Facility Name: **Georgia-Pacific Corporation, Cedar Springs Operation**
City: Cedar Springs, GA
County: Early
AIRS #: 04-13-099-00001 Application #: 14798, 15442

Date SIP Application Received:
Date Title V Application Received: App. # 14798—10/29/2003, App. # 15442—6/24/2004
Permit No: 2631-099-0001-V-01-5

Program	Review Engineers	Review Managers
SSPP	Beth Chalk	David Matos
SSCP	John Harrison	Douglas Waldron
ISMP	Sid Stephens	Richard Taylor
TOXICS	Sherry Waldron	Karen Hays

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. 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-01-0	3/9/2001	✓	
2631-099-0001-V-01-1	4/19/2001	✓	
2631-099-0001-V-01-2	1/29/2002	✓	
2631-099-0001-V-01-3	7/25/2002	✓	
2631-099-0001-V-01-4	4/29/2004	✓	

Table 2: Comments on Specific Permits

Permit/Amendment Number	Comments
2631-099-0001-V-01-0	Initial Title V Permit
2631-099-0001-V-01-1	502(b)(10) Amendment—New Digester Relief System
2631-099-0001-V-01-2	PCP Permit—Cluster Rule Compliance
2631-099-0001-V-01-3	PSD Permit—Boiler Project
2631-099-0001-V-01-4	Min. Mod. Amendment—Scrubber Monitoring Alteration

B. Regulatory Status

1. PSD/NSR/RACT

This facility is major for PSD; however, some limits have been taken to avoid PSD on certain modifications. This modification does not affect the facility's PSD status or require a PSD review.

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_{10}	Yes	✓		
SO_2	Yes	✓		
VOC	Yes	✓		
NO_x	Yes	✓		
CO	Yes	✓		
TRS	Yes	✓		
H_2S	Yes	✓		
Individual	Yes	✓		

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
HAP				
Total HAPs	Yes	✓		

II. Proposed Modification

A. Description of Modification

Application No. 15442 was submitted to permit the installation of low air-flow washer hoods on four Kraft washer lines for the purpose of Phase II compliance with the Cluster Rule. The permit cover page was amended to allow for the construction and operation of these emission reduction tools.

Application No. 14798 was submitted to include the facility-specific requirements for 40 CFR 63 Subpart MM—"*National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semi-chemical Pulp Mills*", to which the facility became subject on March 13, 2004.

B. Emissions Change

There are no changes in emissions associated with this modification.

C. PSD/NSR Applicability

There are no PSD or NSR issues with this modification.

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

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

B. Equipment List for the Process Modification

Table 4: Cedar Springs Subpart MM Sources

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 279, 40 CFR 63 Subpart MM, 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)	3.3.1, 3.3.15, 3.3.16, 3.4.1 through 3.4.4, 4.2.1, 4.2.2, 4.2.10, 5.2.1, 5.2.2, 5.2.3, 5.2.10, 6.1.7, 6.2.1, 6.2.2, 6.2.7, 6.2.8, 6.2.9, 6.2.17 through 6.2.24*	C600	Venturi Scrubber
L601	Lime Kiln No. 2	40 CFR 52.21, 40 CFR 279, 40 CFR 63 Subpart MM, 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)	3.3.1, 3.3.15, 3.3.16, 3.4.1 through 3.4.4, 4.2.1, 4.2.2, 4.2.10, 5.2.1, 5.2.2, 5.2.3, 5.2.10, 6.1.7, 6.2.1, 6.2.2, 6.2.7, 6.2.8, 6.2.9, 6.2.17 through 6.2.24*	C601	Venturi Scrubber
R400	Recovery Boiler No. 1	40 CFR 52.21, 40 CFR 60 Subpart BB, 40 CFR 60 Subpart Db, 40 CFR 63 Subpart MM, 391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g), 391-3-1-.02(2)(gg)	3.3.3 through 3.3.6, 3.4.7, 4.2.1, 4.2.2, 4.2.8, 4.2.10, 5.2.1, 5.2.3, 5.2.4, 5.2.9, 6.1.7, 6.2.3, 6.2.6, 6.2.17 through 6.2.24*	C400	Electrostatic Precipitator
R401	Recovery Boiler No. 2	40 CFR 52.21, 40 CFR 60 Subpart BB, 40 CFR 60 Subpart Db, 40 CFR 63 Subpart MM, 391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g), 391-3-1-.02(2)(gg)	3.3.3 through 3.3.6, 3.4.7, 4.2.1, 4.2.2, 4.2.8, 4.2.10, 5.2.1, 5.2.3, 5.2.4, 5.2.9, 6.1.7, 6.2.3, 6.2.6, 6.2.17 through 6.2.24*	C401	Electrostatic Precipitator
RF02	Recovery Boiler No. 3	40 CFR 52.21, 40 CFR 279, 40 CFR 63 Subpart MM, 391-3-1-.02(2)(gg)1(i), 391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(g)	3.3.15, 3.3.16, 3.3.34 through 3.3.37, 3.4.9 through 3.4.11, 4.2.1, 4.2.2, 4.2.9, 4.2.10, 5.2.1, 5.2.3, 5.2.9, 6.1.7, 6.2.3, 6.2.7, 6.2.8, 6.2.9, 6.2.10, 6.2.16, 6.2.17 through 6.2.24*	C402	Electrostatic Precipitator
R404	Smelt Tank No. 1	40 CFR 52.21, 40 CFR 60 Subpart BB, 40 CFR 63 Subpart MM, 391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(gg)	3.3.7, 3.4.13, 3.4.14, 4.2.1, 4.2.2, 4.2.10, 5.2.2, 5.2.11, 6.1.7, 6.2.17 through 6.2.24*	C404	Water Shower Scrubber
R405	Smelt Tank No. 2	40 CFR 52.21, 40 CFR 60 Subpart BB, 40 CFR 63 Subpart MM, 391-3-1-.02(2)(b), 391-3-1-.02(2)(e), 391-3-1-.02(2)(gg)	3.3.7, 3.4.13, 3.4.14, 4.2.1, 4.2.2, 4.2.10, 5.2.2, 5.2.11, 6.1.7, 6.2.17 through 6.2.24*	C405	Water Shower Scrubber

