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ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
DIVISION OF AIR POLLUTION CONTROL

Summary Report Relative to Permit Application

Submitted By: Georgia - Pacific Corporation
Ashdown Operations
P.O. Box 496
Ashdown, AR 71822-0496

CSN: 410002 Permit No. 287-AR-7 Date Issued 5/24/93

Submittals: August 14, 1990 September 14, 1990
January 28, 1992 February 27, 1992
January 26, 1993 February 8, 1993

Summary

Georgia - Pacific Corporation operates a bleached kraft pulp and paper mill in Ashdown, Little River County, Arkansas. The facility is considered a major stationary source under PSD regulations; and is currently operating under air permits 287-AR-6 and 946-A. This permitting action seeks to consolidate all the above permits into one permit, and to permit existing emission sources which have previously been inadvertently omitted from permitting activities. One proposed source is discussed later in the text.

Permit 287-AR-5 was issued on June 24, 1987 as a PSD action. This permit was for the replacement of the No. 1 Recovery Boiler and the No. 1 Smelt Tank. The replacements were designated as No. 3 Recovery Boiler and the No. 3 Smelt Tank.

Permit 946-A, another PSD permitting action, was issued on July 14, 1989. Under this action, the old No. 1 Recovery Boiler was converted to what is now the No. 3 Power Boiler. Additionally, the construction of a new lime kiln (No. 3 Lime Kiln) was permitted.

Installation: N/A	Operation: Current
Control Equipment: N/A	Total Project: N/A
Reviewed By: M.L.Core	Approved By: J.B. Jones
Applicable Regulation: Air Code, SIP, NSPS, PSD	

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Permit 287-AR-6 was issued on December 31, 1991. This permit allowed for an increase in the black liquor solids (BLS) firing rate in the No. 3 Recovery Boiler. The increase however, did not trigger a PSD review.

In addition to consolidating the permits mentioned, GP proposes to permit a PCC (precipitated calcium carbonate) facility to be located adjacent to the No. 3 Lime Kiln on GP property. The process will introduce the stack gases from the No. 3 Lime Kiln to the carbonators which will produce a slurry of calcium carbonate for use in the papermaking process. The No. 2 Lime Kiln may be used as a backup to the No. 3 Lime Kiln. When neither kiln is operating, liquid carbon dioxide from an onsite tank will be used.

Three carbonators are intended to be constructed in 1993, with a fourth to be constructed in 1994. Construction of the fourth unit will begin no later than eighteen (18) months of final permit issuance. The carbonators will operate as a batch process. The stack gases once used by the carbonators will then be released to the atmosphere. Demisters will be used on the carbonators to control particulate emissions. Emissions from ancillary operations, lime unloading and handling, will be controlled by using a fabric filter and are expected to be negligible.

The PCC facility will be operated by Minerals Technologies, Inc.; a wholly owned subsidiary of Specialty Minerals, Inc.; however, for permitting and compliance purposes, GP will assume full responsibility. GP proposes to demonstrate, through the use of emissions netting procedures, that the facility will not result in emissions increases which would be subject to PSD review. A summary of the net increases in emissions is shown below.

PHASE I (3 CARBONATORS)

POLLUTANT	ACTUAL EMISSIONS ¹	PROPOSED EMISSIONS ² (TOTAL)	NET CHANGE (+/-) ³
CO	-94.0	+119.6	+25.6
NOx	-113.6	+143.2	+29.6
SO2	-22.7	+5.3	-17.4
TRS	-2.0	+0.8	-1.2
PM10	-14.7	+10.1	-4.6
VOC	-22.1	+28.1	+6.0

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POLLUTANT	PHASE II (4 CARBONATORS)		
	ACTUAL EMISSIONS ¹	PROPOSED EMISSIONS ² (TOTAL)	NET CHANGE (+/-) ³
CO	-125.3	+159.4	+34.1
NOx	-151.5	+191.0	+39.5
SO2	-30.3	+7.0	-23.3
TRS	-2.7	+1.0	-1.7
PM10	-19.6	+13.5	-6.1
VOC	-29.5	+36.8	+7.3

1. Actual emissions from lime kiln to be diverted to carbonators, expressed in tons per year.

2. Proposed emissions from the PCC plant, expressed in tons per year.

3. + = Increase, - = Decrease; both expressed in tons per year.

As can be seen from the above, the net changes in emissions as a result of the proposed PCC plant are less than the significant level defined in 40 CFR Part 52.21. Thus, the proposed activity will not be subject to PSD regulatory review. The Air Division has however, made the decision to require a testing regimen to demonstrate compliance with the PSD regulations.

Basic operations include the receipt of logs which are stockpiled for use as needed. Logs are debarked, with the bark saved and used for fuel, and the debarked log is then used to make chips for the pulping operations. Minor source emissions from the woodyard operations would be fugitive emissions from seven cyclones which separate oversized chips from acceptable sized chips. Due to the cyclone locations with respect to the property lines, fugitive emissions are not likely to extend beyond the property line.

