Facility Name: **Weyerhaeuser – Flint River Operations**
City: Oglethorpe
County: Macon County
AIRS #: 04-13-193-00013

Application #: TV-14051
Date SIP Application Received: October 16, 2002
Date Title V Application Received: October 16, 2002
Date of Draft Permit:
Permit No: 2631-193-0013-V-01-1

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Introduction

This narrative is being provided to assist the reader in understanding the content of the attached SIP permit to construct and/or draft/proposed operating permit amendment. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit amendment is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit amendment is to identify state and federal air requirements applicable to the modification/construction to be performed at Weyerhaeuser – Flint River Operations and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit amendment and is presented in the same general order as the permit amendment. It initially describes the facility receiving the permit amendment, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit amendment in response to comments received during the public participation and 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, minor and significant modifications to that permit, and 502(b)(10) attachments. Comments are listed in Table 2 below.

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
2631-193-0013-V-01-0	9/16/2002	X	

Table 2: Comments on Specific Permits

Permit Number	Comments
2631-193-0013-V-01-0	Initial Title V operating permit.

B. Regulatory Status

1. PSD/NSR

Weyerhaeuser – Flint River Operations is a major source under PSD. The first operating permit issued to the facility, Air Quality Permit No. 2631-094-8438 on October 28, 1982, was issued under the requirements of PSD. There were no limits set in the permit other than those required by 40 CFR Part 60 and Georgia State Rules. A second PSD review was conducted for Air Quality Permit No. 2631-094-9038 issued on July 24, 1985. The facility took two PSD limits in that permit:

1. TRS emissions from the smelt tank were limited to 0.0168 pounds per ton of black liquor solids (dry weight). This limit imposed the more stringent TRS limit found in Georgia State Rule 391-3-1-.02(gg) and is still in effect. It should be noted that this is a PSD limit and the facility is not directly subject to Rule (gg).
2. Particulate matter from the sodium sulfate recovery system was limited to 9.3 pounds per hour. This process had been discontinued by the time the initial Title V was prepared and was therefore not included in the permit.

The facility avoided PSD review in 1995 by making steam offset reductions under permit No. 2631-094-11083 for modifications to the isothermal cooking system, post oxygen washer, bleach plant, and recovery boiler. The facility also avoided PSD review for its modified pulp unit under permit No. 2631-094-11084. The modified pulp unit has been decommissioned and does not appear in the facility's Title V permit. The facility underwent PSD review in 1997 for an amendment to permit No. 2631-094-11083. The amendment was for the addition of the dual cap system under Project XL, which appears in the Title V permit. Refer to the narrative for Title V permit number 2631-193-0013-V-01-0 for a complete discussion of Project XL.

For this permitting action the facility has taken the following limits to avoid PSD review for carbon monoxide, volatile organic compounds, and sulfur dioxide (See section IV.F for an explanation of the ton per year bases of this requirements):

1. Emissions of carbon monoxide from the Lime Kiln are limited to 100 tons per 12 consecutive month period.
2. Emissions of volatile organic compounds from the Lime Kiln are limited to 40 tons per 12 consecutive month period.
3. Emissions of sulfur dioxide from the Lime Kiln are limited to 40 tons per 12 consecutive month period.

For this permitting action the facility has taken the following PSD limit:

Emissions of nitrogen oxides from the Lime Kiln are limited to 175 ppm at 10 percent oxygen.

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	X	X		
PM_{10}	X	X		
SO_2	X	X		
VOC	X	X		
NO_x	X	X		
CO	X	X		
TRS	X	X		
H_2S	X	X		
Individual HAP	X	X		
Total HAPs	X	X		

II. Proposed Modification

A. Description of Modification

See Section 2.0 of the Preliminary Determination.

B. Emissions Change

See Section 1.0 of the Preliminary Determination.

C. PSD/NSR Applicability

The construction and operation of the new lime kiln will be considered a major modification with respect to PSD regulations per 40 CFR 52.21. A preliminary PSD determination for the lime kiln project describes the issues in detail. Permit Amendment No. 2631-193-0013-V-01-1 will contain the requirements of PSD including any BACT (Best Available Control Technology) limits.

III. Facility Wide Requirements

A. Emission and Operating Caps:

See Section 8.0 of the Preliminary Determination.

B. Applicable Rules and Regulations

There are no new or modified facility wide applicable rules or regulations associated with this modification.

C. Compliance Status

The facility's application indicates that the Lime Kiln will be in compliance with all applicable rules and regulations upon startup.

