STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

Irving Forest Products, Inc. **Aroostook County** **Nashville Plantation, Maine** **A-314-70-G-A**	**Departmental** **Findings of Fact and Order** **Part 70 Air Emission License** **Amendment #1**

FINDINGS OF FACT

After review of the Part 70 License Amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes (M.R.S.) § 344 and § 590, the Maine Department of Environmental Protection (Department) finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Irving Forest Products, Inc. (Irving) – Ashland Sawmill
LICENSE TYPE	Part 70 Significant License Modification
NAICS CODES	321912 (Cut Stock, Resawing Lumber, and Planing), 321113 (Sawmills), and 321999 (All Other Miscellaneous Wood Product Manufacturing)
NATURE OF BUSINESS	Wood Products
FACILITY LOCATION	1218 Portage Road, Nashville Plantation, Maine 04732

Irving Forest Products, Inc. (Irving) is an existing stationary source currently operating under Part 70 License A-314-70-F-R/A, issued August 21, 2018, and licenses to construct issued under the New Source Review (NSR) program as found in Minor and Major Source Air Emission License Regulations, 06-096 Code of Maine Rules (C.M.R.) ch. 115. The facility is a lumber mill that receives round wood logs and processes them into kiln-dried lumber. Licensed equipment at the facility includes boilers, a wood yard, a sawmill, a planer mill, an emergency fire pump, a wood chip screen, and lumber drying kilns.

Irving has requested an amendment to the facility's Part 70 License to incorporate the terms and conditions of NSR Licenses A-314-77-5-A (January 17, 2019), A-314-77-6-M (April 17, 2019), and A-314-77-7-A (June 24, 2019) into their Part 70 License. The Department is also using this amendment as an opportunity to clarify the recordkeeping and reporting required by *Emission Statements*, 06-096 C.M.R. ch. 137.

B. Emission Equipment

The following emission units are addressed by this Part 70 License Amendment:

Boilers

Equipment	Max. Heat Input Capacity (MMBtu/hr)	Max. Firing Rate	Fuel Type, % sulfur	Manuf. Date	Install. Date	Stack #
Boiler #4	25.7 [each]	5,711 lb/hr [each][1]	Biomass, negl.	1997	2014	4
Boiler #5			Spill material[2], 0.0015%	2008	2014	5
Boiler #7	13.5	96.5 gal/hr	Distillate fuel, 0.0015%	1982	2018	7

1. At 4,500 Btu/lb and 50% moisture, by weight
2. Oil soaked sawdust, wood chips, and absorbent pads from on-site spill clean-up activities; up to 5,000 gal/yr, total for both units combined.

Engines

Equipment	Max. Heat Input Capacity (MMBtu/hr)	Max. Firing Rate (gal/hr)	Output (kW)	Fuel Type, % sulfur	Mfr. Date	Install. Date
CEC Screen Engine	0.63	4.6	72.4	Distillate fuel, 0.0015%	2013	2013
Fire Pump #1[1]	1.7	12	N/A		1967	2018[2]

1. This remanufactured unit replaces the unit addressed as Fire Pump #1 in Air Emission License A-314-70-F-R/A. From this point on, Fire Pump #1 shall refer to this remanufactured unit unless otherwise stated.
2. This is based on the date the unit was remanufactured; the unit was originally installed at the facility in 1967.

Process Equipment

Equipment	Production Rate	Install. Date	Stack #
CEC Screen	Variable	2010	Fugitive

In NSR License A-314-77-7-A (June 24, 2019), Irving also received permission to install a 400-kW steam turbine to generate electricity from the steam coming directly from the boilers. The resulting steam coming from the turbine will be at a lower pressure appropriate for distribution to the facility's Lumber Drying Kilns. Any potential increases in steam demand or emissions resulting from installation of this unit were addressed by the facility's request to increase the biomass fuel limit for Boilers #4 and #5 (combined), which was also addressed in NSR License A-314-77-7-A (June 24, 2019). The steam turbine is otherwise not subject to any licensing requirements and will not be addressed further in this Part 70 License Amendment.

C. Definitions

Biomass. For the purposes of this license and in accordance with 40 Code of Federal Regulations (C.F.R.) Part 63, Subpart JJJJJJ, *biomass* means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); and vegetative agricultural and silvicultural materials, such as logging residues (slash). This definition also includes wood as defined in 40 C.F.R. Part 60, Subpart Dc.

Distillate Fuel means the following:

- Fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials (ASTM) in ASTM D396;
- Diesel fuel oil numbers 1 or 2, as defined in ASTM D975;
- Kerosene, as defined in ASTM D3699;
- Biodiesel, as defined in ASTM D6751; or
- Biodiesel blends, as defined in ASTM D7467.

Replacement Unit. According to 40 C.F.R. § 51.165(a)(1)(xxi), *replacement unit* means an emissions unit for which all of the following criteria are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.

- The emissions unit is a reconstructed unit within the meaning of 40 C.F.R. § 60.15(b)(1), or the emissions unit completely takes the place of an existing emission unit;
- The emissions unit is identical to or functionally equivalent to the replaced emissions unit;
- The replacement does not alter the basic design parameters (as discussed in 40 C.F.R. § 51.165(h)(2)) of the process unit; and
- The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical manner. If the replaced unit is brought back into operation, it shall constitute a new emissions unit.

D. Application Classification

All rules, regulations, or statutes referenced in this air emission license refer to the amended version in effect as of the issued date of this license.

Irving has requested incorporation into the Part 70 Air License the relevant terms and conditions of New Source Review (NSR) licenses A-314-77-5-A, issued January 17, 2019, A-314-77-6-M, issued April 17, 2019, and A-314-77-7-A, issued June 24, 2019, pursuant to *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115. The inclusion of NSR requirements from these NSR licenses is not considered a Part 70 minor license modification or Part 70 administrative revision. Therefore, the license is considered to be a Part 70 significant license modification and has been processed through *Part 70 Air Emission License Regulations*, 06-096 C.M.R. ch. 140.

II. BEST PRACTICAL TREATMENT (BPT) AND EMISSION STANDARDS

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 C.M.R. ch. 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. NSR License Descriptions

Below are descriptions of the three NSR licenses being incorporated into the Part 70 license as part of this amendment. All three licenses were issued pursuant to federal NSR Prevention of Significant Deterioration (PSD) requirements and the Department's air licensing requirements for minor modifications at major stationary sources.