Typical bleached kraft mill activities involve two major processes; pulping and bleaching. Kraft pulping is the process by which the cellulose portion of wood is separated from the lignin which binds the fibers together. This process is accomplished by digesting (cooking) wood chips in an alkaline liquor at elevated temperatures and pressures. Non-condensable gases from the digestion process are routed to the power boiler or lime kiln for incineration.

Upon completion of the digestion stage, the mixture of pulp and liquor is withdrawn into a blow tank. In the blow tank, the pulp

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and liquor are separated; with the pulp proceeding to a washing stage and the spent liquor going to a recovery stage. Washing generally takes place in a multi-stage countercurrent system, and is then followed by bleaching in multiple stages to achieve the desired brightness.

The spent liquor, commonly referred to as "black liquor" contains chemicals which warrant recovery in a closed loop process. The black liquor is concentrated to a degree that dissolved organics will permit it to be burned in a recovery furnace. The inorganics will collect on the bottom of the furnace as a smelt, and are collected and processed into a green liquor. The green liquor is then reacted with lime to form the white liquor, which is reused in the digestion process. Non-condensable gases from the evaporators/concentrators are routed to the power boiler or lime kiln for incineration.

The lime kilns are equipped with slakers which have scrubbers installed to control particulate emissions. Both kilns have hot lime silos and fresh lime unloading areas. The No. 3 kiln utilizes a baghouse to control particulate matter emissions from these areas, while the No. 2 kiln has the emissions vented back into the kiln. These are considered minor sources, and emissions, if any, are expected to be minimal.

Bleached pulp is diluted at the headbox of the paper machine to facilitate the paper making operation. During the paper making process, it becomes necessary to dewater the sheet during its trip through the paper machine. Among the means used are exhaust fans and vacuum pumps, both of which will emit water vapor to the atmosphere. No wet strength resins, coating operations, nor volatile organics are used in the paper manufacturing area. The paper machines/pulp dryers and the number of exhaust fans/pump exhausts are listed in Appendix I.

Emissions will consist of combustion products of natural gas, bark, and oil (boilers and lime kilns), bleach plant emissions, emissions associated with liquor recovery operations, and emissions from storage vessels and the waste treatment system.

SPECIFIC CONDITIONS

1. This permit shall void and supercede all previously issued air permits to Georgia-Pacific Corp. for its Ashdown Operations.
2. Except where otherwise specified, the permittee shall comply with the emissions limitations listed in Table I.

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3. The permittee shall operate all equipment and associated control devices within design specifications as described in the permit application, except where a specific condition(s) allows an alternative means of operation.

4. Any modifications, construction, or reconstruction shall be reported to the Department in advance.

5. Visible emissions as measured by EPA Method 9, shall not exceed the value specified in Table I.

6. No. 3 Power Boiler - The following are limits for steam generation capacity and heat input:

Fuel	Steam Generation LBS/HR	Heat Input MMBTU/HR
Bark	380,000	620
Natural Gas	521,000	670
Natural Gas & Bark	550,000	790

Additionally, the No. 3 Power Boiler shall comply with the applicable provisions of 40 CFR Part 60, Subparts A and Db. Georgia - Pacific, Ashdown Operations shall use only natural gas and/or bark to fire the No. 3 Power Boiler. No other fuels shall be used.

7. No bypass of the Electrostatic precipitator (ESP) is permitted during required maintenance. For situations where the No. 3 Power Boiler is not shut down during ESP maintenance; one chamber of the ESP shall be isolated, and the boiler operation shall be limited to 70% of full service load rating. GP shall notify ADPCE within 24 hours of any ESP maintenance which requires one chamber being removed from service. GP shall comply with the particulate limit in Table I during this operation.

8. No. 3 Lime Kiln - The No. 3 Lime Kiln shall use only natural gas as fuel. The No. 3 Lime Kiln shall comply with 40 CFR Part 60, Subparts A and BB. Noncondensable TRS gases may be incinerated in the No. 3 Lime Kiln in compliance with the Plan for Control of Designated Pollutants (111(d) Plan).

9. No bypass of the ESP is allowed during required maintenance. During situations when the kiln is not shut down for ESP maintenance, one chamber shall be isolated. Kiln operation shall be limited to 90% of full load rating. GP shall notify ADPCE within 24 hours of any ESP maintenance which requires one chamber being removed from service. GP shall not exceed the particulate limit in Table I during maintenance operations.

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10. No. 3 Recovery Boiler - The following firing limits shall be in effect: 110.42 tons BLS/hour firing limit, and 842,035 tons BLS/12 month firing limit.

Operating and Reporting Conditions: The BLS firing rate for the No. 3 Recovery Boiler shall be calculated by measuring the flow of strong black liquor and multiplying this flow by the measured weight concentration of solids in the liquor. The flow of the strong black liquor shall be measured with a flow meter and shall be recorded at least once per month. The weight concentration of solids in the liquor shall be measured and recorded at least once per month.