D. Operational Flexibility

The facility did not make a request for facility wide operational flexibility in this application.

E. Permit Conditions

There have not been any facility wide permit condition changes in Part 2.0 of the Title V permit other than that discussed in Section III.A above.

IV. Regulated Equipment Requirements

A. Brief Process Description

See Section 2.0 of the Preliminary Determination.

B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
~~U700~~	~~Calciner~~	~~40 CFR 60 Subpart BB~~ ~~40 CFR 63 Subpart S~~ ~~40 CFR 63 Subpart MM~~ ~~391-3-1-.02(2)(b)~~ ~~391-3-1-.02(2)(e)~~ ~~391-3-1-.02(2)(g)~~	~~2.2.1, 3.3.3, 3.3.5, through 3.3.8, 3.3.23, 3.3.24, 3.4.4 through 3.4.6, 4.2.1, 5.2.1 through 5.2.3, 5.2.6, 5.3.1, 6.1.7, 6.2.1 through 6.2.3, 6.2.6, 6.2.7, and 6.2.11 through 6.2.13*~~	~~CDU4~~	~~Venturi Scrubber~~
U800	Lime Kiln	40 CFR 52.21 40 CFR 60 Subpart BB 40 CFR 63 Subpart S 40 CFR 63 Subpart MM 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	2.2.1, 3.3.3, 3.3.5 through 3.3.8, 3.3.23, 3.3.24, 3.4.4 through 3.4.6, 4.2.1, 4.2.4, 4.2.5, 5.2.1, 5.2.3, 5.2.6, 5.3.1, 6.1.7, 6.2.1 through 6.2.3, 6.2.6, 6.2.7, 6.2.11 through 6.2.13, and 6.2.17 through 6.2.22*	CDU7	Dry Plate Electrostatic Precipitator
OG03	**STRONG NCG SYSTEM (LVHC)**				
OG01	**Digester System**				
P300 P310 P311 P315	Vapor Phase Continuous Digester steaming vessel and impregnation vessel No. 1A Flash Tank No. 1B Flash Tank No. 2 Flash Tank	40 CFR 60 Subpart BB 40 CFR 63 Subpart S	3.3.5, 3.3.7, 3.3.8, 3.3.10, 3.3.12, 3.3.15 through 3.3.19, 3.3.23, 5.2.2, 5.2.7 through 5.2.9, 5.3.1, 6.1.7, 6.2.7, and 6.2.11 through 6.2.14*	CDU8 U800 U400 W100	White Liquor Scrubber Lime Kiln Power Boiler Biological Treatment
OG02	**Multiple Effect Evaporator / Condensate Stripper System**				
U600 U601 U612 U615	BL Evaporator System (5 effects, 3 flashes, 2 concentrators) BL Effects Hotwell No. 1 Surface Condenser No. 2 Surface Condenser	40 CFR 60 Subpart BB 40 CFR 63 Subpart S	3.3.5, 3.3.7, 3.3.8, 3.3.12, 3.3.15 through 3.3.19, 3.3.23, 5.2.7 through 5.2.9, 5.3.1, 6.1.7, 6.2.7, and 6.2.11 through 6.2.13*	CDU8 U800 U400 W100	White Liquor Scrubber Lime Kiln Power Boiler Biological Treatment
U613 U619	Stripper Condenser Spiral Heat Exchanger	40 CFR 60 Subpart BB 40 CFR 63 Subpart S	3.3.5, 3.3.7, 3.3.8, 3.3.12, 3.3.15 through 3.3.19, 3.3.23, 5.2.7 through 5.2.9, 5.3.1, 6.1.7, 6.2.7, and 6.2.11 through 6.2.13*	CDU8 U800 U400	White Liquor Scrubber Lime Kiln Power Boiler
U617	Stripper Feed Tank	40 CFR 60 Subpart Kb 40 CFR 60 Subpart BB 40 CFR 63 Subpart S	3.3.5, 3.3.7, 3.3.8, 3.3.12, 3.3.15 through 3.3.20, 3.3.23, 5.2.7 through 5.2.9, 5.3.1, 6.1.7, 6.2.7, 6.2.11 through 6.2.13, and 6.2.15*	CDU8 U800 U400	White Liquor Scrubber Lime Kiln Power Boiler
U618	Stripper Column	40 CFR 60 Subpart BB 40 CFR 63 Subpart S	3.3.5, 3.3.7, 3.3.8, 3.3.12, 3.3.15 through 3.3.19, 3.3.23, 5.2.7 through 5.2.9, 5.3.1, 6.1.7, 6.2.7, and 6.2.11 through 6.2.13*	CDU8 U800 U400	White Liquor Scrubber Lime Kiln Power Boiler