Table 4: Cedar Springs Subpart MM Sources

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements / Standards*	Corresponding Permit Conditions	ID No.	Description
R406	Smelt Tank No. 3	40 CFR 63 Subpart MM, 391-3-1-.02(2)(gg)1(iii), 391-3-1-.02(2)(b), 391-3-1-.02(2)(e)	3.4.15 through 3.4.17, 3.3.38, 4.2.1, 4.2.2, 4.2.10, 5.2.2, 5.2.10, 6.1.7, 6.2.17 through 6.2.24*	C406	Venturi Scrubber

C. Equipment & Rule Applicability

The facility became subject to the requirements of 40 CFR 63 Subpart MM – "National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semi-chemical Pulp Mills" on March 13, 2004.

The facility has opted to comply with the particulate matter (PM) limits of 40 CFR 63 Subpart MM by using the bubble compliance alternative allowed under 40 CFR 63.862(a)(1)(ii) due to the higher emission limit on the No. 3 Smelt Tank. The Cedar Springs Mill qualifies for this compliance alternative because it operates more than 6,300 hours per year and all applicable units are existing sources. The facility submitted the calculations for the bubble compliance alternative limit with this application. Additionally, the facility has requested to use previous test data in lieu of initial performance testing.

Using the thresholds specified under 40 CFR 63.862(a)(1)(i), the facility has an overall maximum chemical recovery PM emission limit of 1.366 lb/ton BLS. Flow rates and the maximum BLS production were determined using an average of the data from three past stack tests. The limits proposed by the facility, in accordance with 40 CFR 63.862(a)(1)(ii) and incorporated into this Permit, show an overall chemical recovery PM emission rate at 1.079 lb/ton BLS. Please see the February 27, 2004 memo from Sid Stephens for a detailed calculation of the overall and individual particulate matter emission limits. Table 5 shows the existing and proposed limits and regulatory citation. Note that the new permit limits are either equal to or more stringent than the limits already imposed through PSD or Georgia Rule (e).

Table 5: Cedar Springs Subpart MM Limits

Emissions Unit	Subpart MM Limit	Previous Permit Limit	Previous Reg. Citation
No. 1 Recovery Boiler	0.030 gr/dscf @ 8% oxygen	0.030 gr/dscf @ 8% oxygen	PSD Limit
No. 2 Recovery Boiler	0.030 gr/dscf @ 8% oxygen	0.030 gr/dscf @ 8% oxygen	PSD Limit
No. 3 Recovery Boiler	0.024 gr/dscf @ 8% oxygen	0.029 gr/dscf @ 8% oxygen	Georgia Rule (e)*
No. 1 Smelt Tank	0.12 lb/ton BLS	0.12 lb/ton BLS	PSD Limit
No. 2 Smelt Tank	0.12 lb/ton BLS	0.12 lb/ton BLS	PSD Limit
No. 3 Smelt Tank	0.53 lb/ton BLS	0.62 lb/ton BLS	Georgia Rule (e)*
No. 1 Lime Kiln	0.064 gr/dscf @ 10% oxygen	0.075 gr/dscf @ 10% oxygen	Georgia Rule (e)*
No. 2 Lime Kiln	0.056 gr/dscf @ 10% oxygen	0.072 gr/dscf @ 10% oxygen	Georgia Rule (e)*

* Converted from original units, see the February 27, 2004 memo from Sid Stephens

Table 6, on the following page, compares performance testing results to the MM limitations.