GP shall keep monthly records, in a log book, on the flow meter readings and the BLS weight concentrations. Using these records, GP shall be responsible for preventing the above stated maximum firing rate (842,035 tons, 12 month rolling total) from being exceeded. An exceedence of this rate shall be considered a violation of PSD regulations. GP shall notify this office immediately if the maximum rate is violated.

An annual report listing the amount (monthly and annual) of BLS burned during the previous calendar year (Jan. 1 - Dec. 31) shall be due to the Department by February 1 of the following year. The report for calendar year 1993 will be due on February 1, 1994. The report shall be signed as being accurate by a corporate officer, and shall be considered legally binding.

Additionally, the No. 3 Recovery Boiler shall comply with all applicable provisions of 40 CFR Part 60, Subpart BB, Standards of Performance for Kraft Pulp Mills.

11. No. 3 Package Boiler - The No. 3 Package Boiler shall burn only natural gas with a heat input of no greater than 160 million BTU per hour. Additionally, the No. 3 Package Boiler shall comply with all applicable requirements of 40 CFR Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

12. No. 3 Smelt Dissolving Tank - The No. 3 Smelt Dissolving Tank vent shall comply with all applicable provisions of 40 CFR Part 60, Subpart BB, Standards of Performance for Kraft Pulp Mills.

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13. No. 2 Power Boiler - The following are limits for steam generation capacity and heat input:

Fuel	Steam Generation LBS/HR	Heat Input MMBTU/HR
Bark & Coal	625,000	820

Additionally, the No. 2 Power Boiler shall comply with the applicable provisions of 40 CFR Part 60, Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971. In addition, the No. 2 Power Boiler may utilize used specification grade motor oil and used non-chlorinated solvents from the mill's lubricating systems and parts cleaners during oil inventory control firing. Records of the quantities of used motor oil and used non-chlorinated solvents utilized during oil inventory control firing shall be kept.

14. No. 2 Lime Kiln - The No. 2 Lime Kiln shall use only natural gas or No. 6 fuel oil as fuel. If No. 6 fuel oil is used, the sulfur content shall not exceed two percent (2%). The fuel oil system may be fired for a maximum of one (1) hour per week to insure proper operation of the fuel oil system. If the No. 2 Lime Kiln is fired on fuel oil for reasons other than fuel oil system checkout, GP shall notify ADPC&E by the next business day, and follow up the notification in writing within five (5) business days of the occurrence. The No. 2 Lime Kiln shall comply with 40 CFR Part 60, Subpart BB, Standards of Performance for Kraft Pulp Mills.

15. The No. 2 Lime Kiln may also be used to incinerate noncondensable gases in compliance with the Plan for Control of Designated Pollutants (TRS) (111 (d) Plan).

16. No. 2 Recovery Boiler - The following firing limits shall be in effect: 91.65 tons BLS/hour firing limit, and 803,000 tons BLS/12 month firing limit.

Operating and Reporting Conditions: The BLS firing rate for the No. 2 Recovery Boiler shall be calculated by measuring the flow of strong black liquor and multiplying this flow by the measured weight concentration of solids in the liquor. The flow of the strong black liquor shall be measured with a flow meter and shall be recorded at least once per month. The weight concentration of solids in the liquor shall be measured and recorded at least once per month.

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GP shall keep monthly records, in a log book, on the flow meter readings and the BLS weight concentrations. Using these records, GP shall be responsible for preventing the above stated maximum firing rate (803,000 tons, 12 month rolling total) from being exceeded. An exceedence of this rate shall be considered a violation of PSD regulations. GP shall notify this office immediately if the maximum rate is violated.

An annual report listing the amount (monthly and annual) of BLS burned during the previous calendar year (Jan. 1 - Dec. 31) shall be due to the Department by February 1 of the following year. The report for the 1993 calendar year will be due on February 1, 1994. The report shall be signed as being accurate by a corporate officer, and shall be considered legally binding.

Additionally, the No. 2 Recovery Boiler shall comply with all applicable provisions of 40 CFR Part 60, Subpart BB, Standards of Performance for Kraft Pulp Mills.

17. No. 2 Package Boiler - The No. 2 Package Boiler shall burn only natural gas with a heat input of no greater than 210 million BTU per hour. Additionally, the No. 2 Package Boiler shall comply with all applicable requirements of 40 CFR Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

18. No. 2 Smelt Dissolving Tank - The No. 2 Smelt Dissolving Tank vent shall comply with all applicable provisions of 40 CFR Part 60, Subpart BB, Standards of Performance for Kraft Pulp Mills.

19. No. 1 Power Boiler - The following are limits for steam generation capacity and heat input:

Fuel	Steam Generation LBS/HR	Heat Input MMBTU/HR
Bark	N/A	315
Natural Gas	N/A	459
No. 6 Fuel Oil	N/A	405
***TOTAL	305,000	580

The No. 1 Power Boiler began operation in 1968 and is not subject to NSPS regulations. No. 6 fuel oil may be used as backup fuel, and the No. 1 Power Boiler may be fired on No. 6 fuel oil for a maximum of one (1) hour per week to insure proper operation of the fuel oil system. If the No. 1 Power Boiler is fired for reasons other than fuel oil system checkout, GP shall notify ADPC&E by the next business day and follow up the notification in writing within five (5) business days of the occurrence.