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
Other	**Turpentine Recovery System**				
P312 P320 P321	Turpentine Decanter No. 1 Turpentine Condenser No. 2 Turpentine Condenser	40 CFR 63 Subpart S	3.3.7, 3.3.8, 3.3.12, 3.3.15 through 3.3.19, 5.2.7 through 5.2.9, 5.3.1, 6.1.7, 6.2.7, and 6.2.11 through 6.2.13*	CDU8 U800 U400 W100	White Liquor Scrubber Lime Kiln Power Boiler Biological Treatment
Other	**Foul Oil Recovery System**				
U608 U614	Foul Oil Storage Tank Foul Oil Decanter	40 CFR 63 Subpart S	3.3.7, 3.3.8, 3.3.12, 3.3.15 through 3.3.19, 5.2.7 through 5.2.9, 5.3.1, 6.1.7, 6.2.7, and 6.2.11 through 6.2.13*	CDU8 U800 U400 W100	White Liquor Scrubber Lime Kiln Power Boiler Biological Treatment
OG08	**CHEMICAL RECOVERY SYSTEM**				
U703	Slaker	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.9 and 3.4.10*	None	None
PG02	**LIME STORAGE BIN AREA**				
U716 U718	Reburned Lime Recharge Bin Purchased Lime Bin	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.9, 3.4.10, 5.2.3, and 6.1.7*	CDU6	Lime Bins Fabric Filter

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

C. Equipment & Rule Applicability

Slaker U703 will be replaced in 2003. The purpose of the slaker is to mix lime and clarified green liquor to produce white liquor for use in the digester. The source code and applicable rules and regulations will remain the same for the unit and its associated support equipment:

Georgia Rule 391-3-1-.02(2)(b) – Visible Emissions
Georgia Rule 391-3-1-.02(2)(e) – Particulate Emissions from Manufacturing Processes

Lime Bin Storage Area PG02 well be replaced and relocated due to the installation of the Lime Kiln with the exception of Bypass Lime Bin U720 which will be shutdown completely. The source codes and applicable rules and regulations will remain the same for the units and its associated support equipment:

Georgia Rule 391-3-1-.02(2)(b) – Visible Emissions
Georgia Rule 391-3-1-.02(2)(e) – Particulate Emissions from Manufacturing Processes

Other equipment added or modified due to the installation of the Lime Kiln (support equipment) are insignificant activities and are included in the insignificant activities tables as such.

See Section 3.0 of the Preliminary Determination for further information.

D. Compliance Status

The facility's application indicates that the Lime Kiln will be in compliance with all applicable rules and regulations upon startup.

E. Operational Flexibility

The facility did not make any operational flexibility request in this application.

F. Permit Conditions

Equipment Federal Rule Standards

See Section 8.0 of the Preliminary Determination.

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

A. Individual Equipment:

See Section 8.0 of the Preliminary Determination.

B. Equipment Groups (all subject to the same test requirements):

There are no new or modified equipment group testing requirements associated with this modification.

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

A. Individual Equipment:

a. Specific monitoring requirements

Lime Kiln U800
The Permittee is required to operate continuous monitors and recording devices for TRS and oxygen on a dry basis, opacity, sulfur dioxide, nitrogen oxides, and carbon monoxide for Lime Kiln U800. The monitors are needed to provide a reasonable assurance of compliance with the limits found in Condition 3.3.3. The TRS and oxygen monitors demonstrate compliance with 40 CFR 60 Subpart BB. The sulfur dioxide, nitrogen oxides, and carbon monoxide monitors demonstrate compliance with 40 CFR 52.21 Avoidance and 40 CFR 52.21.

Finally, the opacity monitor demonstrates compliance with the requirements of 40 CFR 63 Subpart MM and Georgia Rule 391-3-1-.02(2)(b). Condition 5.2.1.b has been modified to remove reference to Calciner U700, add reference to Lime Kiln U800, and to add the aforementioned sulfur dioxide, nitrogen oxides, and carbon monoxide continuous monitors.