1. NSR License A-314-77-5-A

   The Department issued NSR License A-314-77-5-A to Irving on January 17, 2019. This license was issued to permit the installation of the distillate fuel-fired Boiler #7, which at the time was intended to be a temporary, seasonal unit, as well as to address the licensing of an existing engine and screening unit that had not previously been addressed in either an NSR license or the facility's Part 70 Air Emission License.

2. NSR License A-314-77-6-M

   The Department issued NSR License A-314-77-6-M to Irving on April 17, 2019. This license was issued to address the like-kind replacement of the facility's fire pump engine, which had failed in mid-2018. The engine that failed was subsequently replaced with a remanufactured unit of the same make, model, year of manufacture, and fuel as the original. This unit, also identified as Fire Pump #1, was determined to meet the definition of replacement unit as defined in 40 C.F.R. § 51.165(a)(1)(xxi) and thus was considered an existing emissions unit.

3. NSR License A-314-77-7-A

   The Department issued NSR License A-314-77-7-A to Irving on June 24, 2019. This license was issued to address the installation of a 400-kW steam turbine and to amend several of the facility's previous NSR licenses to address future equipment changes at the facility. The NSR licenses amended by this licensing action included the following:

   - A-314-77-1-A, issued October 25, 2013, to increase the biomass fuel limit for Boilers #4 and #5 (combined) from 35,000 tons/year to 37,450 tons/year on a 12-month rolling total basis;
   - A-314-77-3-A, issued November 6, 2016, and A-314-77-4-M, issued December 5, 2017, to address Irving's decision not to install Boiler #6 and thus have all requirements pertaining to it removed from all previous NSR licenses; and
   - A-314-77-5-A, issued January 17, 2019, to reclassify Boiler #7 from an existing seasonal boiler to an existing oil-fired boiler under *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ and to remove the requirement that Boiler #7 only be permitted to operate until the end of the tuning and adjustment period for Boiler #6 because the facility chose to retain Boiler #7 instead of installing Boiler #6.

C. Boilers #4 and #5 Fuel Limit Increase

As part of this amendment, Irving has asked to incorporate the biomass fuel limit increase for Boilers #4 and #5 combined addressed in NSR License A-314-77-7-A (6/24/2019) into their Part 70 license. This change, which increased the biomass fuel limit for the two units from 35,000 tons/year to 37,450 tons/year based on a 12-month rolling total and 50% moisture, did not modify the facility's licensed lb/hr emission limits, nor did it affect the units' regulatory requirements. Irving shall maintain documentation demonstrating compliance with the new biomass fuel limit on a monthly and 12-month rolling total basis.

Documentation demonstrating compliance with the Boilers #4 and #5 biomass fuel limit shall include records of fuel use on a 50% moisture basis using the formula below, when necessary, to convert fuel use records to 50% moisture. Biomass moisture content shall be measured at least once per month. Records of fuel use shall be kept on a monthly and 12-month rolling total basis and shall be calculated based on using conversion ratios to convert from lb/hr steam output to Btu/hr steam output, then using the efficiency of the boiler and the heating value of the fuel (determined by the moisture content) to calculate biomass input in tons.

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

Where M = the actual moisture content of the biomass fired

D. Boiler #7

Boiler #7 is a distillate fuel-fired boiler manufactured in 1982 and installed at this location in late 2018. Boiler #7 was designed with a heat input capacity of 13.5 MMBtu/hr and combusts distillate fuel with a maximum sulfur content of 0.0015%, by weight (15 ppm). Boiler #7 is operated to provide supplemental steam at Irving as needed to maintain full facility operation. Boiler #7 has an annual distillate fuel limit of 250,000 gallons/year on a 12-month rolling total basis and exhausts through its own 65-foot above ground level (AGL) stack, Stack #7. Boiler #7 is located in the boiler building along with Boilers #4 and #5.

1. New Source Performance Standards (NSPS)

   Due to its year of manufacture, Boiler #7 is not subject to the New Source Performance Standards (NSPS) titled *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 C.F.R. Part 60, Subpart Dc, for units greater than 10 MMBtu/hr manufactured after June 9, 1989. [40 C.F.R. § 60.40c]

2. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

Boiler #7 is subject to *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 C.F.R. Part 63, Subpart JJJJJJ. The unit is considered an existing oil-fired boiler rated greater than 10 MMBtu/hr.

The requirements of 40 C.F.R. Part 63, Subpart JJJJJJ applicable to Boiler #7 are the following:

a. General Compliance Requirement

At all times Irving must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require Irving to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 C.F.R. § 63.11205(a)]

b. Compliance Dates, Notifications, and Work Practice Requirements

(1) Initial Notification of Compliance

An Initial Notification submittal to EPA was due within 120 days after startup of Boiler #7. Irving submitted this notification to EPA on January 23, 2019. [40 C.F.R. §§ 63.11196(c) and 63.11225(a)(2)]

(2) Startup and Shutdown

Irving shall minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If the manufacturer's recommended procedures are not available, Irving shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. [40 C.F.R. § 63.11201(b)]

(3) Boiler Tune-Up Program

(i) A boiler tune-up program shall be implemented. [40 C.F.R. § 63.11223]

(ii) Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of the boiler. As an existing oil-fired boiler, Boiler #7 shall be subject to a tune-up frequency of every two years, with the first tune-up to take place no later than 30 days after startup of the unit. Irving completed the initial tune-up of Boiler #7 on January 18, 2019. [40 C.F.R. §§ 63.11210(k)(2) and 63.11223(a) and 40 C.F.R. Part 63, Subpart JJJJJJ, Table 2]

(iii)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, not to exceed 36 months from the previous inspection. [40 C.F.R. § 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 C.F.R. § 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. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. [40 C.F.R. § 63.11223(b)(3)]
4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]
5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 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 30 days of startup. [40 C.F.R. § 63.11223(b)(7)]

(iv)Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA. The report shall contain the following information [40 C.F.R. § 63.11223(b)(6)]:

1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
2. A description of any corrective actions taken as part of the tune-up of the boiler; and

3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

(v) After conducting the initial tune-up, a Notification of Compliance Status shall be submitted to EPA no later than 120 days after startup of the unit. Irving submitted their Notification of Compliance Status to EPA via CEDRI on February 20, 2019. [40 C.F.R. §§ 63.11214(b) and 63.11225(a)(4)]

(4) Compliance Report

A compliance report shall be prepared by March 1st every two years which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and to the EPA upon request. The report must include the items contained in 40 C.F.R. §§ 63.11225(b)(1) and (2), including the following [40 C.F.R. § 63.11225(b)]:

(i) Company name and address;
(ii) A statement of whether the source has complied with all the relevant requirements of this Subpart;
(iii) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature; and
(iv) The following certifications, as applicable:

1. "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
2. "No secondary materials that are solid waste were combusted in any affected unit."
3. "This facility complies with the requirement in 40 C.F.R. §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

(5) Energy Assessment

Boiler #7 is not subject to the energy assessment requirement. Irving previously completed a one-time energy assessment at the facility on June 6, 2016, had a comprehensive report generated on June 22, 2016, and submitted a Notification of Compliance Status to EPA on August 8, 2017. The energy use systems at the

facility have not substantially changed since the one-time energy assessment was previously completed; therefore, Irving is not required to complete an energy assessment on Boiler #7. [40 C.F.R. § 63.11214(c)]

c. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:

(1) Copies of notifications and reports with supporting compliance documentation;
(2) Identification of each boiler, date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
(3) Records of the occurrence and duration of each malfunction of each applicable boiler; and
(4) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review. EPA requires submission of Notification of Compliance Status reports for tune-ups and energy assessments through their electronic reporting system. [40 C.F.R. § 63.11225(a)(4)(vi)]

3. Emission Limits and Streamlining

a. Criteria Pollutants

For Boiler #7, a listing of potentially applicable emission standards, the origin and authority of the standards, notation if streamlining of the standards has been requested (* denotes a request for streamlining), and the applicable emission limits can be found below. Limits are on a 1-hour block average basis unless otherwise stated.

Pollutant	Applicable Emission Standards	Origin and Authority	Licensed Emission Limits
PM	0.12 lb/MMBtu	06-096 C.M.R. ch. 103, § 2.B.(1)(a)	0.08 lb/MMBtu*
	0.08 lb/MMBtu	A-314-77-7-A (6/24/2019), BACT	
	1.08 lb/hr	A-314-77-7-A (6/24/2019), BACT	1.08 lb/hr
PM_{10}	1.08 lb/hr	A-314-77-7-A (6/24/2019), BACT	1.08 lb/hr
SO_2	0.02 lb/hr (based on 0.0015% sulfur, by weight)	A-314-77-7-A (6/24/2019), BACT	0.02 lb/hr
NO_x	1.93 lb/hr	A-314-77-7-A (6/24/2019), BACT	1.93 lb/hr
CO	0.54 lb/hr	A-314-77-7-A (6/24/2019), BACT	0.54 lb/hr
VOC	0.02 lb/hr	A-314-77-7-A (6/24/2019), BACT	0.02 lb/hr

b. Visible Emissions

Visible emissions from Boiler #7 shall not exceed 20% opacity on a 6-minute block average basis. [A-314-77-7-A (6/24/2019), BACT (before 1/1/2020) and 06-096 C.M.R. ch. 101, § 3.A.(2) (after 1/1/2020)]

4. Emission Limit Compliance Methods

Compliance with the emission limits associated with Boiler #7 shall be demonstrated in accordance with the methods and frequencies indicated in the table below or other methods or frequencies as approved by the Department.

Pollutant	Applicable Emission Limit	Compliance Method	Frequency
PM	lb/MMBtu lb/hr	40 C.F.R. Part 60, App. A, Method 5	As requested
PM_{10}	lb/hr	EPA Test Method 201 or 201A	As requested
SO_2	lb/hr	40 C.F.R. Part 60, App. A, Method 6	As requested
NO_X	lb/hr	40 C.F.R. Part 60, App. A, Method 7	As requested
CO	lb/hr	40 C.F.R. Part 60, App. A, Method 10	As requested
VOC	lb/hr	40 C.F.R. Part 60, App. A, Method 25 or 25A	As requested
Visible Emissions	20% opacity on a 6-minute block average basis	40 C.F.R. Part 60, App. A, Method 9	As requested

5. Compliance Assurance Monitoring (CAM)

CAM is not applicable to Boiler #7.

6. Periodic Monitoring

Irving shall monitor and record values for Boiler #7 as indicated in the following table whenever the equipment is operating. [06-096 C.M.R. ch. 140, BPT]:

Boiler #7			
Monitored Value	Units of Measure	Monitoring Tool/Method	Frequency
Distillate fuel use	Gallons	Fuel flow meter	Monthly and 12-month rolling total
Distillate fuel sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel is delivered
Operating time	Hours	Boiler control system (DCS)	Monthly and calendar year total

7. Parameter Monitors

   There are no Parameter Monitors required for Boiler #7.

8. CEMS and COMS

   Boiler #7 is not required to have any continuous emission monitoring systems (CEMS) or continuous opacity monitoring systems (COMS).

E. Fire Pump #1 and CEC Screen Engine

Fire Pump #1 is rated at 1.7 MMBtu/hr and was originally manufactured in 1967. Fire Pump #1 fires distillate fuel at a maximum rate of 12 gallons/hour and exhausts through its own stack. The unit was previously unlicensed and rendered inoperable per Condition (7)B. of NSR License A-314-77-1-A (10/25/2013) until being remanufactured and placed into service in December 2018 to replace the previously licensed Fire Pump #1 (originally licensed as Emergency Generator 1 in A-314-77-1-A (10/25/2013) after it abruptly failed in November 2018. The distillate fuel fired in Fire Pump #1 shall be limited to 0.0015% sulfur by weight (15 ppm), and compliance with this limit shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. Additionally, Fire Pump #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations.

As established in NSR License A-314-77-6-M (4/17/2019), Fire Pump #1 is considered to be a replacement unit and is considered to be an existing unit instead of a new unit and is thus subject to the requirements of the unit it replaced. Additionally, NSR License A-314-77-6-M (4/17/2019) established that although Fire Pump #1 was remanufactured, the fixed capital costs of remanufacturing Fire Pump #1 were less than half the costs of a comparable new unit; therefore, the engine retained its manufacture date of 1967 for the purposes of identifying applicable federal engine requirements.

The CEC Screen Engine is a portable, non-road engine used to power the CEC Screen, which is a screen separator unit used to separate wood chips into different sizes for various markets and is considered an insignificant activity per Appendix B of 06-096 C.M.R. ch. 140. The CEC Screen Engine has a maximum heat input capacity of 0.63 MMBtu/hr (72.4 kW output) and fires distillate fuel with a maximum sulfur content not to exceed 0.0015% by weight (15 ppm). The unit is a Deutz Model BF4L914 engine manufactured and installed in 2013 and meets all federal emission compliance requirements for the 2013 model year.

