

**TITLE V MINOR MODIFICATION (without construction) APPLICATION REVIEW**

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Facility Name: **Weyerhaeuser Company – Port Wentworth Mill**

City: Port Wentworth

County: Chatham

AIRS #: 04-13-051-00010

Application #: 14276 & 14694

Date SIP Application Received: February 3, 2003 and August 25, 2003

Date Title V Application Received: February 3, 2003 and August 25, 2003

Permit No: 2611-051-0010-V-01-1

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**Introduction**

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft/proposed operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the proposed permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the EPA review process will be described in an addendum to this narrative.

**I. Facility Description**

A. Existing Permits

Table 1 below lists the current Title V permit, and all administrative amendments and minor and significant modifications and 502(b)(10) changes.

**Table 1: Current Title V Permit and Amendments**

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
2611-051-0010-V-01-0	December 19, 2002		X

B. Regulatory Status

1. PSD/NSR/RACT

Weyerhaeuser is a major source under PSD/NSR regulations. The facility has undergone two PSD reviews, a PCP review, and has taken limits to avoid PSD reviews multiple times.

The following limits are the result of the PSD and PCP reviews:

- The No. 4 Combination Boiler is limited to 0.3 pounds per million BTU heat input for nitrogen oxides emissions.
- The No. 4 Combination Boiler is limited to 0.06 pounds per million BTU heat input for particulate matter emissions.
- The No. 4 Combination Boiler is limited to 239 pounds per hour for sulfur dioxide emissions.
- The No. 3 Recovery Boiler is limited to 47 pounds per hour for particulate matter emissions.
- The No. 3 Recovery Boiler is limited to 500 pounds per hour for sulfur dioxide emissions.
- The No. 3 Recovery Boiler is limited to 744.8 pounds per hour for carbon monoxide emissions.
- The No. 2 Lime Kiln is limited to 49.6 pounds per hour for sulfur dioxide emissions.
- The No. 2 Lime Kiln is limited to 0.067 gr/dscf corrected to 10 percent oxygen while firing natural gas or 0.12 gr/dscf corrected to 10 percent oxygen while firing fuel oil for particulate matter emissions.
- The No. 6 fuel oil fired in the No. 2 Lime Kiln is limited to a sulfur content of 2.3 percent, by weight.

The following limits have been taken to avoid PSD review:

- The entire facility is limited to a production cap of 438,000 air-dried tons per year of bleached market pulp.
- The No. 3 Recovery Boiler is limited to 174.3 pounds per hour for nitrogen oxides emissions.
- The No. 4 Combination Boiler is limited to firing 1,115,000 gallons of No. 2 fuel oil per calendar year.
- The No. 4 Combination Boiler is limited to firing 29,565 tons per calendar year of mill wastewater sludge. The sulfur content of the sludge cannot exceed 0.47 percent, by weight.
- The No. 4 Combination Boiler is limited to 700 pounds per hour for sulfur dioxide emissions when the gases from LVHC02 LVHC Continuous Gas Collection System are incinerated in the No. 4 Combination Boiler.

- The No. 4 Combination Boiler is limited to 1,752 hours per calendar year for incineration of LVHC02 LVHC Continuous Gas Collection gases.
- The No. 4 Combination Boiler is limited to 573 pounds per hour for sulfur dioxide emissions when firing No. 2 fuel oil.
- The No. 4 Combination Boiler is limited to 1034 pounds per hour for sulfur dioxide emissions when the gases from LVHC02 LVHC Continuous Gas Collection System are incinerated in the No. 4 Combination Boiler while firing No.2 fuel oil.
- The No. 2 fuel oil fired in the No. 4 Combination Boiler is limited to a sulfur content of 0.5 percent, by weight.

