



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

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COMMISSIONER

**Woodland Pulp LLC  
Washington County  
Baileville, Maine  
A-215-77-8-M**

**Departmental  
Findings of Fact and Order  
New Source Review  
NSR #8**

**FINDINGS OF FACT**

After review of the New Source Review (NSR) license 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	Woodland Pulp LLC (Woodland Pulp)
LICENSE TYPE	Part 70 Minor License Modification
NAICS CODES	32211
NATURE OF BUSINESS	Pulp Production
FACILITY LOCATION	144 Main Street, Baileyville, Maine

B. Amendment Description

This NSR Minor Revision is for the inclusion of the rebuilt Lime Kiln Auxiliary Drive engine that was installed during the facility's annual maintenance outage in May 2014. The engine is a remanufactured, like-for-like replacement (same model, same year of manufacture, same energy rating, and same fuel).

C. Emission Equipment

The following equipment is addressed in this NSR license:

<u>Equipment</u>	<u>Max. Heat Input Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate (gal/hr)</u>	<u>Output</u>	<u>Fuel Type, % sulfur</u>	<u>Mfr. Date</u>	<u>Install. Date</u>
Lime Kiln Auxiliary Drive Engine	0.32	2.3	46.5 hp (33.4 kW)	Distillate Fuel, 0.0015% by weight	1986	2014

D. Application Classification

The application submitted by Woodland Pulp 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 change the facility's emission limits; therefore, the modification 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 is not prohibited by the Part 70 air emission license. This NSR minor revision shall be incorporated into the Part 70 air emission license amendment currently in process.

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. Lime Kiln Auxiliary Drive Engine

The Lime Kiln Auxiliary Drive Engine is rated at 0.32 MMBtu/hour and was originally manufactured in 1986. Because the engine was purchased by Woodland Pulp as a "remanufactured" unit, the date of manufacture came into question for purposes of identification of applicable federal requirements. According to both NSPS and NESHAP regulations, this is answered through comparison of the fixed capital cost of new, replacement components for a rebuilt unit to the fixed capital cost required to construct a comparable new unit. According to R.A. Mitchell Co., the supplier of the remanufactured unit, cost of a new, comparable engine is between \$18,000 and \$22,000; while the remanufactured engine was sold to Woodland Pulp for \$8,650. Using the most conservative comparison and assuming the remanufactured engine was sold to the facility at a profit, the cost of replacement components is less than 50% of the cost to construct a comparable new unit.

1. New Source Performance Standards (NSPS)

The Lime Kiln Auxiliary Drive Engine was manufactured and installed prior to the applicability dates of NSPS 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* (CI ICE). According to Subpart IIII's §60.4219, "date of manufacture" for reconstructed engines means the date of original manufacture if the fixed capital cost of the new and refurbished components is less than 75% of the fixed capital cost of a comparable entirely new unit. As provided in the above paragraph, the cost is less than 50% of the cost of an entirely new unit; thus, this unit is not subject to requirements under 40 CFR Subpart IIII.

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

The federal regulation 40 CFR Part 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines* is applicable to the Lime Kiln Auxiliary Drive Engine. According to the definition of "reconstruction" provided in 40 CFR Part 63, §63.2, because the fixed capital cost of new components in this remanufactured unit is less than 50% of the fixed capital cost required to construct a comparable new unit, the remanufactured engine is considered an existing unit under NESHAP regulations. Thus, the Lime Kiln Auxiliary Drive Engine is considered an existing, emergency stationary reciprocating internal combustion engine (RICE) at a major HAP source and is not subject to NSPS 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.

a. Emergency Definition:

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the following criteria:

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. There is no time limit on the use of emergency stationary ICE in emergency situations.
- (2) Paragraph (1) above notwithstanding, the Lime Kiln Auxiliary Drive 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; or Woodland Pulp's insurance carrier. Woodland Pulp 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 beyond 100 hours per calendar year.