Irving shall operate and maintain the CEC Screen Engine according to the manufacturer's emission-related written instructions, or Irving shall develop a maintenance plan which provides to the extent practicable for maintenance and operation of the CEC Screen Engine in a manner consistent with good air pollution control practices for minimizing emissions.

1. Control Equipment

   Neither Fire Pump #1 nor the CEC Screen Engine is required to have any control equipment.

2. New Source Performance Standards (NSPS)

   Fire Pump #1 was manufactured prior to the applicability dates of Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII. According to the definition of "date of manufacture" in 40 C.F.R. § 60.4219, the date of manufacture for a reconstructed engine is the date of original manufacture unless the fixed capital costs of all new and refurbished components is greater than 75% of the fixed capital costs of an entirely new unit. As established in NSR License A-314-77-6-M (1/17/2019), the cost of remanufacturing Fire Pump #1 was less than 50% of the cost of an entirely new unit; therefore, Fire Pump #1 retains its original manufacture date of 1967 and is not subject to 40 C.F.R. Part 60, Subpart IIII. [40 C.F.R. §§ 60.4200 and 60.4219]

   The CEC Screen Engine is considered a non-road engine, as opposed to a stationary engine, since the CEC Screen Engine is portable and will be moved to various sites with the CEC Screen. Therefore, the CEC Screen Engine is not subject to Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. Part 60, Subpart IIII. [40 C.F.R. § 60.4200]

3. National Emissions Standards for Hazardous Air Pollutants (NESHAP)

   CEC Screen Engine

   The CEC Screen Engine is considered a non-road engine, as opposed to a stationary engine, since the CEC Screen Engine is portable and will be moved to various sites with the CEC Screen. Therefore, the CEC Screen Engine is not subject to *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,* 40 C.F.R. Part 63, Subpart ZZZZ. The definition in 40 C.F.R. § 1068.30 states that a non-road engine is an internal combustion engine that meets certain criteria, including: "Portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform." 40 C.F.R. § 1068.30 further states that an engine is not a non-road engine if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. An engine located at a seasonal source (a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year) is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. [40 C.F.R. § 63.6585]

Fire Pump #1

National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines 40 C.F.R. Part 63, Subpart ZZZZ is applicable to Fire Pump #1. The unit is considered an existing, emergency stationary reciprocating internal combustion engines (RICE) at an area HAP source and is not subject to New Source Performance Standards regulations. EPA's August 9, 2010 memo (*Guidance Regarding Definition of Residential, Commercial, and Institutional Emergency Stationary RICE in the NESHAP for Stationary RICE*) specifically does not exempt this unit from the federal requirements.

The criteria and requirements of 40 C.F.R. Part 63, Subpart ZZZZ applicable to Fire Pump #1 are included below.

a. Emergency Engine Designation and Operating Criteria

Under Subpart ZZZZ, a stationary reciprocating internal combustion engine (RICE) is considered an **emergency** stationary RICE (emergency engine) as long as the engine is operated in accordance with the following criteria. Operation of an engine outside of the criteria specified below may cause the engine to no longer be considered an emergency engine under Subpart ZZZZ, resulting in the engine being subject to requirements applicable to **non-emergency** engines.

(1) Emergency Situation Operation (On-Site)

There is no operating time limit on the use of an emergency engine to provide electrical power or mechanical work during an emergency situation. Examples of use of an emergency engine during emergency situations include the following:

- Use of an engine to produce power for critical networks or equipment (including power supplied to portions of a facility) because of failure or interruption of electric power from the local utility (or the normal power source, if the facility runs on its own power production);
- Use of an engine to mitigate an on-site disaster or equipment failure;
- Use of an engine to pump water in the case of fire, flood, natural disaster, or severe weather conditions; and
- Similar instances.

(2) Non-Emergency Situation Operation

An emergency engine may be operated up to a maximum of 100 hours per calendar year for maintenance checks, readiness testing, and other non-emergency situations as described below.

(i) An emergency engine may be operated for a maximum of 100 hours per calendar year for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government; the manufacturer; the vendor; the regional transmission organization or equivalent balancing authority and transmission operator; or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE more than 100 hours per calendar year.

(ii) An emergency engine may be operated for up to 50 hours per calendar year for other non-emergency situations. **However, these operating hours are counted as part of the 100 hours per calendar year operating limit described in paragraph (2) and (2) (i) above.**

The 50 hours per calendar year operating limit for other non-emergency situations cannot be used for peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Fire Pump #1 shall be limited to the usage outlined in 40 C.F.R. § 63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 C.F.R. Part 63, Subpart ZZZZ. Failure to comply with all of the requirements listed in 40 C.F.R. § 63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all applicable requirements for non-emergency engines.

b. 40 C.F.R. Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements

Unit Type	Operating Limitations
Compression ignition (distillate fuel) units:	- Change oil and filter every 500 hours of operation or annually, whichever comes first; - Inspect the air cleaner every 1000 hours of operation or annually, whichever comes first, and replace as necessary; and - Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

The engine shall be operated and maintained according to the manufacturer's emission-related written instructions, or Irving shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 C.F.R. §§ 6603(a) & 63.6625(e) and 40 C.F.R. Part 63, Subpart ZZZZ, Table 2d]

(2) Optional Oil Analysis Program

Irving has the option of utilizing an oil analysis program which complies with the requirements of 40 C.F.R. § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Irving must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R. § 63.6625(i)]

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the engine. [40 C.F.R. § 63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements

During periods of startup, Irving must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) and 40 C.F.R. Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit for Maintenance and Testing

As an emergency engine, the unit shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). [40 C.F.R. § 63.6640(f)]

(6) Recordkeeping

Irving shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for

emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. § 63.6655(f)]

4. Emission Limits and Streamlining

a. Criteria Pollutants

Emissions from Fire Pump #1 and the CEC Screen Engine shall not exceed the following limits [A-314-77-5-A (1/17/2019), BACT (CEC Screen Engine) & A-314-77-6-M (4/17/2019), BPT (Fire Pump #1)]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump #1	0.52	0.52	0.003	7.36	1.59	0.60
CEC Screen Engine	0.08	0.08	0.01	2.78	0.60	0.22

b. Visible Emissions

Visible emissions from Fire Pump #1 and the CEC Screen Engine shall each not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Irving may elect to comply with the following work practice standards in lieu of the numerical opacity limit [A-314-77-5-A (1/17/2019), BACT (CEC Screen Engine) & A-314-77-6-M (4/17/2019), BPT (Fire Pump #1)]:

(1) Irving shall maintain a log (written or electronic) of the date, time, and duration of all generator startups for each unit which result in electing to comply with this section.

