



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
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ACTING COMMISSIONER

**Woodland Pulp, LLC
Washington County
Baileyville, Maine
A-215-77-4-A**

**Departmental
Findings of Fact and Order
New Source Review
Amendment #9**

After staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, § 344, § 582, § 590 and § 603, the Department finds the following facts:

I. REGISTRATION

A. Introduction

FACILITY	Woodland Pulp, LLC (WP)
INITIAL LICENSE NUMBER	A-215-70-A-I
LICENSE TYPE	06-096 CMR 115, Minor Modification
NAICS CODES	32211
NATURE OF BUSINESS	Pulp Production
FACILITY LOCATION	Baileyville, Maine
DETERMINATION ISSUANCE DATE	July 13, 2011

B. Amendment Description

WP was issued Air Emission License A-215-70-A-I on December 22, 2004. This License has subsequently been amended eight times. WP has requested that their License be amended to allow the firing of natural gas in the #3 Recovery Boiler, the #9 Power Boiler, and the Lime Kiln, as well as permitting the #3 recovery Boiler to act as the primary incinerator for WP's Non-Condensable Gases (NCG).

C. Application Classification

The modification of a major source is considered a major modification based on whether or not expected emissions increases exceed the "Significant Emission Increase Levels" as given in *Definitions Regulation*, 06-096 CMR 100 (as amended).

The emission increases are determined by subtracting the average actual emissions of the 24 months preceding the modification (or representative 24

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months) from the future projected actual emissions. The only pollutant that is projected to increase is NO_x emitted from the Lime Kiln. The results of this comparison follows:

Pollutant	Average Past Actuals 5/05 – 4/07 (ton/year)	Future Permit (ton/year)	Net Change (ton/year)	Significance Level (ton/year)
Lime Kiln - NO _x	45.1	73.3	28.2	40

Therefore, this amendment is determined to be a minor modification under *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended) and has been processed as such.

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 of Air Pollution Control Regulations*, 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 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

06-096 CMR 100 (as amended) defines a modification as:

“... any physical change in or change in the method of a source that would result in the emission increase of any regulated pollutant...”

As such, a BACT analysis is not required for the #3 Recovery Boiler or the #9 Power Boiler as no changes will be made, and no increase in emissions are expected as a result of this project. A BACT analysis is required for NO_x emission from the Lime Kiln.

B. NOx emission from Lime Kiln

The NOx emission limit for the Lime Kiln is 120 ppmv at 10% oxygen. This limit is in line with recent BACT findings of similarly sized units firing #6 fuel oil and natural gas from the BACT/RACT/LAER clearinghouse.

Selective Catalytic Reduction (SCR) and Selective Non-Catalytic Reduction (SNCR) have been evaluated as NOx control strategies. However, the design and function of a lime kiln render these control options infeasible from an engineering perspective. Flue Gas Recirculation (FGR) and Low NOx burners have not been properly evaluated in kraft mill lime kilns and will therefore be removed from consideration. The only feasible strategies for controlling NOx are good combustion practices to maintain proper excess air when firing fuel oil, and monitoring dry end air temperature to minimize thermal NOx formation when firing natural gas.

Because each of the potential add-on control technology options for NOx have been eliminated for technical infeasibility, WP finds that use of good combustion practices and limiting NOx emission to 120 ppmv at 10% oxygen represents BACT.

C. BPT for #3 Recovery Boiler (RB) and #9 Power Boiler (PB)

WP is required to capture and incinerate the process NCG, LVHC, and HVLC gasses under the requirements of 40 CFR Part 63, Subpart S and 06-096 CMR 124 (as amended). Currently WP utilizes the #9 PB as the primary incinerator and the NCG incinerator as a back-up. WP proposes that the #3 RB act as the primary incinerator for the mill's NCG, LVHC, and HVLC gasses, while the #9 PB and NCG Incinerator serve as back-up incinerators. No alterations to the boilers or increases in emissions are expected from this change. Therefore #3 RB is permitted to act as the primary incinerator with #9 PB and the NCG Incinerator serving as back-ups for the control of WP's NCG, LVHC, and HVLC gasses. The remaining BPT analysis for #3 RB and #9 PB from Air Emission Licenses A-215-70-A-I, and A-215-77-3-M shall remain in effect.

D. 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 2(J)(2)(d), for a modification that has undergone NSR requirements or been processed through 06-

096 CMR 115 (as amended), 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. AMBIENT AIR QUALITY ANALYSIS

WP 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. An additional ambient air quality analysis is not required for this modification.