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20. In accordance with Section 5(c) of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control, the opacity limit for the No. 2 and 3 Recovery Boilers is 20% for visible emissions and upset conditions as specified in the Plan. The Standards of Performance for New Stationary Sources requires G.P.- Ashdown Operations to submit, on a quarterly basis, a list of all six minute average opacities that exceed 35%. This, however; does not change either requirement.

21. During the operation of the No. 2 Power Boiler, the pressure drop across the scrubber shall be maintained at or above 14 inches of water; the liquid flow to the scrubber shall be maintained at or above 1500 gallons per minute.

22. For the purposes of this permit, any three hour period during which the average emissions of nitrogen oxides or sulfur dioxide exceed the allowable emissions listed in Table I, any twelve hour period during which the average emissions of total reduced sulfur exceed the allowable emissions listed in Table I, and any thirty-six (36) minute period during which the average opacity exceeds the allowable limit listed in Table I, shall be considered a violation.

23. Within 180 days of permit issuance, GP shall test the No. 3 Smelt Tank for particulate emissions at varying scrubber medium flowrates and scrubber pressure drops to establish the minimum flowrate and pressure drop necessary to maintain compliance with the listed particulate limit. The testing shall be performed at 90% of boiler capacity or greater. Upon approval of the test results by the Air Division, GP may operate the No. 3 Smelt Tank Scrubber at or above the minimum flowrates and pressure drop determined to maintain compliance with the listed particulate limit. Within thirty (30) days of receipt of the testing results, GP shall forward a complete copy of the testing results to the Air Division.

24. REQUIREMENTS FOR CONTINUOUS EMISSION MONITORS (CEM)

A. In the event a CEM is required, the installation date for the CEM must be no later than thirty (30) days from the date of start-up of the plant.

B. Within sixty (60) days of installation of a CEM, a performance specification test (PST) must be completed. PST's are defined in 40 CFR Part 60, Appendix B, PST 1-7. The Department will accept alternate PST's for pollutants not covered by Appendix B on a case-by-case basis.

C. Each CEM shall have, as a minimum, a daily zero-span

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check. The span check shall be 1.5 times the permit limits.

D. For each CEM, a quality assurance/quality control (QA/QC) plan shall be submitted to the Department (Attention: Air Division, Compliance Section Manager). Quality Assurance procedures are defined in 40 CFR Part 60, Appendix F. This plan must be submitted within 180 days of CEM installation. A QA/QC plan shall consist of procedures and practices to assure an acceptable level of monitor data accuracy, precision, representativeness, and availability.

E. The submitted QA/QC plan shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

F. As part of the QA/QC plan for each CEM, a relative accuracy test audit (RATA) shall be conducted at least once every four calendar quarters. A relative accuracy audit (RAA) or a cyclinder gas audit (CGA) may be conducted in the other three calendar quarters, but in no more than three quarters in succession. The RATA test procedure shall be included in the QA/QC plan submitted for approval. Additionally, the justification and methodology for any alternate RATA tests shall be submitted with the QA/QC plan.

G. A written report showing excess emissions for each CEM shall be submitted to ADPC&E for every calendar quarter (Attention: Air Division, Compliance Section Manager). Excess emissions and violations of the CEM standards are defined in J-K below. All quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter.

H. Each report shall be submitted on ADPC&E Quarterly Excess Emission Report Forms. These forms may be obtained from the Air Division of the Little Rock office of ADPC&E. Alternate forms may be used with approval from the Department.

I. The CEM reports shall be used by ADPC&E to determine compliance with the permit.

J. All CEM's must be operated 95% per quarter. Failure to maintain operation time shall constitute a violation of the CEM standard.

K. All CEM's shall meet 95% compliance per quarter for each pollutant. Failure to maintain compliance shall constitute a violation of the CEM standard.

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L. Violations of the CEM standard shall result in penalties and/or other enforcement action being taken.

25. GP shall, within one (1) year of permit issuance, provide reporting only from the required CEM's in units of the applicable standard (i.e. ppm, lbs/mmBtu) and in lbs/hour. GP may develop source specific methods to determine the lbs/hr figure. Any such method must be certified using actual stack data and must be approved by the Air Division - Compliance Section Manager. After approval of the method of reporting for a source, that source may operate at throughput levels greater than those specified in the permit application, provided that the lbs/hour limits or applicable standards are not exceeded. When the lbs/hour figures are not available due to monitor downtime, the source for which the figures are not available shall be limited to the throughput rates as specified in the permit application and Appendix II. Both the applicable standard and the lbs/hr figures shall be used for compliance purposes.

In addition, GP shall submit a plan delineating steps to achieve compliance with this condition. Monthly progress reports shall be forwarded to the Compliance Section Manager.

