



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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GOVERNOR

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Irving Forest Products, Inc.
Aroostook County
Ashland, Maine
A-314-77-2-M

Departmental
Findings of Fact and Order
New Source Review
NSR #2

FINDINGS OF FACT

After review of the air emissions license minor revision application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), Section 344 and Section 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Irving Forest Products, Inc. (Irving)
LICENSE TYPE	06-096 CMR 115, Minor Revision
NAICS CODES	321912 (cutstock, resawing, planing), 32113 (sawmill), 321999 (misc. wood product mfg.)
NATURE OF BUSINESS	Wood Products
FACILITY LOCATION	Ashland – Nashville Plantation

The Irving facility is an existing stationary major source for criteria pollutants currently licensed under Part 70 air emission license A-314-70-E-R (issued January 11, 2011). A mill modernization project was licensed under New Source Review amendment A-314-77-1-A (issued October 25, 2013) for two relocated biomass boilers (Boilers 4 and 5), the existing oil boiler (Boiler 2), two relocated lumber kilns, and sawmill and planer equipment.

Irving has submitted a minor revision request to allow the biomass boilers to fire oil soaked sawdust, wood chips, and absorbent pads resulting from the clean-up of small spills.

B. Amendment Description

Irving's minor revision request is for the ability to fire material used to absorb oil spills at the facility in the biomass boilers. The requested language is similar to what was included in a previous license for the facility when a large oil/biomass boiler (Boiler 3) was on-site and operating. For the relocated biomass Boilers 4

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and 5, the amount of spilled oil material licensed to be burned in the boilers will be less.

C. 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>Manu-factured Date</u>	<u>Installed Date</u>	<u>Fuel Type</u>	<u>Stack #</u>
Boiler 4 (relocated)	25.7	5711 lb/hr	1997	2014	Biomass (50 % moisture, 4500 Btu/lb) Spill Material*	4
Boiler 5 (relocated)	25.7	5711 lb/hr	2008	2014	Biomass (50 % moisture, 4500 Btu/lb) Spill Material*	5

* Added in this license: Allowable fuel of oil soaked sawdust, wood chips, and absorbent pads from on-site spill clean-up activities.

D. Application Classification

The application submitted by Irving does not violate any applicable federal or state requirements, does not reduce monitoring, reporting, testing or record keeping, and does not seek to modify a Best Available Control Technology (BACT) analysis.

The proposed revision will not result in an emissions increase of any licensed allowed emissions and will also not result in a noticeable change in actual emissions from the biomass boilers. Therefore, the amendment is determined to be a minor revision under *Minor and Major Source Air Emission License Regulations* 06-096 Code of Maine Rules (CMR) 115 (as amended). The procedures found in 06-096 CMR 115 (as amended) can be utilized to process this application since the proposed revision not prohibited by the Part 70 air emission license. An application to incorporate the requirements of this amendment into the Part 70 air emission license shall be submitted no later than 12 months from commencement of the requested operation.

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

B. Additional Fuel Allowance

Irving submitted a request to allow Boilers 4 and 5 to add spilled distillate oil absorbed in sawdust, wood chips, and absorbent pads as an allowed material to be fired in the boilers. Irving has stated the absorbed spilled oil will predominantly consist of diesel fuel with a sulfur content of 0.0015% by weight. The firing of the absorbed spilled oil will not be a regular occurrence.

The emission limits for the boilers will not change as a result of this fuel addition based on the ultra-low sulfur content of the fuel. Pollutant emissions that can vary between firing fuel oil as compared to biomass is predominantly sulfur dioxide (SO₂), dependent on the sulfur content of the fuel oil. The SO₂ emission limit for biomass firing was based on a 0.025 lb/MMBtu emission factor. Firing 0.0015% sulfur distillate oil results in an SO₂ emission rate of 0.0015 lb/MMBtu using mass balance calculations:

$$(0.000015 \text{ lb S/lb fuel}) * (7.05 \text{ lb fuel/gal density}) * (64 \text{ lb SO}_2/32 \text{ lb S}) * (\text{gal}/0.14 \text{ MMBtu heat content}) = 0.0015 \text{ lb/MMBtu SO}_2$$

The fuel oil mass balance SO₂ emission factor of 0.0015 lb/MMBtu is less than the 0.025 lb/MMBtu factor used for biomass. The other pollutant emissions are also comparable, or less, with fuel oil firing.

Irving shall have a 5000 gallons/year limit on firing distillate oil soaked sawdust, wood chips, and absorbent pads from on-site spill clean-up activities, based on a 12 month rolling total. The biomass boilers currently have a license requirement in amendment A-314-77-1-A for recording annual fuel use on a monthly and 12-month rolling total. The fuel use records shall now also include the estimated amount of oil (in gallons) fired in oil soaked sawdust, wood chips, and absorbent

pads. Documentation shall also include the origin of the spill. For recordkeeping purposes, one drum of absorbent pads shall be considered to be 55 gallons of oil spill product. The spilled oil shall be from on-site or facility related occurrences. The oil fired shall be distillate oil.

