

Facility Name: **Georgia-Pacific Corporation, Cedar Springs Operation**

City: Cedar Springs, Georgia

County: Early

AIRS #: 04-13-099-00001

Application #: 16819

Date SIP Application Received: Initial submittal July 7, 2006 resubmitted Sept 8, 2006

Date Title V Application Received: Initial submittal July 7, 2006 resubmitted Sept 8, 2006

Permit No: 2631-099-0001-V-02-1

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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 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 draft 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 public comment period 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
2631-099-0001-V-02-0	Draft issued Nov 16, 2006	✓	

**Table 2: Comments on Specific Permits**

Permit/Amendment Number	Comments
2631-099-0001-V-02-0	Title V Renewal Permit

B. Regulatory Status

1. PSD/NSR/RACT

This facility is major for PSD. See the narrative for permit 2631-099-0001-V-02-0 for a discussion of these limits.

The facility has chosen to take federally enforceable limits for PM, PM10, NOx, SO2, CO and TRS for lime kilns # 1 and 2 to avoid PSD review for this particular modification.

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

On July 7, 2005, Georgia-Pacific Corporation—Cedar Springs Operation (referred to as the Cedar Springs Mill) submitted a permit application to the Georgia Environmental Protection Division (GA EPD) to allow for modification to the causticizing and lime kiln area. GA EPD requested additional information and clarification to the July 7, 2005 submittal. The facility later resubmitted an entirely new application on Sept 8, 2006.

The No. 1 and No. 2 lime kilns cannot process all the lime mud that is currently generated, as result the excess lime mud ends up in the landfill and the facility has to purchase fresh lime. This project will allow the facility to process all the lime mud generated in the process.

The following specific changes are made to the causticizing and lime kiln area:

- Installation of a new lime mud flash dryer
- Installation of a new lime mud pre-coat filter with associated hoods, feeder and cyclone
- Installation of a Micro Mist scrubber to control emissions from the No. 2 Lime Kiln
- Replacing the existing Lime Mud filter # 2 with a new lime mud filter dedicated to No. 2 Lime Kiln.
- The existing Lime mud filter # 2 will serve as a backup
- Relocating Lime Mud Filter No. 3 to serve the No. 1 Lime Kiln. The existing Lime Mud Filter No. 1 will be retired.
- Installation of a belt conveyor to feed the lime mud from the pre-coat filter to the flash dryer
- Repairing a portion of the shell of No. 2 Lime Kiln, and repairing conveyors and bucket elevators associated with No. 2 Lime Kiln
- No physical changes are made to the No. 1 Lime Kiln

The lime mud dryer will use the exhaust from the No. 2 Lime Kiln to flash dry the lime mud to an approximate temperature of 400 degrees prior to entering the kiln. Preheating the lime mud will effectively increase the No. 2 Lime Kiln design capacity from 250 tons per day of CaO to 300 tons per day of CaO.

The potential capacity of No. 1 Lime Kiln will remain at 250 tons per day of CaO.

## B. Emissions Change

**Table 4: Emissions Change Due to Modification**

<b>Pollutant</b>	<b>Is the Pollutant Emitted?</b>	<b>Net Actual Emissions Increase (tpy)</b>	<b>Net Potential Emissions Increase (tpy)</b>
PM	Y	15.9*	15.9*
PM <sub>10</sub>	Y	14.7*	14.7*
SO <sub>2</sub>	Y	37.3*	37.3*
VOC	Y	16.1	16.1
NO <sub>x</sub>	Y	38.7*	38.7*
CO	Y	12.0*	12.0*
TRS	Y	9.9*	9.9*
SAM	Y	0.8	0.8

\*Emissions Capped with PSD Avoidance Conditions

## C. PSD/NSR Applicability

Georgia-Pacific Corporation, Cedar Springs Operation is major for PSD; however, some limit have been taken to avoid PSD on certain projects. See the narrative for permit 2631-099-0001-V-02-0 for a discussion of these limits.

**III. Facility Wide Requirements**

A. Emission and Operating Caps

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

B. Applicable Rules and Regulations

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

C. Compliance Status

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 any operational flexibility with this modification.