2. Title V Major Source Status by Pollutant

**Table 3: Title V Major Source Status**

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	✓		
PM <sub>10</sub>	Yes	✓		
SO <sub>2</sub>	Yes	✓		
VOC	Yes	✓		
NO <sub>x</sub>	Yes	✓		
CO	Yes	✓		
TRS	Yes	✓		
H <sub>2</sub> S	Yes	✓		
Individual HAP	Yes	✓		
Total HAPs	Yes	✓		

**II. Proposed Modification**

A. Description of Modification

Application No. 14276 was submitted by the facility on February 3, 2003 to provide values for certain excursions in Permit No. 2611-051-0010-V-01-0 issued December 19, 2002. The facility conducted performance testing on the No. 4 Combination Boiler, the No. 3 Recovery Boiler, and the No. 2 Lime Kiln (Source Codes: PB04, RE01, and LK01) in order to establish these excursion values for inclusion in Permit Condition 6.1.7.c.

Application No. 14694 was submitted by the facility on August 25, 2003 to modify the Steam Stripper parameter excursion values in Permit No. 2611-051-0010-V-01-0 issued December 19, 2002. The facility conducted performance testing on condensate Stream Stripper (Source Code: SS01) in order to modify the excursion values in Permit Condition 6.1.7.c.

The facility also submitted an email on August 27, 2003 to request an exemption from the Acid Rain Rules by including a limit on the sale of electric output from the facility.

This application is being processed as a minor modification without construction to Title V Permit No. 2611-051-0010-V-01-0 since the modification does not involve significant changes to monitoring, reporting, or record keeping. The application was deemed complete on August 27, 2003 with the submittal of the additional information.

**B. Emissions Change**

There will be no change in emissions due to this modification.

**C. PSD/NSR Applicability**

There are no PSD/NSR issues associated with this modification.

**III. Facility Wide Requirements**

**A. Emission and Operating Caps**

There are no new facility-wide emissions and operating caps associated with this modification.

**B. Applicable Rules and Regulations**

There are no new facility-wide applicable rules and regulations associated with this modification.

**C. Compliance Status**

According to the Title V Annual Certification Evaluation for calendar year 2002, the facility listed 12 noncompliant issues. On March 13, 2003, SSCP determined that no enforcement action was needed for these noncompliance issues. The facility did not indicate that they are out of compliance with any facility-wide applicable rules and regulations in the application for this modification.

**D. Operational Flexibility**

The facility did not request operational flexibility in their application for this modification.

**E. Permit Conditions**

There are no new facility-wide permit conditions due to this modification.

**IV. Regulated Equipment Requirements**

A. Brief Process Description

There is no new equipment being added due to this modification.

B. Equipment List for the Process

There are no changes to Table 3.1 due to this modification.

C. Equipment & Rule Applicability

Per the facility request of August 27, 2003, the entire facility will be limited to 202,064 MW-hours of electric output that can be sold to any utility power distribution system on a twelve-month rolling total. The total maximum electric output capacity for the entire facility is 69.2 MW. One-third of the maximum output is 23.07 MW, or 202,064 MW-hours per consecutive twelve-month period. This limit is to keep the facility from being considered an electric generation source under the Acid Rain Rules of 40 CFR 72.6 and to keep the No. 3 Recovery Boiler and No. 4 Combination Boiler (Source Codes: RE01 and PB04) from being subject to the provisions of 40 CFR 60 Subpart Da. The facility has indicated that, based on steam balances, the most it will be able to sell is 13 MW (113,880 MW-hours).

D. Compliance Status

Aside from the above-mentioned non-compliances listed in the Title V Annual Certification Evaluation for calendar year 2002, the facility has indicated that they comply with all applicable rules and regulations. The facility did not indicate that they are out of compliance with any applicable rules and regulations in the application for this modification.

E. Operational Flexibility

The facility did not request operational flexibility in their application for this modification.

F. Permit Conditions

New Permit Condition 3.2.2 limits the facility to selling less than 202,064 MW-hours of its electric output to any utility power distribution system during any twelve consecutive-month period. The total electrical output of the facility is less than 75MW, so the facility is limited to selling one-third of its potential electric output capacity.

**V. Testing Requirements (with Associated Record Keeping and Reporting)**

Permit Conditions 4.2.3, 4.2.5, and 4.2.6 will be removed from the Permit since the required testing has been completed by the facility and approved by EPD.