26. TESTING REQUIREMENTS - GP shall, within one year of the date of issuance of this permit, perform emissions testing on the sources listed below. Testing dates shall be coordinated with the Compliance Section Manager in advance. A report containing the results of testing and the actual operating conditions during testing shall be forwarded to the Air Division - Compliance Section Manager. The results of testing may be used by the Department in setting a baseline level of those emission sources, or for enforcement purposes.

SOURCE	POLLUTANT	TEST METHOD
06 -NO. 2 REC. BLR.	HCl H2SO4	NO. 26 NO. 8
14 -NO. 3 REC. BLR.	HCl H2SO4	NO. 26 NO. 8
20 -ClO2 GENERATOR	Cl2 ClO2	NCASI NCASI
22 -NO. 1 BROWNSTOCK WASHER VENTS	CH3COCH3 CH3OH	NO. 18 NO. 18

TEST METHODS 8, 18, AND 26 ARE USEPA APPROVED METHODS; AND MAY BE

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FOUND IN 40 CFR PART 60, APPENDIX A. NCASI METHODS HAVE BEEN DEVELOPED BY THE NATIONAL COUNCIL OF THE PAPER INDUSTRY FOR AIR AND STREAM IMPROVEMENT. THE USE OF ALTERNATE METHODS MUST BE APPROVED IN ADVANCE.

27. The No.2 Lime Kiln may be used as a backup for the PCC plant when the No. 3 Lime Kiln is unable to fully supply the CO₂ requirements of the PCC plant. The carbonators are limited to the production of 5.4 tons per hour (each) of calcium carbonate precipitate. Operating logs for each carbonator shall be stored electronically onsite, and hardcopy printouts for inspection by Air Division personnel shall be produced upon request. These logs should also depict which lime kiln is used in conjunction with the PCC operations.

28. GP shall test the inlet stream to the carbonators and the outlet from one (1) carbonator simultaneously for NO_x using EPA Reference Method 7E within 180 days of startup of the PCC plant. The average of three (3) Method 7E test runs from three (3) carbonator cycles shall be used to determine compliance with the permit limits as listed on Table I. This testing shall be performed when using the No. 3 Lime Kiln as the supply source and shall be repeated when using the No. 2 Lime Kiln as the supply source. At the time of testing, the carbonator shall be functioning at no less than ninety (90%) percent of its design capacity. The testing shall also be repeated using the No. 3 Lime Kiln as the supply source within 180 days of bringing the fourth carbonator on line. The Air Division will designate which carbonator is to be tested on the day of the testing period. In the event that a net increase in lbs/hour of NO_x is measured across the tested carbonator, all of the carbonators shall be tested. Advance coordination shall be made with Compliance Monitoring Manager - Air Division. Testing results shall be forwarded in duplicate to the Compliance Monitoring Manager within thirty (30) days of testing.

29. Other permit limits which have been set based on emission factors, as listed in Table I, may be modified based upon actual source sampling.

TABLE I

SN	Description	Control Equipment	Pollutant	Emission Rate		Applicable Regulations	Opacity (percent)
				lbs/hr	(tons/yr)	Emissions Derivation	
01	No. 3 Power Boiler (790MMBTU/HR)	Electrostatic Precipitator	PM10	19.75	(86.5)	0.025 LB/MMBTU, PSD, 946-A	20
			NOx	237.00	(1038.1)	0.30 LB/MMBTU, NSPS-Db, PSD, 946-A	
			CO	276.50	(1211.1)	0.35 LB/MMBTU, PSD, 946-A	
			NM VOC	21.30	(93.3)	0.027 LB/MMBTU, PSD, 946-A	
			SO2	62.00	(271.6)	0.1 LB/MMBTU @ 620 MMBTU, PSD, 946-A	
02	No. 3 Lime Kiln ¹ (153 MMBTU/HR)	Electrostatic Precipitator	PM10	8.60	(37.7)	0.034 gr/dscf, PSD, 946-A	20
			NOx	66.50	(291.3)	3.63 LB/TON LIME, PSD, 946-A	
			CO	55.00	(240.9)	3.00 LB/TON LIME, PSD, 946-A	
			NM VOC	14.60	(63.9)	0.795 LB/TON LIME, AP-42*, PSD	
			SO2	13.30	(58.3)	0.727 LB/TON LIME, PSD, 946-A	
			TRS	1.34	(5.9)	8 ppmv(dry basis) @ 10% O ₂ , NSPS BB	
02A	No. 3 Lime Kiln ²	Electrostatic Precipitator	PM10		(15.0)		20
			NOx		(116.0)		
			CO		(95.9)		
			NM VOC		(22.6)		
			SO2		(23.2)		
			TRS		(2.1)		
02B	No. 3 Lime Kiln ³	Electrostatic Precipitator	PM10		(10.1)		20
			NOx		(78.1)		
			CO		(64.6)		
			NM VOC		(15.2)		
			SO2		(15.6)		
			TRS		(1.4)		
03	No. 1 Power Boiler (580 MMBTU/HR)	Centrifugual Collector	PM10	300.00	(1314.0)	Permit 287-AR-5	40
			SO2	1285.00	(214.0)	AP-42*	
			NM VOC	43.00	(214.6)	AP-42*	
			CO	150.40	(658.8)	AP-42*	
			NOx	247.5	(1084.1)	AP-42*	

FOOTNOTES:

1. Emission limitations for the operation of the No. 3 lime kiln without PCC Units.
2. Emission limitations for the operation of the No. 3 lime kiln and three PCC Units.
3. Emission limitations for the operation of the No. 3 lime kiln and four PCC Units.