E. Permit Conditions

There are no new permit conditions in Section 2.0 of the permit due to this modification.

**IV. Regulated Equipment Requirements**

A. Brief Process Description

Please see the process description given in the original Title V narrative.

B. Equipment List for the Process

**Table 5: Revised Emission Units**

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
L600	Lime Kiln No. 1	40 CFR 52.21 40 CFR 63 Subpart S 40 CFR 63 Subpart MM 40 CFR 64 391-3-1-.02(2)(gg)1(iv) 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	3.2.1, 3.2.12, 3.3.6 through 3.3.8, 3.3.19 through 3.3.21, 3.3.24, 3.3.28, 3.4.1 through 3.4.4, 3.4.19, 4.2.1, 4.2.8 through 4.2.11, 4.2.15, 4.2.25, 5.2.1 through 5.2.3, 5.2.6, 5.2.14, 5.2.18, 5.2.21, 6.1.7, 6.2.1, 6.2.2, 6.2.7 through 6.2.13, 6.2.23 through 6.2.25, 6.2.35 through 6.2.39, 6.2.47 through 6.2.49*	C600	Venturi Scrubber
L601	Lime Kiln No. 2	40 CFR 52.21 40 CFR 63 Subpart S 40 CFR 63 Subpart MM 40 CFR 64 391-3-1-.02(2)(gg)1(iv) 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	3.2.1, 3.2.12, 3.3.6 through 3.3.8, 3.3.19 through 3.3.21, 3.3.24, 3.3.28, 3.4.1 through 3.4.4, 3.4.19, 4.2.1, 4.2.8 through 4.2.11, 4.2.15, 4.2.25, 5.2.1 through 5.2.3, 5.2.6, 5.2.14, 5.2.18, 5.2.21, 6.1.7, 6.2.1, 6.2.2, 6.2.7 through 6.2.13, 6.2.23 through 6.2.25, 6.2.35 through 6.2.39, 6.2.47 through 6.2.49*	C601	Micro Mist Scrubber

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

C. Equipment & Rule Applicability

The equipment listed in Table 5 of this narrative is subject to the following rules and regulations:

- Georgia Rule 391-3-1-.02(2)(b)— “Visible Emissions” (Subsumed by Georgia Rule 391-3-1-.02(2)(d))
- Georgia Rule 391-3-1-.02(2)(d)— “Fuel-burning Equipment”
- Georgia Rule 391-3-1-.02(2)(g)— “Sulfur Dioxide”
- Georgia Rule 391-3-1-.02(2)(gg)— “Kraft Pulp Mills”

Equipment Emission Caps and Operating Limits

Condition No. 3.2.1 was revised to include new PSD avoidance emission limits for PM, PM10, SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, SAM and Pb.

Condition No. 3.2.1 now also contains the rated production capacity of the lime kiln # 1 and # 2 that was used for PSD avoidance.

Condition No. 3.2.2 was revised to include the new emission limits from emission group LEG1, LEG2 and LOG1.

Equipment Federal Rule Standards

The proposed changes to the Lime Kiln # 2 falls under the repairs and maintenance provisions of the NSPS and hence are not considered modification. There are no changes made to Lime Kiln # 1.

There is no physical change or a change in method of operations of the Lime Kilns # 1 and # 2 and hence NSPS modification definition does not apply to either of these Kilns.

Equipment SIP Rule Standards

This amendment does not include any new equipment SIP Rule Standards.

D. Compliance Status

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

There are no requests for operational flexibility for this modification.

F. Permit Conditions

Equipment Emission Caps and Operating Limits for Lime Kilns # 1 and 2

Section 3.2.1 of Amendment No. 2631-099-0001-V-02-1 includes the equipment emission caps and operating limits for Lime Kilns # 1 and 2.

*New Conditions*

Condition 3.2.1 restricts the emissions of PM, PM10, SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, SAM and Pb from No. 1 and No. 2 Lime Kilns. This provision is a requirement for both 40 CFR 52.21 (PSD) Avoidance for all pollutants.