Permit Condition 4.2.3 required the facility to test the No. 4 Combination Boiler for mercury emissions in order to show compliance with the limit of 7.1 pounds per 24-hour period while burning mill wastewater sludge. This limit

is a 40 CFR 61 Subpart E requirement. The facility conducted this test on December 5, 2002. EPD approved the results in March 2003. The test showed 0.001 pounds per hour of mercury emissions at a firing rate of 18.3 tons per day of mill wastewater sludge. This is 0.33% of the allowable limit. Since the mercury emissions were less than 3.5 pounds per 24-hour period, the facility does not need to monitor emissions according to 40 CFR 61.55(a). This condition can be removed from the Permit since this test will not need to be repeated in the future.

Permit Condition 4.2.5 required the facility to test the No. 2 Lime Kiln electrostatic precipitator for sulfur dioxide emissions in order to show compliance with the sulfur dioxide emission limit of 49.6 pounds per hour. This limit is a 40 CFR 52.21 limit. The facility conducted this test on December 4, 2002. EPD approved the results in March 2003. The test showed 5.58 pounds per hour of sulfur dioxide emissions at a CaO production rate of 327.7 tons per day. This is 11.25% of the allowable limit. The facility is required to conduct annual sulfur dioxide emissions test on the No. 2 Lime Kiln per Permit Conditions 4.2.1 and 4.2.2. This condition can be removed from the Permit since this test showed that the new electrostatic precipitator could effectively control sulfur dioxide emissions from the No. 2 Lime Kiln.

Permit Condition 4.2.6 required the facility to test the No. 3 Recovery Boiler for carbon monoxide emissions in order to demonstrate compliance with the carbon monoxide limit of 744.8 pounds per hour and to establish a parameter for monitoring carbon monoxide emissions. This limit is a 40 CFR 52.21 limit. The facility conducted this test on December 3, 2002. EPD approved the results in March 2003. The test showed 124.96 pounds per hour of carbon monoxide emissions. This is 16.78% of the allowable limit. The facility established economizer percent oxygen as the surrogate parameter to be monitored. This condition can be removed from the Permit since this test will not need to be repeated in the future.

## **VI. Monitoring Requirements (with Associated Record Keeping and Reporting)**

During review of the Permit for this modification, it was noted that the facility isn't currently required to monitor any parameter for carbon monoxide emissions on the No. 3 Recovery Boiler. New Permit Condition 5.2.2.f requires the facility to continuously monitor the economizer percent oxygen. The facility has indicated that they monitor this parameter on a near-continuous basis, and requested continuous monitoring over periodic monitoring.

## **VII. Other Record Keeping and Reporting Requirements**

### Electric Output For Sale

New Permit Condition 6.1.7.b.xiv requires the facility to report as an exceedance, any twelve-month period during which the facility sells more than 202,064 MW-hours of its electric output to any utility power distribution system.

New Permit Conditions 6.2.22 and 6.2.23 require the facility to maintain records and to calculate and record the twelve-month rolling total of utility power that is sold in order to prove compliance with the limit in Permit Condition 3.2.2.

Excursion Value Changes

Permit Conditions 6.1.7.c.i through 6.1.7.c.v are being modified to reflect the excursion values established during performance testing conducted by the facility in December 2002.

Permit Condition 6.1.7.c.i is being modified to include the value 45.6 kW as the total electrostatic precipitator total power value to be used as an excursion value for the No. 4 Combination Boiler. This total power value was determined as 75% of the average of the three runs conducted on December 5, 2002. Both the facility and the EPD test report review notes that the precipitator total power during the testing was 60.8 kW. The particulate matter emissions were tested at 11.7% of the allowable emission rate and sulfur dioxide emissions were tested at 69.3% of the allowable emission rate.

Permit Condition 6.1.7.c.ii is being modified to include the value 295.7 kW as the total electrostatic precipitator total power value to be used as an excursion value for the No. 3 Recovery Boiler. This total power value was determined as 75% of the average of the three runs conducted on December 3, 2002. Both the facility and the EPD test report review notes that the precipitator total power during the testing was 394.3 kW. The particulate matter emissions were tested at 13.40% of the allowable emission rate.

