million board feet (BF) per year based on a twelve-month rolling total.

VOC emissions released from the kilns during drying have been estimated using data from studies conducted by the National Counsel of the Paper Industry for Air and Stream Improvement (NCASI) and the University of Maine. VOC emissions from the drying of eastern white pine in the kilns were calculated using a factor of 2.26 lbs/1000BF.

Visible emissions from the kilns shall not exceed 20% opacity on a six-minute block average, except for no more than one six-minute block average in a one-hour period.

F. Annual Emissions

Hancock Lumber shall be restricted to the following annual emissions, based on a twelve-month rolling total:

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

Unit	PM	PM_{10}	SO_2	NO_x	CO	VOC
Boiler #2	1.7	1.7	7.0	4.9	0.5	0.1
Boiler #3	14.2	14.2	1.2	10.4	28.4	0.8
Kilns	--	--	--	--	--	26.5
Total TPY	**15.9**	**15.9**	**8.2**	**15.3**	**28.9**	**27.4**

III. AMBIENT AIR QUALITY ANALYSIS

According to 06-096 CMR 115 (as amended), the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Modeling is not required for a renewal if the total emissions of any pollutant released do not exceed the following and there are no extenuating circumstances affecting local air quality:

Pollutant	Tons/Year
PM	25
PM_{10}	25
SO_2	50
NO_x	100
CO	250

Based on the total facility licensed emissions, Hancock Lumber is below the emissions level required for modeling.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive BPT,
- 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-629-71-K-R 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 Chapter 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-A. [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) **Boiler #2**

A. The total fuel use for Boiler #2 shall not exceed 200,000 gallons/year of ASTM D396 compliant #2 fuel. Compliance shall be demonstrated by records from the supplier showing the quantity of fuel. Fuel use records shall be kept on a twelve-month rolling total basis. [06-096 CMR 115, BPT]

B. Hancock Lumber shall not fire Boiler #2 with any type of rain cap obstructing the stack exit. [06-096 CMR 115, BPT]

C. Emissions from Boiler #2 shall not exceed the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #2 – 13.6 MMBTU/hr - #2 fuel	1.63	1.63	6.80	4.76	0.50	0.03

D. Visible emissions from Stack #1 (serving boiler #2) shall not exceed 20% opacity on a six-minute block average, except for no more than one six-minute block average in a continuous three-hour period. [06-096 CMR 101]

(17) **Boiler #3**

A. Total fuel use for Boiler #3 shall not exceed 10,500 ton/yr at 50% moisture, by weight (or equivalent) of wood waste. Fuel use records shall be kept on a 12-month rolling total basis. [06-096 CMR 115, BPT]

B. Emissions from Boiler #3 shall not exceed the following:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Boiler #3 – 10.8 MMBTU/hr - Wood	3.24	3.24	0.27	2.38	6.48	0.18

C. Hancock Lumber shall continuously operate the fly ash re-injection system on Boiler #3 whenever Boiler #3 is in operation. Hancock Lumber shall keep a log of all maintenance performed on the fly ash re-injection system. [06-096 CMR 115, BPT]

D. Visible emissions from Boiler #2 (serving boiler #3) shall not exceed 30% opacity on a six-minute block average, except for no more than two six-minute block averages in a continuous three-hour period. [06-096 CMR 101]

(18) **Kilns**

A. Hancock Lumber's kilns shall not exceed a yearly throughput of 23.5 million board feet per year, based on a twelve-month rolling total. [06-096 CMR 115, BPT]

B. Hancock Lumber shall keep monthly records of board feet processing in the kiln. [06-096 CMR 115, BPT]

C. Visible emissions from the each kiln shall not exceed 20% opacity on a six-minute block average, except for no more than one six-minute block average in a one-hour period. [06-096 CMR 101]

(19) **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% in any one (1) hour. [06-096 CMR 101]

(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. [06-096 CMR 101]

(21) Hancock Lumber 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).

(22) **Annual Emission Statement**

In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), Hancock Lumber 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.

DONE AND DATED IN AUGUSTA, MAINE THIS 21st DAY OF October , 2011.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie Loyzim for
PATRICIA W. AHO, 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 27, 2011

Date of application acceptance: February 1, 2011

Date filed with the Board of Environmental Protection:

This Order prepared by Kevin J. Ostrowski, Bureau of Air Quality.