ORDER

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

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

The Department hereby grants Air Emission License A-215-77-4-A subject to the following conditions.

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

No emission limits are being altered by this License. The following conditions reference the systems and processes that rely on the #9 PB and the NCG Incinerator for the control of NCG, LVHC, and HVLC gasses.

SPECIAL CONDITIONS

The following shall replace Special Conditions 20, 22, 23(A), and 30(A) in Air Emission License A-215-70-A-I:

- (20) The Digester and Evaporator System shall comply with the following:
- A. WP shall maintain and operate the TRS NCG collection system for the digester relief gases, exhaust gases from the blow tank, flash tank, condenser, and evaporator system to be incinerated in the #3 RB, the #9 PB or the NCG Incinerator as required in 06-096 CMR 124 (as amended).
 - B. WP shall operate and maintain a designated backup incinerator in accordance with 06-096 CMR 124 (as amended).
 - C. The Digester and Evaporator System is subject to 40 CFR, Part 63, Subparts A and S.

- (22) Condensate Collection [06-096 CMR 140, BPT, 40 CFR, Part 63, Subpart S, 06-096 CMR 124]
WP has elected to demonstrate compliance with the pulping condensate collection option listed in 40 CFR Part 63, §63.446(c)(3), which requires collection of pulping process condensates that contain a total HAP mass rate of 11.1 lb/ton of oven-dry pulp.

WP shall use a steam stripper to treat some of the pulping process condensate streams and send the captured HAP's to the #3 RB, #9 PB or the NCG Incinerator in accordance with 40 C.F.R. § 63.446. The treatment of these condensate streams meets the requirements of 40 CFR, 63.446(e)(3), reducing or destroying the total HAPS by 92%, or 63.446(e)(5), removing 10.2 lb of HAPs per ton of oven-dry pulp, or achieving a total HAP concentration of 330 ppm or less at the outlet.

The steam stripper system is comprised of the steam stripper, foul condensate tank, and associated piping and ductwork.

- A. Emissions from the steam stripper and foul condensate tank shall be collected and controlled by the #3 RB, #9 PB or the NCG incinerator for a minimum of 99% of the stripper's operating time on a quarterly basis. The Steam Stripper must have a minimum of 90% up-time pursuant to 40 CFR, 63.446(g). [06-096 CMR 124, 40 CFR, Part 63 Subpart S]

WP shall record the amount of time on a quarterly basis of:

1. stripper operation
2. the combustion of Stripper Off Gas (SOG) in the #3 RB
3. the combustion of SOGs in the #9 PB
4. the combustion of SOGs in the NCG incinerator
5. any ventings of SOGs

Any venting of SOGs in portion or in whole shall be considered time of uncontrolled emissions, which shall not exceed the specified 1% above.

- B. WP shall monitor and record the following as specified for the Steam stripper.

Item to be monitored	Record	Average
Stripper Condensate Feed Rate	Every 15 min	3-hr block avg every three hours
Steam feed rate	Every 15 min	3-hr block avg every three hours
Stripper Condensate Feed Temperature	Every 15 min	3-hr block avg every three hours
Steam flow to Condensate flow ratio	Every 15 min	3-hr block avg every three hours

- C. The steam stripper system is subject to 40 CFR, Part 60, Subpart BB, and 40 CFR, Part 63, Subpart S.

- (23) Non-Condensable Gas Incinerator [06-096 CMR 140, BPT, 40 CFR, Part 63, Subparts S, 06-096 CMR 124]

The Non-Condensable Gas (NCG) incinerator shall comply with each of the following:

- A. The NCG incinerator shall serve as a backup incineration device to the #3 RB and the #9 PB.

- (30) Low Volume, High Concentration Collection and Control System

- A. The digester and evaporator systems shall be vented to the LVHC system when the units are in use as specified in 40 CFR Part 63, Subpart S and 06-096 CMR 124 (as amended), with the #3 RB as the primary incineration unit and the #9 PB and NCG Incinerator as the back-up incineration units. [40 CFR Part 63, Subpart S and 06-096 CMR 124]

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The following is a new Condition:

1. WP shall apply for an amendment to the Part 70 license within one year of commencing the operations proposed in this 06-096 CMR 115 amendment as provided in 40 CFR Part 70.5.

DONE AND DATED IN AUGUSTA, MAINE THIS 13th DAY OF July 2011.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Melanie F. Soj
PATRICIA WAHO, ACTING COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 5/6/2011

Date of application acceptance: 5/20/2011

Date filed with the Board of Environmental Protection: _____

This Order prepared by Jonathan Voisine, Bureau of Air Quality.