Permit Condition 6.1.7.c.iii is being modified to include the value 1500 ppm as the black liquor nitrogen content to be used as an excursion value for the No. 3 Recovery Boiler. This value was determined as 150% of the black liquor nitrogen content from an analysis conducted on December 23, 2002. The analysis showed nitrogen content of less than 0.1%; therefore, the facility determined the nitrogen content as 1000 ppm. Nitrogen content of the black liquor is being used as a surrogate parameter for nitrogen oxides emissions from the No. 3 Recovery Boiler. The nitrogen oxides emissions were tested at 75.48% of the allowable emission rate. Permit Condition 6.2.5 requires the facility to conduct a quarterly analysis of black liquor for nitrogen content, and Permit Condition 6.1.7.d.ii requires the facility to submit the black liquor nitrogen content analysis.

Permit Condition 6.1.7.c.iv is being modified to include the value 1.7% as the economizer percent oxygen value to be used as an excursion value for the No. 3 Recovery Boiler. This value was determined as 90% of the average of the three runs conducted on December 3, 2002. Both the facility and the EPD test report review notes that the economizer oxygen content during the testing was 1.9%. Economizer percent oxygen is being used as a surrogate parameter for carbon monoxide emissions. The carbon dioxide emissions were tested at 16.78% of the allowable emission rate. In addition, since the facility is continuously monitoring this value, the condition was modified from “any three consecutive readings” to “any three-hour period.”

Permit Condition 6.1.7.c.v is being modified to include the value 48.2 kW as the total electrostatic precipitator total power value to be used as an excursion value for the No. 2 Lime Kiln. This total power value was determined as 75% of the average of the three runs conducted on December 4, 2002. Both the facility and the EPD test report review notes that the precipitator total power during the testing was 64.2 kW. The particulate matter emissions were tested at 2.39% of the allowable emission rate and the sulfur dioxide emissions tested at 11.25% of the allowable emission rate.

Permit Conditions 6.1.7.c.viii and 6.1.7.c.ix are being modified to reflect the steam stripper excursion values established during performance testing conducted by the facility on August 7, 2003.

Permit Condition 6.1.7.c.viii is being modified to change the excursion value for the steam stripper steam to process wastewater feed ratio from 0.219 to 0.250. In testing conducted on June 12, 2003 and August 7, 2003, the facility demonstrated that a steam to feed ratio of 0.250 resulted in 97.5% treatment efficiency of the methanol. EPD approved the June 2003 test results in September 2003. The August 2003 results have not yet been approved by EPD.

Permit Condition 6.1.7.c.ix is being modified to change the excursion value for the steam stripper wastewater column feed temperature from 208°F to 189°F. In testing conducted on June 12, 2003, the facility demonstrated that a feed temperature of 192°F resulted in 98% treatment efficiency of the methanol. EPD approved the June 2003 test results in September 2003. In testing conducted on August 7, 2003, the facility demonstrated that a feed temperature of 189°F resulted in 97.5% treatment efficiency of the methanol. While the August 2003 test results have not been approved by EPD, this operating temperature does meet the treatment requirements of 40 CFR 63.446(e)(3).

**VIII. Specific Requirements**

A. Operational Flexibility

Not Applicable

B. Alternative Requirements

Not Applicable

C. Insignificant Activities

Not Applicable

D. Temporary Sources

Not Applicable

E. Short-Term Activities

Not Applicable

F. Compliance Schedule/Progress Reports

Not Applicable

G. Emissions Trading

Not Applicable

H. Acid Rain Requirements

Not Applicable

I. Prevention of Accidental Releases

Not Applicable

J. Stratospheric Ozone Protection Requirements

Not Applicable

K. Pollution Prevention

Not Applicable

L. Specific Conditions

Not Applicable

**Addendum to Narrative**

The 45-day EPA review started on October 15, 2003 and ended on December 1, 2003. No comments were received by the Division.