- (3) Paragraphs (1) and (2) above notwithstanding, the Lime Kiln Auxiliary Drive Engine may be operated for up to 50 hours per calendar year in non-emergency situations. These 50 hours are counted as part of the 100 hours per calendar year for maintenance checks and readiness testing, as provided in paragraph (2) above.

The Lime Kiln Auxiliary Drive Engine shall be limited to the usage outlined in §63.6640(f) and therefore may be classified as an existing emergency stationary RICE as defined in 40 CFR Part 63, Subpart ZZZZ. Failure to comply with all of the applicable requirements listed in §63.6640(f) may cause this engine to not be considered an emergency engine and therefore subject to all requirements applicable to a non-emergency engine.

b. 40 CFR Part 63, Subpart ZZZZ Requirements

(1) Operation and Maintenance Requirements

For the Lime Kiln Auxiliary Drive Engine, Woodland Pulp shall comply with the following requirements [40 CFR §63.6603(a) and Table 2(d)]:

- 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 unit shall be operated and maintained according to the manufacturer's emission-related written instructions, or Woodland Pulp shall develop a maintenance plan which provides 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 CFR §63.6625(e)]

(2) Optional Oil Analysis Program

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

(3) Non-Resettable Hour Meter Requirement

A non-resettable hour meter shall be installed and operated on the Lime Kiln Auxiliary Drive Engine. [40 CFR §63.6625(f)]

(4) Startup Idle and Startup Time Minimization Requirements

During periods of startup of the Lime Kiln Auxiliary Drive Engine, 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 CFR §63.6625(h) and 40 CFR Part 63, Subpart ZZZZ Table 2d]

(5) Annual Time Limit For Maintenance and Testing

The Lime Kiln Auxiliary Drive Engine 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. [40 CFR §63.6640(f)]

(6) Recordkeeping Requirements

Woodland Pulp shall keep records that include maintenance conducted on the engine and the hours of operation of the engine recorded based on the non-resettable hour meter. Documentation shall include the number of hours of emergency operation, including what classified the operation as emergency, and the number of hours of operation for non-emergency purposes. [40 CFR §63.6655(e) and (f)]

3. BACT/BPT Emission Limits

The BACT/BPT emission limits for the Lime Kiln Auxiliary Drive Engine are based on the following:

<u>Pollutant</u>	<u>Emission Factor</u>	<u>Source of Emission Factor</u>
PM, PM <sub>10</sub>	- 0.31 lb/MMBtu	AP-42 Table 3.3-1 (10/96)
SO <sub>2</sub>	- 0.0015 lb/MMBtu	combustion of distillate fuel with a sulfur content not to exceed 15 ppm (0.0015% by weight)
NO <sub>x</sub>	- 4.41 lb/MMBtu	
CO	- 0.95 lb/MMBtu	AP-42, Table 3.3-1 (10/96)
VOC	- 0.36 lb/MMBtu	

<u>Pollutant</u>	<u>Emission Factor</u>	<u>Source of Emission Factor</u>
Visible Emissions	N.A.	06-096 CMR 101, Section 2(B)(1)(d)

The BACT/BPT emission limits for the engine are the following:

<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Lime Kiln Auxiliary Drive Engine 0.32 MMBtu/hr, distillate fuel	0.10	0.10	negligible	1.41	0.30	0.16

Visible emissions from the emergency engine shall not exceed 20% opacity on a six-minute block average, except for no more than two six-minute block averages in a three-hour period.

4. Emission Limit Compliance Methods

Compliance with the emission limits associated with the emergency unit shall be demonstrated in accordance with the appropriate test methods upon request of the Department.

5. Periodic Monitoring

For the Lime Kiln Auxiliary Drive Engine, Woodland Pulp shall periodically monitor and record the information indicated in the following table.