Irving has stated that other spilled oils will be contained within the mill and will be burned in a waste oil burner. That burner is rated less than 1 MMBtu/hr input capacity and is not included in this license since it is below the insignificant activity threshold. However, the rules of specification and non-specification waste oil shall apply to the waste oil burner per 06-096 CMR 860 (Chapter 860) of the Department's regulations through the Bureau of Remediation and Waste Management.

C. Incorporation into the Part 70 Air Emission License

The requirements in this 06-096 CMR 115 New Source Review amendment shall apply to the facility upon amendment issuance. Per *Part 70 Air Emission License Regulations*, 06-096 CMR 140 (as amended), Section 1(C)(8), for a modification that has undergone NSR requirements or been processed through 06-096 CMR 115, the source must then apply for an amendment to the Part 70 license within one year of commencing the proposed operations as provided in 40 CFR Part 70.5.

III. Annual Emissions

The facility licensed annual emissions are not being revised with this amendment.

A. Criteria Pollutants

Irving shall continue to be restricted to the following annual emissions, based on a 12 month rolling total. The tons per year limits were calculated based on a biomass annual use limit of 35,000 tons/year (including sawdust, wood chips, and/or absorbent pads with 5000 gallons/year of absorbed distillate oil), a #2 fuel oil use limit of 250,000 gallons/year, and a 500 hr/year operating restriction on the emergency generator:

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

	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Boiler 2	3.5	3.5	0.4	0.9	4.4	0.7	0.2
Boilers 4 and 5 total	47.3	47.3	32.6	3.9	34.7	94.5	2.7
Emergency Generator 1	0.13	0.13	-	0.0006	1.8	0.4	0.15
Lumber Kilns	-	-	-	-	-	-	83.4
Total TPY	50.9	50.9	33.0	4.8	40.9	95.6	86.5

B. Hazardous Air Pollutants

Emissions of hazardous air pollutants from Irving have been calculated to be below the major source threshold based on the boiler fuel limits, the kilns' operations, information in the Part 70 air emission license A-314-70-E-R, and data submitted in the application associated with this new source review amendment. Irving shall be limited to the following HAP emissions:

Single HAP	10 tons/year
Total HAPs	25 tons/year

C. 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 (CO₂e).

Based on the facility's fuel use limit(s), the worst case emission factors from AP-42, IPCC (Intergovernmental Panel on Climate Change), and *Mandatory Greenhouse Gas Reporting*, 40 CFR Part 98, and the global warming potentials contained in 40 CFR Part 98, Irving is below the major source threshold of 100,000 tons of CO₂e per year. Therefore, no additional licensing requirements are needed to address GHG emissions at this time.

IV. AMBIENT AIR QUALITY ANALYSIS

Irving previously submitted an ambient air quality analysis demonstrating that emissions from the facility, in conjunction with all other sources, do not violate ambient air quality standards, as summarized in A-22-77-1-A (October 25, 2013). An additional ambient air quality analysis is not required for this minor revision.

ORDER

The Department hereby grants Air Emission License Minor Revision A-314-77-2-M pursuant to the preconstruction licensing requirements of 06-096 CMR 115 and subject to the specific conditions below.

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.

SPECIFIC CONDITIONS

(1) **Biomass Boilers – Distillate Oil Material**

- A. In Boilers 4 and 5, Irving may burn up to 5000 gallons/year of distillate oil (0.0015% sulfur, by weight) soaked sawdust, wood chips, and absorbent pad material resulting from onsite spills, based on a 12-month rolling total. Distillate oil spill clean-up material from facility related off-site maintenance and other associated activities shall also be allowed to be burned.
- B. Irving shall maintain records of the estimated annual firing of spilled distillate oil in the boilers on a monthly and 12-month rolling total. For recordkeeping purposes, one drum of absorbent pads shall be considered to be 55 gallons of oil spill product. Documentation shall also include a record of the spill origin.

[06-096 CMR 115, BACT]

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- (2) Irving shall submit an application to incorporate this amendment into the Part 70 air emission license no later than 12 months from commencement of the requested operation. [06-096 CMR 140, Section 1(C)(8)]

DONE AND DATED IN AUGUSTA, MAINE THIS 1 DAY OF August, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: *Patricia W. Aho*
PATRICIA W. AHO, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 12, 2014

Date of application acceptance: March 18, 2014

Date filed with the Board of Environmental Protection:

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