(2) Fire Pump #1 and the CEC Screen Engine shall each be operated in accordance with the manufacturer's emission-related operating instructions.

(3) Irving shall minimize each engine's time spent at idle during startup and minimize each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.

(4) Fire Pump #1 and the CEC Screen Engine, including any associated air pollution control equipment, shall each be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review

of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

The BACT and BPT visible emission limits listed above are determined to be more stringent than the applicable limit in 06-096 C.M.R. ch. 101. Therefore, the visible emission limits for Fire Pump #1 and the CEC Screen Engine have been streamlined to the more stringent BACT and BPT limits, and only the more stringent limits shall be included in this air emission license.

5. Emission Limit Compliance Methods

Compliance with the emission limits associated with Fire Pump #1 and the CEC Screen Engine shall be demonstrated in accordance with the appropriate test methods as approved by the Department upon request of the Department.

6. Compliance Assurance Monitoring

CAM is not applicable to either Fire Pump #1 or the CEC Screen Engine.

7. Periodic Monitoring

For Fire Pump #1 and the CEC Screen Engine, Irving shall periodically monitor and record the information indicated in the following table [A-314-77-6-M (4/17/2019), BPT (Fire Pump #1) & 06-096 C.M.R. ch. 140, BPT (CEC Screen Engine)]:

Information	Units of Measure	Monitoring Tool/Method	Frequency	Applicable Unit(s)
Distillate fuel sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel delivery receipts are received	CEC Screen Engine and Fire Pump #1
Operating time	Hours	Hour meter	Monthly and calendar year total	Fire Pump #1
Type of operation (emergency, maintenance, etc.)	N/A	Recorded electronically or in logbook	As it occurs	Fire Pump #1

8. Parameter Monitors

There are no Parameter Monitors required for either Fire Pump #1 or the CEC Screen Engine.

9. CEMS and COMS

There are no CEMS or COMS required for either Fire Pump #1 or the CEC Screen Engine.

F. Fugitive Emissions

Visible emissions from any fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a five-minute block average basis. [06-096 C.M.R. ch. 140, BPT (before 1/1/2020) and 06-096 C.M.R. ch. 101, § 3.C. (after 1/1/2020)]

G. Emissions Statement

Irving is subject to emissions inventory requirements contained in *Emission Statements*, 06-096 C.M.R. ch. 137. Irving shall maintain the following records in order to comply with this rule:

1. The amount of distillate fuel fired in Boiler #7, Fire Pump #1, and the CEC Screen Engine (each) on a monthly basis;
2. The amount of wood fired (at 50% moisture) in Boilers #4 and #5 (each) on a monthly basis;
3. The sulfur content of the distillate fuel fired in Boiler #7, Fire Pump #1, and the CEC Screen Engine;
4. Kiln throughput on a monthly basis for the three Lumber Drying Kilns combined;
5. Calculations of the VOC and/or HAP emissions from the use of SAPTEK 200 (tree species identifier) on a calendar year total basis; and
6. Hours of operation of each licensed emission unit on a monthly basis.

In reporting year 2020 and every third year thereafter, Irving shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). The Department will use these reports to calculate and invoice for the applicable annual air quality surcharge for the subsequent three billing periods. Irving shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3).
[38 M.R.S. § 353-A(1-A)]

H. Facility Annual Emissions

Irving shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on the following:

- A biomass fuel limit of 37,450 tons/year (including sawdust, wood chips, and/or absorbent pads with up to 5,000 gal/year of absorbed distillate fuel) for Boilers #4 and #5 combined;
- A distillate fuel limit of 250,000 gal/year for Boiler #7;
- 100 hours/year of operation for Fire Pump #1;
- A throughput limit of 145 MMBF/year for the three Lumber Drying Kilns combined;
- A use limit of 3,080 gal/year of SAPTEK 200 for the Sawmill; and
- 8,760 hours/year of operation for the CEC Screen Engine.

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
Boilers #4 and #5 (combined)	50.6	53.4	35.4	4.2	37.1	101.1	2.9
Boiler #7	1.4	1.4	0.2	0.1	1.9	0.5	0.1
Fire Pump #1	0.1	0.1	---	0.1	0.4	0.1	0.1
Lumber Drying Kilns	---	---	---	---	---	---	93.0
Sawmill	---	---	---	---	---	---	10.2
CEC Screen Engine	0.3	0.3	---	0.1	12.2	2.6	1.0
Total TPY	**52.4**	**55.2**	**35.6**	**4.5**	**51.6**	**104.3**	**107.3**

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

III. 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 (see license A-314-77-1-A, issued on October 25, 2013). An additional ambient air quality analysis is not required for this Part 70 License Amendment.

ORDER

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

- will receive Best Practical Treatment;
- will not violate applicable emissions standards; and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants the Part 70 License Amendment A-314-70-G-A pursuant to 06-096 C.M.R. 140 and the preconstruction permitting requirements of *Major and Minor Source Air Emission License Regulations*, 06-096 C.M.R. ch. 115 and subject to the conditions found in Air Emission License A-314-70-F-R/A and the following conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in 06-096 C.M.R. ch. 115 for making such changes and pursuant to the applicable requirements in 06-096 C.M.R. ch. 140.