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SN	Description	Control Equipment	Pollutant	Emission Rate lbs/hr (tons/yr)	Applicable Regulations Emissions Derivation	Opacity (percent)
05	No. 2 Power Boiler (Coal) (820 MMBTU/HR)	Scrubber	PM10	82.00 (359.2)	0.10 LB/MMBTU, NSPS-D, 287-AR-5	20
			SO2	983.00 (4305.5)	1.20 LB/MMBTU, NSPS-D, 287-AR-5	
			NOX	574.00 (2514.1)	0.70 LB/MMBTU, NSPS-D, 287-AR-5	
			CO	266.00 (630.0)	0.324 LB/MMBTU, AP-42*	
			NMVOC	92.00 (206.5)	0.112 LB/MMBTU, AP-42*	
			LEAD	0.03 (0.1)	EPA 450/2-88-006A****	
			HCL	5.75 (16.5)	NCASI**	
06	No. 2 Recovery Boiler (1063 MMBTU/HR)	Electrostatic Precipitator	PM10	84.40 (369.7)	0.044 gr/dscf@8% O2, NSPS-BB, 287-AR-5	20
			SO2	286.00 (1252.7)	250 PPM, 287-AR-5	
			NMVOC	46.70 (204.6)	0.8 LB/ADTP, AP-42 *	
			CO	980.00 (4292.4)	16.8 LB/ADTP	
			NOx	309.20 (1354.3)	5.3 LB/ADTP	
			TRS	7.40 (32.4)	5 ppmv (dry basis) @ 8% O2, NSPS-BB, 287-AR-5	
			HCL	51.20 (224.3)	0.8783 LB/ADTP, NCASI**	
08	No. 2 Smelt Dissolving Tank	Venturi Scrubber	PM10	18.00 (78.8)	0.2 LB/TON BLS, NSPS-BB, 287-AR-5	20
			SO2	10.60 (46.4)	Permit 287-AR-5	
			NMVOC	9.30 (40.7)	0.16 LB/ADTP, AP-42*	
			TRS	2.10 (9.2)	0.0168 G/KG BLS, NSPS-BB, 287-AR-5	
			HCL	51.20 (224.3)	0.8783 LB/ADTP, NCASI**	
			H2SO4	3.22 (14.1)	0.81 ppm, NCASI**	
09	No. 2 Lime Kiln (193.8 MMBTU/HR)	Scrubber	PM10	51.00 (223.4)	0.067 GR/DSCF, NSPS-BB, 287-AR-5	20
			SO2	16.70 (73.2)	Permit 287-AR-5	
			NOx	68.60 (300.5)	3.7411 LB/TON CaO, AP-42*	
			CO	55.00 (240.9)	3.0 LB/TON CaO, 946-A	
			NMVOC	17.10 (74.9)	0.9353 LB/TON CaO, AP-42*	
			TRS	8.00 (35.0)	8 ppmv (dry basis) @ 10% O2, NSPS-BB 287-AR-5	
11	No. 2 Package Boiler (210 MMBTU/HR)	None	PM10	0.60 (2.6)	Permit 287-AR-5	5
			SO2	0.20 (0.9)	Permit 287-AR-5	
			NOx	27.40 (120.0)	Permit 287-AR-5	
			CO	8.20 (36.1)	AP-42*	
			NMVOC	0.29 (1.3)	AP-42*	

Facility Name GEORGIA-PACIFIC CORP. - ASHDOWN OPERATIONS
 CSN: 410002 Permit No: 287-AR-7