Table 6: Cedar Springs Subpart MM and Performance Testing Comparison

Emissions Unit	Subpart MM Limit	Performance Test Result	Test Date	Percent Allowable
No. 1 Recovery Boiler	0.030 gr/dscf @ 8% oxygen	0.0151 gr/dscf @ 8% oxygen	2000	50
No. 2 Recovery Boiler	0.030 gr/dscf @ 8% oxygen	0.0114 gr/dscf @ 8% oxygen	2000	38
No. 3 Recovery Boiler	0.024 gr/dscf @ 8% oxygen	0.0066 gr/dscf @ 8% oxy gen	2000	28
No. 1 Smelt Tank	0.12 lb/ton BLS	0.0472 lb/ton BLS	2000	39
No. 2 Smelt Tank	0.12 lb/ton BLS	0.0612 lb/ton BLS	2000	51
No. 3 Smelt Tank	0.53 lb/ton BLS	0.192 lb/ton BLS	2000	36
No. 1 Lime Kiln	0.064 gr/dscf @ 10% oxygen	0.0339 gr/dscf @ 10% oxygen	2000	53
No. 2 Lime Kiln	0.056 gr/dscf @ 10% oxygen	0.0354 gr/dscf @ 10% oxygen	2000	63

D. 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.

E. Operational Flexibility

The facility did not request any operational flexibility with this modification.

F. Permit Conditions

The conditions listed in Section 3.3 incorporate the particulate matter (PM) limits, established for compliance with the bubble limit alternative, for each lime kiln, recovery boiler, and smelt tank. Conditions 3.3.1.c and 3.3.1.d set the PM limits for the lime kilns. The No. 1 Lime Kiln must abide by a limit of 0.064 gr/dscf, and the No. 2 Lime Kiln must abide by a limit of 0.056 gr/dscf; both of these limits are corrected to 10 percent oxygen. The PM limit of 0.030 gr/dscf corrected to 8 percent oxygen has not changed for Recovery Boilers No. 1 and No. 2; Condition 3.3.5.b was altered only to incorporate the reference to 40 CFR 63.862(a)(1)(ii). The PM limit of 0.12 pounds per ton of black liquor solids has not changed for Smelt Tanks No. 1 and No. 2; Condition 3.3.7.b was altered only to incorporate the reference to 40 CFR 63.862(a)(1)(ii). This amendment establishes new PM limiting conditions for Recovery Boiler No. 3 and Smelt Tank No. 3. Condition 3.3.37 specifies that PM emissions from Recovery Boiler No. 3 should not exceed 0.024 gr/dscf corrected to 8 percent oxygen. Condition 3.3.38 specifies that PM emissions from Smelt Tank No. 3 should not exceed 0.53 pounds per ton of black liquor solids.

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

A. Individual Equipment:

There were no testing requirements that applied only to individual pieces of equipment.

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

The conditions listed in Sections 4.1 and 4.2 of this amendment incorporate all the testing requirements needed for compliance with 40 CFR 63 Subpart MM. Conditions 4.1.1 and 4.1.2 have been updated in to reflect changes in the Title V permit template. Conditions 4.1.3(v) through 4.1.3(bb) incorporate the test methods required for Subpart MM performance testing. For determining the operational ranges of the monitoring parameters listed in Condition 5.2.2, Condition 4.2.10 states that the facility can use existing test data in lieu of performance testing if the requirements of 40 CFR 63.865 have been met. Condition 4.2.11 states that operating ranges may be replaced or changed in subsequent performance tests. Condition 4.2.12 requires the facility to determine the average value of each parameter monitored during a performance test. Condition 4.2.13 requires the facility to determine the black liquor solids firing rate and calcium oxide production during the performance tests.

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

A. Individual Equipment:

There were no monitoring requirements that applied only to individual pieces of equipment.

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

The conditions listed in Section 5.2 of this amendment incorporate all the specific monitoring requirements needed for compliance with 40 CFR 63 Subpart MM.

Conditions 5.2.1 through 5.2.3 describe the parameters that must be monitored on the control equipment. For the three recovery boilers, each equipped with an ESP, Condition 5.2.1 specifies that opacity is the required monitoring parameter; compliance is demonstrated through the use of a COMS. For the three smelt tanks and the two lime kilns, control is achieved through the use of a scrubber. Condition 5.2.2 specifies that for the two lime kilns and Smelt Tank No. 3, the required monitoring parameters are pressure drop and scrubbant flow rate; compliance is demonstrated through the use of a CPMS. For Smelt Tanks No. 1 and No. 2, the required monitoring parameters are scrubber fan amperage and scrubbant flow rate. Fan amperage is an alternative monitoring parameter requested by this facility; Georgia-Pacific received approval for this alternative monitoring from the Georgia EPD and EPA on March 4 and March 5, 2003, respectively. Compliance is also demonstrated through the use of a CPMS for Smelt Tanks No. 1 and No. 2. Condition 5.2.3 specifies that black liquor firing rates, weight percents of black liquor solids, and calcium oxide production rates must be measured and recorded daily.