For each specific condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

Severability. The invalidity or unenforceability of any provision of this License Amendment or part thereof shall not affect the remainder of the provision or any other provisions. This License Amendment shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

SPECIFIC CONDITIONS

The following Condition shall replace Condition (14) of Air Emission License A-314-70-F-R/A (August 21, 2018):

(14) **Boilers #4, #5, and #7**

A. Fuel Use and Operation

1. Boilers #4 and #5

a. Total fuel use for Boilers #4 and #5 shall not exceed 37,450 tons/year of biomass (based on 50% moisture content and a heat content of 4,500 Btu/lb), or equivalent, based on a 12-month rolling total. [A-314-77-7-A (6/24/2019), BACT]

b. Fuel use records for Boilers #4 and #5 shall be kept on a 50% moisture basis using the formula below, when necessary, to convert fuel use records to 50% moisture. Fuel moisture content shall be measured at least once per month. [A-314-77-7-A (6/24/2019), BPT]

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

Where M = the actual moisture content of the biomass fired

c. Records of annual fuel use, calculated based on actual steam production or other method approved by the Department, shall be kept on a monthly and 12-month rolling total basis. [A-314-77-7-A (6/24/2019), BACT]

d. Distillate Fuel Spill Material

(1) Irving may burn up to 5,000 gal/year of distillate fuel-soaked sawdust, wood chips, and absorbent pad material resulting from on-site spills in Boilers #4 and #5, based on a 12-month rolling total. Distillate fuel spill clean-up material from facility related off-site maintenance and other associated activities shall also be allowed to be burned. [A-314-77-2-M (8/1/2014), BACT]

(2) Irving shall maintain records of the estimated annual firing of spilled distillate fuel in Boilers #4 and #5 on a monthly and 12-month rolling total basis. For recordkeeping purposes, one drum of absorbent pads shall be considered to be 55 gallons of distillate fuel spill product. Documentation shall also include a record of the spill origin. [A-314-77-2-M (8/1/2014), BACT]

2. Boiler #7

a. Total fuel use for Boiler #7 shall not exceed 250,000 gal/yr of distillate fuel, based on a 12-month rolling total. [A-314-77-7-A (6/24/2019), BACT]

b. The facility shall not purchase or otherwise obtain distillate fuel with a maximum sulfur content that exceeds 0.0015% by weight (15 ppm) for use in Boiler #7. [A-314-77-7-A (6/24/2019), BACT]

c. Compliance with the above shall be demonstrated by fuel records from the supplier showing the quantity, type, and percent sulfur of the fuel delivered. Fuel use records shall be kept on a monthly and 12-month rolling total basis. [A-314-77-7-A (6/24/2019), BACT]

B. Control Equipment and Stack Height

1. Irving shall operate the multi-clones on Boilers #4 and #5 at all times the boilers are in operation. Irving shall keep records documenting maintenance, malfunctions, and downtime of the multi-clones. [A-314-77-1-A (10/25/2013), BACT]

2. Boilers #4 and #5 shall each exhaust through individual stacks with a stack height of at least 100 feet above ground level. [A-314-77-1-A (10/25/2013), BACT]

3. The Boiler #7 stack shall be no less than 65 feet above ground level, which is equivalent to 60% of GEP stack height. [A-314-77-7-A (6/24/2019)]

C. Boilers #4, #5, and #7 Emission Limits

1. Emissions from Boilers #4 and #5 shall each not exceed the following limits:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.3	A-314-77-1-A (10/25/2013), BACT

Pollutant	lb/hr	Origin and Authority
PM	7.7	A-314-77-1-A (10/25/2013), BACT
PM_{10}	7.7	
$PM_{2.5}$	5.3	
SO_2	0.6	
NO_X	5.7	
CO	15.4	
VOC	0.4	

2. Emissions from Boiler #7 shall not exceed the following limits:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.08	A-314-77-7-A (6/24/2019), BACT

Pollutant	lb/hr	Origin and Authority
PM	1.08	A-314-77-7-A (6/24/2019), BACT
PM_{10}	1.08	
SO_2	0.02	
NO_X	1.93	
CO	0.54	
VOC	0.02	

D. Visible Emissions

1. Boilers #4 and #5

Visible emissions from Boilers #4 and #5 shall each not exceed 20% opacity on a six-minute block average basis, except for periods of startup, shutdown, and malfunction, during which time the unit operator may elect to comply with the following work practice requirements in lieu of the numerical opacity limit [A-314-70-F-R/A (8/21/2018), BPT]:

a. The unit operator shall maintain a log (written or electronic) of the date, time, and duration of all startups, shutdowns, and malfunctions of Boilers #4 and #5 and their associated air pollution control equipment;

b. The unit operator shall develop and implement a written startup and shutdown plan;
c. The duration of unit startups and shutdowns shall each not exceed eight hours; and
d. The units, including any associated air pollution control equipment, shall be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is no limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the units.

2. Boiler #7

Visible emissions from Boiler #7 shall not exceed 20% opacity on a six-minute block average basis. [A-314-77-7-A (6/24/2019), BACT (before 1/1/2020) & 06-096 C.M.R. ch. 101, § 3.A.(2) (after 1/1/2020)]

3. Upon request by the Department, Irving shall demonstrate compliance with the numerical visible emission limits above through performance testing in accordance with 40 C.F.R. Part 60, Appendix A, Method 9. [40 C.F.R. § 70.6(c)(1)]

E. Compliance Methods

Compliance with the emission limits listed above shall be demonstrated in accordance with the following methods and frequencies, or other methods and frequencies as approved by the Department [06-096 C.M.R. ch. 140, BPT]:

Pollutant	Unit of Emission Standard	Compliance Method	Frequency
PM	lb/MMBtu and lb/hr	40 C.F.R. Part 60, App. A, Method 5	As requested
PM_{10}	lb/hr	EPA Test Method 201 or 201A	As requested
$PM_{2.5}$	lb/hr	EPA Test Method 201A	As requested
SO_2	lb/hr	40 C.F.R. Part 60, App. A, Method 6	As requested
NO_X	lb/hr	40 C.F.R. Part 60, App. A, Method 7	As requested
CO	lb/hr	40 C.F.R. Part 60, App. A, Method 10	As requested
VOC	lb/hr	40 C.F.R. Part 60, App. A, Method 25 or 25A	As requested

F. Periodic Monitoring

Irving shall monitor and record values for Boilers #4, #5, and #7 and their associated air pollution control equipment as indicated in the following tables whenever the equipment is operating. [06-096 C.M.R. ch. 140, BPT]

Boilers #4 and #5			
Monitored Value	**Units of Measure**	**Monitoring Tool/Method**	**Frequency**
Biomass fuel use	Tons	Steam production[1]	Monthly and 12-month rolling total
Biomass moisture content	Percent, by weight	Fuel sampling	Monthly
Amount of spilled distillate fuel fired	Gallons	One drum of material equals 55 gallons of distillate fuel	Monthly and 12-month rolling total
Distillate fuel sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel is purchased
Operating time	Hours	Boiler control system (DCS)	Monthly and calendar year total
Steam production	Pounds per hour	Steam flow meter	Continuously
Steam temperature	Degrees Fahrenheit	Thermocouple	Continuously

1. Based on using conversion ratios to convert from lb/hr steam output to Btu/hr steam output, then using the efficiency of the boiler and the heating value of the fuel (determined by the moisture content) to calculate biomass input in tons.