SN	Description	Control Equipment	Pollutant	Emission Rate lbs/hr (tons/yr)	Applicable Regulations Emissions Derivation	Opacity (percent)
12	No. 3 Package Boiler (160 MMBTU/HR)	None	PM10	0.50 (2.2)	287-AR-5	5
			SO2	0.10 (0.4)	287-AR-5	
			NOx	16.00 (70.1)	0.1 LB/MMBTU, NSPS-Db, 287-AR-5	
			CO	6.40 (28.0)	AP-42*	
			NMVOG	0.22 (1.0)	AP-42*	
14	No. 3 Recovery Boiler (1281 MMBTU/HR)	Electrostatic Precipitator	SO2	425.00 (1861.5)	Permit 287-AR-6	20
			NOx	270.00 (1182.6)	5.3 LB/ADTP, PSD, 287-AR-6	
			TRS	6.60 (28.9)	5 ppmv (dry basis) @ 8% O2, NSPS-BB, 287-AR-6	
			CO	856.00 (3749.3)	16.8 LB/ADTP, PSD, 287-AR-6	
			PM10	93.50 (409.5)	0.044 GR/DSCF @ 8% O2, NSPS-BB, 287-AR-6	
			NMVOG	137.00 (600.1)	Permit 287-AR-6	
			HCl	54.50 (238.7)	0.8783 LB/ADTP, NCASI**	
			H2SO4	4.20 (18.4)	Permit 287-AR-6, NCASI**	
15	No. 3 Smelt Dissolving Tank	Scrubber	PM10	18.70 (81.9)	0.2 LB/TON BLS, NSPS-BB, 287-AR-5	20
			SO2	5.10 (22.3)	0.1 LB ADTP, PSD, 287-AR-5	
			TRS	1.60 (7.0)	0.0168 G/KG BLS, NSPS-BB, 287-AR-5	
			NMVOG	9.90 (43.5)	0.16 LB/ADTP, AP-42*	
16	No. 1A Bleach Plant Vents	Scrubber	Cl2	2.00 (8.8)	STACK TESTS SIP	5
			ClO2	1.00 (4.4)	STACK TESTS	
			CHCl3	5.50 (24.1)	STACK TESTS & NCASI	
17	No. 1B Bleach Plant Vents	Scrubber	Cl2	2.00 (8.8)	STACK TESTS SIP	5
			ClO2	1.00 (4.4)	STACK TESTS	
			CHCl3	5.50 (24.1)	STACK TESTS & NCASI	
18	No. 2 Bleach Plant Vents	Scrubber	Cl2	2.00 (8.8)	STACK TESTS SIP	5
			ClO2	2.00 (8.8)	STACK TESTS	
			CHCl3	5.50 (24.1)	STACK TESTS & NCASI	
[19]	Chlorine Dioxide Generator (SVP R-8)	Scrubber	Cl2	TIED TO NO. 2 BLEACH PLANT SCRUBBER		
20	Chlorine Dioxide Generator (ERCO)	Scrubber	Cl2	0.30 (1.3)	NCASI** SIP	5
			ClO2	3.00 (13.1)	NCASI**	
[21]	Effluent Treatment Lagoons (FUGITIVE)	None	CHCl3	6.80 (29.6)	NCASI**	N/A
			CH3OH	5.50 (24.0)	NCASI**	
22	No. 1 Brownstock Washer Vents	None	CH3COCH3	8.80 (38.5)	0.1 LB/TON USED, NCASI**; SIP	5
			CH3OH	58.96 (258.2)	0.67 LB/TON USED, NCASI**	

Facility Name GEORGIA-PACIFIC CORP. - ASHDOWN OPERATIONS
 CSN: 410002 Permit No: 287-AR-7

SN	Description	Control Equipment	Pollutant	Emission Rate lbs/hr (tons/yr)		Applicable Regulations Emissions Derivation		Opacity (percent)
23	Methanol Storage Tank	None	CH3OH	0.91	(4.0)	SOCMI***	SIP	0
24	Ammonia Storage	None	NH3	N/A	(0.1)	SOCMI***	SIP	0
25	Phosphoric Acid Tank	None	H3PO4	0.01	(0.1)	SOCMI***	SIP	0
26	Sulfuric Acid Tanks	None	H2SO4	0.01	(0.1)	SOCMI***	SIP	0
27	Sulfur Dioxide Storage Bldg.	None	SO2	0.20	(0.9)	SOCMI***	SIP	0
28	Formic Acid Storage Tanks(2)	None	HCOOH	0.20	(0.9)	SOCMI***	SIP	0
29	Recausticizer Vents	None	NH3	N/A	N/A	TESTING REQUIRED	SIP	5
30	PCC Carbonator No. 1	Demister	PM10	0.77	(3.4)	VENDOR DATA	SIP	20%
			SO2	0.40	(1.8)	" "		
			NMVOG	2.10	(9.2)	" "		
			CO	9.10	(39.9)	" "		
			NOx	10.90	(47.7)	" "		
			TRS	0.06	(0.3)	" "		
31	PCC Carbonator No. 2	Demister	PM10	0.77	3.4	VENDOR DATA	SIP	20%
			SO2	0.40	(1.8)	" "		
			NMVOG	2.10	(9.2)	" "		
			CO	9.10	(39.9)	" "		
			NOx	10.90	(47.7)	" "		
			TRS	0.06	(0.3)	" "		
32	PCC Carbonator No. 3	Demister	PM10	0.77	(3.4)	VENDOR DATA	SIP	20%
			SO2	0.40	(1.8)	" "		
			NMVOG	2.10	(9.2)	" "		
			CO	9.10	(39.9)	" "		
			NOx	10.90	(47.7)	" "		
			TRS	0.06	(0.3)	" "		