The lime kiln will be equipped with a dry plate electrostatic precipitator (Source Code CDU7). The Permittee is required to record the secondary current and secondary voltage for each isolatable section of the control device and use this data to calculate total power once per shift of operation. A value for the total power that indicates compliance will be determined during the initial performance test for particulate matter. Monitoring the total power for the ESP provides a reasonable assurance of compliance with the particulate matter limits found in Georgia Rule 391-3-1-.02(2)(e). Condition 5.2.3.d has been modified to add the monitoring requirements for the lime kiln ESP.

Condition 5.2.3.b has been modified. The condition originally required the Permittee to monitor and record lime mud feed rate and mud density for Calciner U700. These same monitoring requirements are applicable to the new lime kiln. The reference to the calciner has been replaced with a reference to the lime kiln. In addition, the facility is required to monitor and record CaO production rate. This is a requirement under 40 CFR 63 Subpart MM.

Condition 5.2.2.d has been deleted. The condition required the Permittee to monitor and record scrubbant flow rate and pressure drop for the venturi scrubber (Source Code CDU4) that controlled opacity and particulate matter for the calciner. The condition is no longer needed because the scrubber will be decommissioned along with the calciner.

Ongoing compliance with the VOC limit found in Condition 3.3.3 will be determined through performance testing under Condition 4.2.1 and the calculations required by Condition 6.2.17.

Finally, the Permittee is required to keep records of fuel certifications from fuel suppliers. This monitoring is required to provide a reasonable assurance that the facility is meeting the fuel requirements found in Condition 3.4.6 based on the requirements of Georgia Rule 391-3-1-.02(2)(g).

Scrubber CDU8

As stated in the process description section of this narrative, the facility will install a white liquor scrubber to scrub strong NCGs prior to burning them in Lime Kiln U800 or Power Boiler U400 (backup). The purpose of this scrubber is to remove sulfur dioxide. This is needed because the lime kiln has taken a PSD Avoidance limit for sulfur dioxide and the power boiler has a 0.80 pounds per million BTU heat input sulfur dioxide limit through 40 CFR 60 Subpart D and Georgia Rule 391-3-1-.02(2)(g). Because both the lime kiln and the power boiler will monitor sulfur dioxide emissions with CEMs there is no need to place monitoring requirements for the scrubber in this permit. If the facility operates the scrubber improperly any excess emissions will be recorded by the CEMs and reported to the Division.

Chemical Recovery Area (Slaker)

No new monitoring has been added to the permit for the new slaker and supporting equipment the facility will install with the new lime kiln. The slaker vent is equipped with two in-line green liquor shower sprays, which are designed to prevent particulate emissions and opacity. Violation of Georgia Rule 391-3-1-.02(2)(b) or (e) is not likely.

Lime Storage Bin Area

The bins are equipped with a fabric filter for control of particulate matter and opacity. The Permittee is required to record the pressure drop every 8 hours of operation. The pressure drop is an indication of compliance with 391-3-1-.02(2)(b) and (e). No additional monitoring is required. The standards and monitoring and record keeping requirements for fabric filter CDU6 were included in the initial Title V. The requirements have not been repeated in this amendment.

b. Record keeping for monitoring

As indicated in Condition 5.1.1, all continuous monitors and monitoring devices must be in continuous operation and data recorded during all periods of operation except for system breakdowns and repairs. The frequency at which monitoring data should be recorded on equipment that does not require a CEM is listed in Conditions 5.2.2 and 5.2.3. Records, consisting of identification of any deviations, including excess emissions, exceedances, and excursions from applicable monitoring triggers, the cause of such occurrence, and the corrective action taken are required to be kept by the Permittee.

c. Reporting for monitoring

None Applicable.

B. Equipment Groups:

There are no new or modified monitoring requirements for equipment groups associated with this modification.

VII. Other Record Keeping and Reporting Requirements

See Section 8.0 of the Preliminary Determination.

VIII. Specific Requirements

A. Operational Flexibility

Not Applicable.

B. Alternative Requirements

Not Applicable.

C. Insignificant Activities

The "Insignificant Activities Based on Emission Levels" table has been updated. The number of tanks in the Causticizer Tank set has been increased from 3 to 4.

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

This modification does not change the source's applicability.

J. Stratospheric Ozone Protection Requirements

This modification does not change the source's applicability.

K. Pollution Prevention

Not Applicable.

L. Specific Conditions

Permit condition 7.14.1 has been added to the permit. The condition requires the Permittee to permanently decommission Calciner U700 upon startup of Lime Kiln U800. This condition ensures that the facility does not emit any additional pollutants on top of what is allowed by this amendment or the initial Title V permit.