Boiler #7			
Monitored Value	**Units of Measure**	**Monitoring Tool/Method**	**Frequency**
Distillate fuel use	Gallons	Fuel flow meter	Monthly and 12-month rolling total
Distillate fuel sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel is delivered
Operating time	Hours	Boiler control system (DCS)	Monthly and calendar year total

Multiclones on Boilers #4 and #5		
Records Maintained	**Monitoring Tool/Method**	**Frequency**
Documentation of maintenance, malfunctions, and downtime of the multiclones	Logbook or electronic log	As each situation occurs

G. 40 C.F.R. Part 60, Subpart Dc

Irving shall comply with all requirements of 40 C.F.R. Part 60, Subpart Dc applicable to Boilers #4 and #5 including, but not limited to, the following:

Irving shall maintain records of the amount of each fuel combusted during each calendar month. [40 C.F.R. § 60.48c(g)(2)]

H. 40 C.F.R. Part 63, Subpart JJJJJJ

Irving shall comply with all requirements of 40 C.F.R. Part 63, Subpart JJJJJJ applicable to Boilers #4, #5, and #7 including, but not limited to, the following:

1. General Compliance Requirement

   At all times Irving must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require Irving to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 C.F.R. § 63.11205(a)]

2. Work Practice Standards

   a. Startup and Shutdown

      Irving shall minimize each boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If the manufacturer's recommended procedures are not available, Irving shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. [40 C.F.R. § 63.11201(b)]

   b. Boiler Tune-Up Program

      (1) The facility shall implement a boiler tune-up program. [40 C.F.R. § 63.11223]

      (2) Each tune-up shall be conducted at a frequency specified by the rule and based on the size, age, and operations of each boiler. For Boilers #4, #5, and #7, each tune-up is required once every two calendar years. [40 C.F.R. §§ 63.11210(k)(2) and 63.11223(a) and 40 C.F.R. Part 63, Subpart JJJJJJ, Table 2]

(3) The boiler tune-up program, conducted to demonstrate continuous compliance, shall be performed as specified below:

(i) 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, not to exceed 36 months from the previous inspection. [40 C.F.R. § 63.11223(b)(1)]

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame patter, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(2)]

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted, not to exceed 36 months from the previous inspection. [40 C.F.R. § 63.11223(b)(3)]

(iv) Optimize total emissions of CO, consistent with the manufacturer's specifications. [40 C.F.R. § 63.11223(b)(4)]

(v) Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 C.F.R. § 63.11223(b)(5)]

(vi) If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up. [40 C.F.R. § 63.11223(b)(7)]

(4) Tune-up Report: A tune-up report shall be maintained on-site and, if requested, submitted to EPA. The report shall contain the following information [40 C.F.R. § 63.11223(b)(6)]:

(i) The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;

(ii) A description of any corrective actions taken as part of the tune-up of the boiler; and

(iii) The types and amounts of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

c. Compliance Report

A compliance report shall be prepared by March 1st every two years for Boilers #4, #5, and #7 which covers the previous two calendar years. The report shall be maintained by the source and submitted to the Department and to EPA upon request. The report must include the items contained in 40 C.F.R. §§ 63.11225(b)(1) and (2), including the following [40 C.F.R. § 63.11225(b)]:

(1) Company name and address;
(2) A statement of whether the source has complied with all the relevant requirements of this Subpart;
(3) A statement certifying truth, accuracy, and completeness of the notification, signed by a responsible official and containing the official's name, title, phone number, email address, and signature; and
(4) The following certifications, as applicable:

(i) "This facility complies with the requirements in 40 C.F.R. § 63.11223 to conduct tune-ups of the boiler in accordance with the frequency specified in this Subpart."
(ii) "No secondary materials that are solid waste were combusted in any affected unit."
(iii)"This facility complies with the requirements in 40 C.F.R. §§ 63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available."

3. Recordkeeping

Records shall be maintained consistent with the requirements of 40 C.F.R. Part 63, Subpart JJJJJJ including the following [40 C.F.R. § 63.11225(c)]:

a. Copies of notifications and reports with supporting compliance documentation;
b. 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;
c. Records of the occurrence and duration of each malfunction of each applicable boiler; and
d. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler.

Records shall be in a form suitable and readily available for expeditious review. EPA requires submission of Notification of Compliance status reports for tune-ups

and energy assessments through their electronic reporting system. [40 C.F.R. § 63.11225(a)(4)(vi)]

The following Condition shall replace Condition (18) of Air Emission License A-314-70-F-R/A (August 21, 2018):

(18) **Fire Pump #1 and CEC Screen Engine**

A. Allowable Operation and Fuel Sulfur Content (Fire Pump #1)

1. Fire Pump #1 is licensed to fire distillate fuel. [A-314-77-6-M (4/17/2019), BPT]
2. Fire Pump #1 shall be limited to 100 hours of operation per calendar year, excluding operating hours during emergency situations. [A-314-77-6-M (4/17/2019), BPT]
3. The distillate fuel sulfur content for Fire Pump #1 shall be limited to 0.0015% sulfur by weight (15 ppm). Compliance shall be demonstrated by fuel records from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [A-314-77-6-M (4/17/2019), BPT]

B. Irving shall operate and maintain the CEC Screen Engine according to the manufacturer's emission-related written instructions, or Irving shall develop a maintenance plan which provides to the extent practicable for maintenance and operation of the CEC Screen Engine in a manner consistent with good air pollution control practice for minimizing emissions. [A-314-77-5-A (1/17/2019), BACT]

C. Fuel Sulfur Content (CEC Screen Engine)

The CEC Screen Engine is licensed to fire distillate fuel with a maximum sulfur content not to exceed 0.0015% by weight (15 ppm). Compliance shall be demonstrated by fuel records from the supplier documenting the type and sulfur content of the fuel delivered. [A-314-77-5-A (1/17/2019), BACT]

D. Emissions shall not exceed the following limits [A-314-77-5-A (1/17/2019), BACT (CEC Screen Engine) & A-314-77-6-M (4/17/2019), BPT (Fire Pump #1)]:

Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Fire Pump #1	0.52	0.52	0.003	7.36	1.59	0.60
CEC Screen Engine	0.08	0.08	0.01	2.78	0.60	0.22

E. Visible Emissions

Visible emissions from Fire Pump #1 and the CEC Screen Engine shall each not exceed 20% opacity on a six-minute block average basis except for periods of startup during which time Irving may elect to comply with the following work practice standards in lieu of the numerical opacity limit [A-314-77-5-A (1/17/2019), BACT (CEC Screen Engine) & A-314-77-6-M (4/17/2019), BPT (Fire Pump #1)]:

1. Irving shall maintain a log (written or electronic) of the date, time, and duration of all generator startups for each unit which result in electing to comply with this section.