Condition 3.2.1 also limits the production of Calcium Oxide in No.1 Lime Kiln to 250 tons per day and 300 tons per day in No. 2 Lime Kiln. This provision is a requirement for 40 CFR 52.21 (PSD) Avoidance for all pollutants.

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

*Amended Conditions*

Condition 4.1.3 was amended to include Method 202 for condensable particulate matter.

Condition 4.2.1 requires the Permittee to conduct an annual performance test to demonstrate compliance with the emissions rate specified in Condition 3.3.2.

*New Conditions*

Condition 4.2.25 (a) requires the Permittee to conduct an initial performance test for particulate matter from the new micro-mist scrubber to establish the normal range of pressure drop and flow rates and establish excursion limits.

Condition 4.2.25 (b) requires the Permittee to conduct an initial performance test for for PM, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, SAM and Pb. Air flow rate and pollutant concentrations determined during these performance tests will be used establish emission factors for PM, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, Pb and SAM in the units of pounds of pollutant per ton of CaO. These emission factors will be used to calculate the monthly and annual emission rates as required by Condition Nos. 6.2.42 and 6.2.43.

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

None applicable.

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

*Amended Conditions*

Condition 5.2.1 (a) was amended to reflect the new CEMS for sulfur dioxide to be installed on the lime kiln stack.

Condition 5.2.2 (a) was amended to reflect the monitoring requirement for the new micro-mist scrubber.

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

None applicable.

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

### *Modified Conditions*

Condition 6.1.7 b.(i) (I) defines scrubbant flow rate exceedence as any readings over the limit established during initial performance testing required by Condition 4.2.8.

Condition 6.1.7b.(i) (J) defines pressure drop rate exceedence as any readings over the limit established during initial performance testing required by Condition 4.2.8.

Condition 6.17 b (i)(K) through (T) define exceedences for PM, SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, Pb and SAM for Lime Kiln No. 1 and Lime Kiln No. 2.

### *New Conditions*

Conditons 6.2.47 through 6.2.49 were added to record and report annual emissions and twelve month rolling averages for PM, SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, Pb and SAM from No. 1 Lime Kiln to demonstrate compliance with PSD avoidance limits established in Condition 3.2.1. The permitte will use emission factors establish during previous compliance test and production data recorded in Condition 6.2.1 and hours of operation recorded per Condition 6.2.11 to calculate annual emissions.

## **VIII. Specific Requirements**

- A. Operational Flexibility—Not Applicable.
- B. Alternative Requirements—Not Applicable.
- C. Insignificant Activities—Not Applicable.
- D. Temporary Sources—Please see previous discussion.
- 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
- J. Stratospheric Ozone Protection Requirements

This modification does not change the source's applicability.

This modification does not change the source's applicability.

K. Pollution Prevention—Not Applicable.

L. Specific Conditions

Condition 7.14.1 was added to ensure that lime mud filter No. 2 is used as a back up filter as intended and not used to handle swing in production.

**Addendum to Narrative**

The 30-day public review started on February 28, 2007 and ended on March 30, 2007. Comments were received by the Division from the facility. No comments were received by the public or USEPA.

Each comment is printed below, followed by a discussion of the comment and any changes made to the permit as a result. Due to the changes in permit no. 2631-099-0001-V-02-1 it is revoked and reissued as permit no. 2631-099-0001-V-02-2.

Request: The facility requested to delete the typo of tons/yr in permit condition 3.2.1 (d).

Response: The typo was deleted in Condition 3.2.1 (d)

Request: The facility requested that the 30 day rolling average for Lime Kiln No.1 in Condition 3.2.1 (j) be changed to 30 day block average.

Response: For a continuously operated process a 30 day rolling average is a better measure than a 30 day block average where the block is arbitrarily defined by the company. Hence this request is denied and 30 day rolling average remains in the Condition 3.2.1 (j).

Request: The facility requested that the 30 day rolling average for Lime Kiln No.2 in Condition 3.2.1 (k) be changed to 30 day block average.

Response: For a continuously operated process a 30 day rolling average is a better measure than a 30 day block average where the block is arbitrarily defined by the company. Hence this request is denied and 30 day rolling average remains in the Condition 3.2.1 (k).

Request: The facility requested to add the green liquor splitter box (L602) to the list of emission sources in Condition No. 3.2.2 (c).