Permit condition 7.14.2 has been added to the permit. The condition requires the Permittee to continue to comply with all conditions pertaining to Calciner U700 while the new lime kiln is under construction. When the lime kiln comes on line the facility is required to comply with the new and modified conditions contained in the amendment.

Addendum to Narrative

The public comment period for this Title V significant modification expired on May 2, 2003. Minor comments were received from Jim Little, U.S. EPA Region 4, by email on May 1, 2003. No comments were received from the U.S. EPA Region 4 Title V review program. Comments were also received from Anna Skrobecki, Weyerhaeuser Vice President/Mill Manager, on April 30, 2003.

U.S. EPA REGION 4

The four minor comments submitted by USEPA Region 4 are typed, verbatim, below. Jim Little discussed these comments in a phone conversation (April 30, 2003) with Heather Cottrell, GA EPD, prior to emailing them in written form. Mr. Little reviews PSD permits for completeness and enforceability.

Minor Comment 1
We recommend that you add a permit condition specifying that natural gas and No. 2 fuel oil cannot be burned at the same time in the new lime kiln.

> EPD Response: The EPD agrees with the comment. Condition 3.3.26 has been added to the permit. The facility is already required to measure and record the amount of natural gas and No. 6 fuel oil combusted in Condition 5.2.2. Condition 6.1.7.b.v has been added to make the simultaneous firing of the fuels a reportable exceedance. Finally, the facility is already required to keep daily fuel burning records in Condition 6.2.6. The equipment list has been updated to reflect the addition of a new condition.

Minor Comment 2
Wherever necessary, please change the term "sulfur dioxide scrubber" to "white liquor scrubber."

> EPD Response: The EPD agrees with the commenter that the Scrubber CDU8 should be described as a "white liquor scrubber." The change has been made where necessary.

Minor Comment 3
Three pollutants (CO, SO_2, and VOC) have 12-month emissions limits but no short-term limits. Short-term limits instead of, or in addition to, 12-month limits are usually preferred for practical enforceability purposes. However, we discussed the reasons why 12-month limits are acceptable in this case.

> EPD Response: Per the April 30, 2003 phone conversation and the information found in pages 22 and 23 of the Preliminary Determination, U.S. EPA Region 4 is not objecting to the 12-month emission limits. No changes need to be made as a result of this comment.

Minor Comment 4
The NO_X BACT limit of 175 ppm (10% oxygen) seems reasonable. However, as I pointed out yesterday, NO_X limits for lime kilns other than those in the RACT/BACT/LAER (RBLC) Clearinghouse could have been reviewed also.

> EPD Response: U.S. EPA Region 4 agrees with the EPD that the limit of 175 ppm NO_X (10% oxygen) is a reasonable BACT limit for the new lime kiln. No changes need to be made as a result of this comment. The GA EPD will continue to ensure that all BACT analyses are correct and complete.

WEYERHAEUSER – FLINT RIVER OPERATIONS MILL

Comment 1
On page 13 of 18, in section 6.1.7.b.iv, the following sentence ends abruptly: "The report shall also include any periods during which the condensate collection system, Lime Kiln U800, or Recovery Boiler U500." It is similarly worded in the current permit. The words "… are down" should be added to the end of that sentence.

> EPD Response: The words "are down" have been added to the end of the sentence found in Condition 6.1.7.b.iv. This wording is consistent that found in other pulp mill permits issued by the Division.

GA EPD

Condition 4.2.4 has been reworded for clarification. The modifications to the condition have not changed the requirements of the condition:

> Within 60 days after achieving the maximum capacity at which Lime Kiln U800 will be operated, but not later than 180 days after the initial startup, the Permittee shall conduct an initial performance test for VOC while burning No. 6 fuel oil and an initial performance test while burning natural gas. ~~The results of the test shall be used to show compliance with the VOC emission rate limit in Condition 3.3.3. Following the performance test the facility shall comply with the testing schedule in Condition 4.2.1.b.~~ Based on the data collected through the performance testing the facility shall develop a correlation between lime mud feed rate, the amount and type of fuel burned, and the VOC emission rate. This correlation shall be submitted to the Division as required by Condition 6.2.22 and used to calculate the 12-month rolling average as required in Condition 6.2.17. The 12-month rolling average calculated through Condition 6.2.17 shall be used to show compliance with the VOC emission limit in Condition 3.3.3. Following the initial performance testing the facility shall comply with the testing schedule in Condition 4.2.1.b.