<u>Information</u>	<u>Units of Measure</u>	<u>Monitoring Tool/Method</u>	<u>Frequency</u>
Fuel oil sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel is purchased, documented semi-annually
Operating time	Hours	Hour Meter	Recorded monthly and totaled at the end of every calendar year
Reason for Operation	N/A	Logbook or similar documentation	As occurs

6. Parameter Monitors

There are no Parameter Monitors required for the Lime Kiln Auxiliary Drive Engine.

7. CEMS and COMS

There are no CEMS or COMS required for the Lime Kiln Auxiliary Drive Engine.

C. Incorporation into the Part 70 Air Emission License

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. Woodland Pulp has submitted this application and has thus fulfilled this requirement.

D. Annual Emissions

Total licensed annual emissions for the facility will not change as a result of this NSR Minor Revision License.

### III. AMBIENT AIR QUALITY ANALYSIS

Woodland Pulp 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 (Air Emission License A-215-71-AC-A). An additional ambient air quality analysis is not required for this NSR Minor Revision.

### ORDER

The Department hereby grants NSR License A-215-77-8-M pursuant to the preconstruction licensing requirements of 06-096 CMR 115 and subject to the standard and special conditions below.

Severability. The invalidity or unenforceability of any provision of this License or part thereof 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 CONDITION**

**(1) Lime Kiln Auxiliary Drive Engine**

**A. Allowable Operation and Fuels**

1. The Lime Kiln Auxiliary Drive Engine is licensed to fire distillate fuel. [06-096 CMR 115, BACT/BPT]
2. The distillate fuel sulfur content for the Lime Kiln Auxiliary Drive Engine shall be limited to 0.0015% sulfur by weight. [06-096 CMR 115, BACT/BPT]
3. Fuel sulfur content compliance shall be demonstrated by fuel delivery receipts from the supplier documenting the type of fuel delivered and the sulfur content of the fuel. [06-096 CMR 115, BACT/BPT]

**B. Emissions shall not exceed the following limits [06-096 CMR 115, BACT/BPT]:**

<b>Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Lime Kiln Auxiliary Drive Engine	0.10	0.10	negligible	1.41	0.30	0.16

**C. Visible Emissions**

Visible emissions from the Lime Kiln Auxiliary Drive Engine shall not exceed 20% opacity on a six-minute block average, except for no more than two six-minute block averages in a three-hour period. [06-096 CMR 101]

**D. Compliance with the emission limits associated with the Lime Kiln Auxiliary Drive Engine shall be demonstrated in accordance with the appropriate test methods upon request of the Department. [06-096 CMR 115, BPT]**

**E. 40 CFR Part 63, Subpart ZZZZ Requirements**

**1. Operation and Maintenance Requirements**

For the Lime Kiln Auxiliary Drive Engine, Woodland Pulp shall comply with the following requirements [40 CFR §63.6603(a) and Table 2(d)]:

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- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.



The unit shall be operated and maintained according to the manufacturer's emission-related written instructions or according to a maintenance plan developed by Woodland Pulp which provides 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 CFR §63.6625(e)]

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For the Lime Kiln Auxiliary Drive Engine, Woodland Pulp shall periodically monitor and record the information indicated in the following table.

<u>Information</u>	<u>Units of Measure</u>	<u>Monitoring Tool/Method</u>	<u>Frequency</u>
Fuel oil sulfur content	Percent, by weight	Fuel receipts from supplier	As fuel is purchased, documented semi-annually
Operating time	Hours	Hour Meter	Recorded monthly and totaled at the end of every calendar year
Reason for Operation	N/A	Logbook or similar documentation	As occurs

DONE AND DATED IN AUGUSTA, MAINE THIS 3 DAY OF July, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:

  
PATRICIA W. AHO, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 27, 2014

Date of application acceptance: June 2, 2014

Date filed with the Board of Environmental Protection:

This Order prepared by Jane E. Gilbert, Bureau of Air Quality.