2. Fire Pump #1 and the CEC Screen Engine shall each be operated in accordance with the manufacturer's emission-related operating instructions.

3. Irving shall minimize each engine's time spent at idle during startup and minimize each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations shall apply.

4. Fire Pump #1 and the CEC Screen Engine, including any associated air pollution control equipment, shall each be operated at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the unit.

F. Compliance Methods

Compliance with the emission limits associated with Fire Pump #1 and the CEC Screen Engine shall be demonstrated in accordance with the appropriate test methods as approved by the Department upon request of the Department. [A-314-77-6-M (4/17/2019), BPT (Fire Pump #1) & 06-096 C.M.R. ch. 140, BPT (CEC Screen Engine)]

G. Periodic Monitoring

For Fire Pump #1 and the CEC Screen Engine, Irving shall periodically monitor and record the information indicated in the following table [A-314-77-6-M (4/17/2019), BPT & 06-096 C.M.R. ch. 140, BPT (CEC Screen Engine)]:

Information	Units of Measure	Monitoring Tool/Method	Frequency	Applicable Unit(s)
Distillate fuel sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel delivery receipts are received	CEC Screen Engine and Fire Pump #1
Operating time	Hours	Hour meter	Monthly and calendar year total	Fire Pump #1
Type of operation (emergency, maintenance, etc.)	N/A	Recorded electronically or in logbook	As it occurs	Fire Pump #1

H. Fire Pump #1 shall meet the applicable requirements of 40 C.F.R. Part 63, Subpart ZZZZ, including the following:

1. Irving shall meet the following operational limitations for Fire Pump #1:

   a. Change the oil and filter every 500 hours of operation or annually, whichever comes first;
   b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
   c. Inspect the hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

   Records shall be maintained documenting compliance with the operational limitations.

   [40 C.F.R. §§ 63.6603(a) & 63.6625(e), 40 C.F.R. Part 63, Subpart ZZZ, Table 2d, and A-314-77-6-M (4/17/2019), BPT]

2. Oil Analysis Program Option

   Irving has the option of utilizing an oil analysis program which complies with the requirements of 40 C.F.R. § 63.6625(i) in order to extend the specified oil change requirement. If this option is used, Irving must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 C.F.R.§ 63.6625(i)]

3. Non-Resettable Hour Meter

   A non-resettable hour meter shall be installed and operated on Fire Pump #1. [40 C.F.R. § 63.6625(f)]

4. Maintenance, Testing, and Non-Emergency Operating Situations

   a. Fire Pump #1 shall be limited to 100 hours/year for maintenance checks and readiness testing. Up to 50 hours/year of the 100 hours/year may be used in non-emergency situations (this does not include peak shaving, demand response, or to generate income for a facility by providing power to an electric grid or otherwise supply power as part of a financial arrangement with another entity). These limits are based on a calendar year. Compliance shall be demonstrated by records (electronic or written logs) of all engine operating hours. [40 C.F.R. § 63.6640(f) and A-314-77-6-M (4/17/2019), BPT]

   b. Irving shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded through the non-resettable hour meter. Documentation shall include the number of hours the unit operated for emergency purposes, the number of hours the unit operated for non-emergency purposes, and the reason the engine was in operation during each time. [40 C.F.R. §§ 63.6655(e) and (f)]

5. Operation and Maintenance

   Fire Pump #1 shall be operated and maintained according to the manufacturer's emission-related written instructions, or Irving shall develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 C.F.R. § 63.6625(e)]

6. Startup Idle and Startup Time Minimization

   During periods of startup the facility must minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 C.F.R. § 63.6625(h) & 40 C.F.R. Part 63, Subpart ZZZZ, Table 2d]

The following shall replace Condition (22) of Air Emission License A-314-70-F-R/A (August 21, 2018):

(22) **Annual Emission Statement**

A. In accordance with *Emission Statements*, 06-096 C.M.R. ch. 137, Irving shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 C.M.R. ch. 137.

B. Irving shall keep the following records in order to comply with 06-096 C.M.R. ch. 137:

1. The amount of distillate fuel fired in Boiler #7, Fire Pump #1, and the CEC Screen Engine (each) on a monthly basis;
2. The amount of wood fired (at 50% moisture) in Boilers #4 and #5 (each) on a monthly basis;
3. The sulfur content of the distillate fuel fired in Boiler #7, Fire Pump #1, and the CEC Screen Engine;
4. Kiln throughput on a monthly basis for the three Lumber Drying Kilns combined;
5. Calculations of the VOC and/or HAP emissions from the use of SAPTEK 200 (tree species identifier) on a calendar year total basis; and
6. Hours of operation of each licensed emission unit on a monthly basis.

[06-096 C.M.R. ch. 137]

C. In reporting year 2020 and every third year thereafter, Irving shall report to the Department emissions of hazardous air pollutants as required by 06-096 C.M.R. ch. 137, § (3)(C). Irving shall pay the annual air quality surcharge, calculated by the Department based on these reported emissions of hazardous air pollutants, by the date required in Title 38 M.R.S. § 353-A(3). [38 M.R.S. § 353-A(1-A)]

The following Conditions are new to Air Emission License A-314-70-F-R/A (August 21, 2018):

(28) Irving is licensed to install and operate a new 400-kW steam turbine. [A-314-77-7-A (6/24/2019), BACT]

(29) **Fugitive Emissions**

Visible emissions from any fugitive emission source (including stockpiles and roadways) shall not exceed 20% opacity on a 5-minute block average basis. [06-096 C.M.R. ch. 140, BPT (before 1/1/2020) and 06-096 C.M.R. ch. 101, § 3.C. (after 1/1/2020)]

DONE AND DATED IN AUGUSTA, MAINE THIS 12th DAY OF December , 2019.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for
GERALD D. REID, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-314-70-F-R/A.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: July 30, 2019
Date of application acceptance: August 2, 2019

Date filed with the Board of Environmental Protection:

This Order prepared by Jonathan E. Rice, Bureau of Air Quality.

Filed
DEC 12 2019
State of Maine
Board of Environmental Protection