Response: The green liquor splitter box (L602) was inadvertently left out in the draft. It is now added to the list of sources in Condition 3.2.2 (c).

Request: The facility states that they are unaware of an accurate test method that can be used to measure PM10 emissions for a lime kiln with a web scrubber exhaust stack.

Response: GAEPD requests Georgia Pacific suggest a method and then EPD will work with the facility to arrive at a mutually satisfactory way to test.

Request: The facility is requesting to remove lead testing at the Kiln and instead proposing to use NCASI published factors

Response: Testing lead in fuel is more accurate way than testing in the air stream. GAEPD agrees to the use of NCASI factors in lieu of the test.

Request: GP request to add a statement that allows the Mill to perform additional performance testing to establish a new pollutant based emission factor for NO<sub>x</sub>, CO, when the Mill believes it is necessary.

Response: This request is accommodated in Condition 4.2.1 under testing frequency.

Request: GP requested to add 12-month rolling average Pb limits for No. 1 lime kiln and No. 2 Lime Kiln in Condition 6.1.7 (b).

Response: The condition 6.1.7 (b) is revised accordingly with 12 month rolling average for Pb.

Request: GP requested the exceedence for lime Kilns production be defined in Condition No. 6.1.7 (c) (ii) (A) and Condition No. 6.1.7 (c) (ii) (B) and as any 24 hour daily average based on a monthly block period when the lime Kiln No. 1 production exceeds 250 tons per day

Response: The exceedence for lime kilns is defined as any 30 day rolling average period when the lime kilns production exceeds 250 tons per day for No. 1 Lime Kiln and 300 tons per day for No. 2 Lime Kiln. This was clarified with Mr. Cliff Chamblee of GP via a telephone conversation on March 27, 2007 and they now better understand the exceedence definition.

Request: Condition No. 6.2.47: GP Request this condition be revised as shown by the *Italic* to indicate that monthly emission totals and twelve-month rolling emission totals will be calculated as follows for the pollutants shown below:

- a. For PM, NO<sub>x</sub>, *and* CO, ~~Pb~~ GP will use the results of performance testing to calculate an emission factor in the units of lbs pollutant per ton CaO produced. The emission factor will be multiplied by the CaO production rate to calculate the mass emission rates on a monthly basis for each lime kiln.
- b. For PM<sub>10</sub>, GP will multiply the PM emission rate data by a NCASI factor of 84.7% to obtain the PM<sub>10</sub> emission rate.
- c. For VOCs, SAM, *and* Pb, GP will use the emission factors contained in the Lime Mud Dryer permit application multiplied by the CaO production rate to calculate the mass emission rates on a monthly basis for each lime kiln.

Also, PM<sub>10</sub> needs to be added to the regulator reference. [40 CFR 52.21 Avoidance for PM, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, VOC, TRS, Pb and SAM]

Response: Condition 6.2.47 (a) was changed to remove Pb since Pb testing is not required in the final permit.

Condition 6.2.47 (b) revision was denied since we are request testing for PM10.

Condition 6.2.47 (c) was revised to add Pb to the list of pollutants.

Request: GP requested Condition 6.2.48 should be corrected with SO<sub>2</sub> limits of 60.3 tons

Response: The limit was incorrect and is corrected to 60.30 for SO<sub>2</sub> in the final permit.

Request: GP requested Condition 6.2.49 should be corrected with SO<sub>2</sub> limits of 72.4 tons

Response: The limit was incorrect and is corrected to 72.40 for SO<sub>2</sub> in the final permit.

Request: Condition No. 7.14.1: GP requests that the following changes be made since the backup filter may need to be used when any equipment downstream of the mud filter is down for maintenance or repairs:

The existing Lime Mud Filter No. 2 (will be called Lime Mud Filter No.3 after the modification) will serve as a back up filter ~~only when the lime mud filter serving the No.1 Lime Kiln or No. 2 Lime Kiln is down for repairs.~~ The output from the back up Lime Mud Filter No.3 will not be used to supply lime mud to either of the lime kilns.

Response: The language of the condition 7.14.1 is changed in the final permit.