Conditions 5.2.9 through 5.2.11 spell out the requirements that a COMS or CPMS must meet in order to satisfy the requirements of 40 CFR 63 Subpart MM.

VI. Other Record Keeping and Reporting Requirements

The conditions listed in Sections 6.1 and 6.2 of this amendment incorporate all the record keeping and reporting requirements needed for compliance with 40 CFR 63 Subpart MM.

Conditions 6.1.7(b)(xiv) and 6.1.7(b)(xv) outline the exceedances required to be reported by 40 CFR 63 Subpart MM.

Because the recovery boilers are equipped with ESPs, the monitoring exceedance values for the recovery boilers are based upon opacity; these opacity limits are specified in 40 CFR 63 Subpart MM. Because the smelt tanks and lime kilns are equipped with scrubbers, the monitoring exceedance values for the smelt tanks and lime kilns are based upon the scrubber parameters recorded during performance testing. The exceedance values for the smelt tanks and lime kilns were provided by the facility in an email dated 3/23/2005; Cliff Chamblee, Technical Services Superintendent of the Cedar Springs Mill, has stated that the exceedance values specified in this email were based upon performance testing conducted in accordance with 40 CFR 63 Subpart MM. The exceedance values provided by the facility were calculated using performance testing from multiple years. For the smelt tanks, the exceedance values were selected to be 90 percent of the minimum scrubbant flow rates and differential pressures recorded during performance testing conducted between 1994 and 2000. For the lime kilns, the exceedance values were selected to be 90 percent of the average scrubbant flow rates and differential pressures recorded during performance testing conducted between 1995 and 2000. In 2003, Cedar Springs received approval for an alternate parameter, fan amperage, to be monitored in lieu of differential pressure for the scrubbers on Smelt Tanks No. 1 and No. 2. A value of 45 amps was accepted for each scrubber as the replacement exceedance limit.

Table 7, below, was included to demonstrate that the monitoring exceedance values provided by the facility correspond closely with the scrubber parameters recorded during successful MM compliance testing and were selected in accordance with EPD policy. Please refer to Table 6 for more testing detail.

Table 7: Cedar Springs Scrubber Parameter Comparison

Emissions Unit	Performance Test Result	Test Date	Pressure Drop/Fan Amperage			Scrubber Flow Rate (gpm)		
			Test Value	Exceedance Value	Percent Comparison	Test Value	Exceedance Value	Percent Comparison
No. 1 Smelt Tank	0.0472 lb/ton BLS	2000	--	45 amp	--	57	50	88
No. 2 Smelt Tank	0.0612 lb/ton BLS	2000	--	45 amp	--	61	54	89
No. 3 Smelt Tank	0.192 lb/ton BLS	2000	2.9 in.	2.5 in.	86	158	127	80
No. 1 Lime Kiln	0.0399 gr/dscf @ 10% oxygen	2000	22.6 in.	19.4 in.	86	631	560	89
No. 2 Lime Kiln	0.0354 gr/dscf @ 10% oxygen	2000	23.0 in.	19.9 in.	87	623	560	90

Conditions 6.2.1 and 6.2.3 have been slightly modified. Condition 6.2.1 now includes a direct reference to the recording of the calcium oxide production rate for Lime Kilns No. 1 and No. 2. Both of these conditions have been modified to include a reference to 40 CFR 63.866(c).

Condition 6.2.12 was modified to include the startup, shutdown, and malfunction requirements for 40 CFR 63 subpart MM.

Conditions 6.2.17 through 6.2.23 outline the remaining 40 CFR 63 Subpart MM reporting and record keeping requirements. Condition 6.2.17 outlines the items that would require a corrective action plan under 40 CFR 63 Subpart MM. Condition 6.2.18 requires the facility to maintain records of any corrective actions or exceedances of Subpart MM. Condition 6.2.19 requires the facility to submit the operating ranges for the required parameters in accordance with Conditions 4.2.10 through 4.2.13. Condition 6.2.20 outlines notifications the facility must make to EPD. Condition 6.2.21 outlines additional record keeping needed for 40 CFR 63 Subpart MM. Condition 6.2.22 requires the facility to maintain records of the hours of operation under 40 CFR 63 Subpart MM. Condition 6.2.23 requires the facility to submit a quarterly report on the monitored parameters. Condition 6.2.24 requires the maintenance of records related to the conditions of Section 5.2.

VII. 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 May 10, 2005 and ended on June 23, 2005. Comments were not received by the Division.