Facility Name GEORGIA-PACIFIC CORP. - ASHDOWN OPERATIONS
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SN	Description	Control Equipment	Pollutant	Emission Rate lbs/hr (tons/yr)		Applicable Regulations Emissions Derivation		Opacity (percent)
33	PCC Carbonator No. 4	Demister	PM10	0.77	(3.4)	VENDOR DATA	SIP	20%
			SO2	0.40	(1.8)	" "		
			NMVOG	2.10	(9.2)	" "		
			CO	9.10	(39.9)	" "		
			NOx	10.90	(47.7)	" "		
			TRS	0.06	(0.3)	" "		
34	Lime Unloading System	Fabric Filter	PM10	0.12	(0.1)	AP-42	SIP	20%

EMISSION TOTALS

POLLUTANT	LBS/HR	TONS/YEAR	
PM10 ¹	677.17	2965.6	PARTICULATE MATTER, LESS THAN 10 MICRONS
PM10 ²		2975.8	
PM10 ³		2979.2	
NOx ¹	1816.20	7955.1	OXIDES OF NITROGEN
NOx ²		8098.2	
NOx ³		8145.9	
CO ¹	2653.50	11087.5	CARBON MONOXIDE
CO ²		11207.2	
CO ³		11247.1	
TRS ¹	27.04	118.4	TOTAL REDUCED SULFUR
TRS ²		119.3	
TRS ³		119.6	
SO2 ¹	3087.00	8106.8	SULFUR DIOXIDE
SO2 ²		8113.1	
SO2 ³		8114.9	
NM VOC ¹	391.41	1544.4	NONMETHANE VOLATILE ORGANIC COMPOUNDS
NM VOC ²		1572.0	
NM VOC ³		1581.2	
LEAD	0.03	0.1	LEAD
HCl	106.28	464.7	HYDROCHLORIC ACID
H2SO4	7.43	32.6	SULFURIC ACID
Cl2	6.30	27.7	CHLORINE
ClO2	7.00	30.7	CHLORINE DIOXIDE
CHCl3	23.30	101.9	CHLOROFORM
CH3OH	65.37	286.2	METHANOL
CH3COCH3	8.80	38.5	ACETONE
NH3	N/A	0.1	AMMONIA
H3PO4	0.01	0.1	PHOSPHORIC ACID
HCOOH	0.20	0.9	FORMIC ACID

FOOTNOTES

- ¹. Emission limitations for the No. 3 lime kiln without the PCC plant.
- ². Emission limitations for the No. 3 lime kiln and three carbonators at the PCC plant.
- ³. Emission limitations for the No. 3 lime kiln and all four carbonators at the PCC plant.

AP-42* represents an emission limit derived from AP-42, Fourth Edition, September 1985, Compilation of Air Pollutant Emission Factors, U.S.E.P.A.

NCASI** represents an emission limit derived from estimations made by the National Council of the Paper Industry for Air and Stream Improvement, Inc.

Facility Name GEORGIA-PACIFIC CORP. - ASHDOWN OPERATIONS
 CSN: 410002 Permit No: 287-AR-7

SOCMI*** where referenced refers to an emission limit based upon information obtained from the Society of Organic Chemical Manufacturers Industry.

EPA-450/2-88-006A**** TOXIC AIR POLLUTANT EMISSION FACTORS, OCTOBER 1988.

APPENDIX I

EQUIPMENT DESCRIPTION	NO. of PUMP EXHAUSTS	NO. of FAN EXHAUSTS
Paper Machine No. 61	2	5
Paper Machine No. 62	3	7
Paper Machine No. 63	2	9
Paper Machine No. 64	2	17
Pulp Dryer	2	2

SN	DESCRIPTION	POLLUTANT	C.E.M. REQ'D.
01	No. 3 Pwr. Blr.	NOx OPACITY	Yes Yes
02	No. 3 Lime Kiln	TRS OPACITY	Yes Yes
05	No. 2 Pwr. Blr.	SO2 NOx	Yes Yes
06	No. 2 Rec. Blr.	TRS OPACITY	Yes Yes
09	No. 2 Lime Kiln	TRS	Yes
14	No. 3 Rec. Blr.	SO2 TRS OPACITY	Yes Yes Yes

NOTE: PERMITTEE IS RESPONSIBLE FOR CONDUCTING ALL TESTS ASSOCIATED WITH THE USE AND MAINTENANCE OF CONTINUOUS MONITORING DEVICES.

APPENDIX II

During monitor downtime as described in Specific Condition No. 25, the following sources will be limited to the throughput as described below:

SOURCE NO.	DESCRIPTION	THROUGHPUT
01	NO.3 POWER BOILER	79.5 Tons of bark per hour 615.0 MSCF of natural gas per hour
02	NO.3 LIME KILN	18.33 Tons of CaO per hour 150.0 MSCF of natural gas per hour
05	NO.2 POWER BOILER	35.0 Tons of coal per hour 65.0 Tons of bark per hour 5,100.0 Gallons of No. 6 fuel oil per hour
06	NO.2 RECOVERY BOILER	0.1833 million pounds of BLS per hour
09	NO.2 LIME KILN	18.33 Tons of CaO per hour 190.0 MSCF of natural gas per hour 1,320.0 Gallons of No. 6 fuel oil per hour
14	NO.3 RECOVERY BOILER	0.2208 million pounds of BLS per hour