

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 287-AOP-R3

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Domtar Industries, Inc. - Ashdown Mill
285 Highway 71 South
Ashdown, Arkansas 71822

3. PERMIT WRITER: Lloyd Davis

4. PROCESS DESCRIPTION AND SIC CODE:

SIC Description: Kraft pulp and paper mill
SIC Code: 2611

5. SUBMITTALS: September 10, November 12, December 3, 2001, January 3, January 4, and March 18, 2002

6. REVIEWER'S NOTES:

Recent tests have shown carbon monoxide emissions from the bleach plant vents (SN-16, 17 and 18) and the oxygen lignification system (SN-45) at the Ashdown Mill to be higher than those permitted. The emission rates used in Permit # 287-AOP-R2 were process estimates, and not based on actual testing, so that actual increases - if any - are not known. The proposed limit is based on stack testing outlined in the CAO issued for this source. The permit will also be modified to allow the use of a CMS that will record amperage to the SN-18 Scrubber instead of direct measurement of air flow, based on an EPA Region 6 determination. SC #170 has been modified to make it identical to SC #49, allowing a minimum of 65% solids on a 30-day rolling average in the lime mud fed.

7. COMPLIANCE STATUS:

The permittee will be in compliance with this permit upon issuance.

8. APPLICABLE REGULATIONS:

A. Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera) (Y/N) Y Has this facility underwent PSD review in the past (Y/N) Y
 Permit # 287-AR-1, 287-AR-3, 287-AR-5, 287-AR-6
 Is this facility categorized as a major source for PSD? (Y/N) Y
 \$ 100 tpy and on the list of 28 (100 tpy)? (Y/N) Y
 \$ 250 tpy all other (Y/N) Y

B. PSD Netting

Was netting performed to avoid PSD review in this permit? (Y/N) N

C. Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation
01	PM	PSD, 40 CFR Part 60, Subpart Db
	PM ₁₀	PSD, 40 CFR Part 60, Subpart Db
	SO ₂	PSD
	VOC	PSD
	CO	PSD
	NO _x	PSD, 40 CFR Part 60, Subpart Db
02	PM	PSD, 40 CFR Part 60, Subpart BB
	PM ₁₀	PSD, 40 CFR Part 60, Subpart BB
	SO ₂	PSD
	VOC	PSD
	CO	PSD
	NO _x	PSD
	TRS	PSD, 40 CFR Part 60, Subpart BB
05	PM	40 CFR Part 60, Subpart D
	PM ₁₀	40 CFR Part 60, Subpart D
	SO ₂	40 CFR Part 60, Subpart D
	NO _x	40 CFR Part 60, Subpart D

Source	Pollutant	Regulation
	This source is also subject to 40 CFR Part 60, Subpart BB because it incinerates NCGs produced by sources which are subject to this subpart. However, no specific pollutants at this source are subject to any of the standards contained in the subpart.	
06	PM	PSD, 40 CFR Part 60, Subpart BB
	PM ₁₀	PSD, 40 CFR Part 60, Subpart BB
	SO ₂	PSD
	VOC	PSD
	CO	PSD
	NO _x	PSD
	TRS	PSD, 40 CFR Part 60, Subpart BB
08	PM	PSD, 40 CFR Part 60, Subpart BB
	PM ₁₀	PSD, 40 CFR Part 60, Subpart BB
	SO ₂	PSD
	VOC	PSD
	TRS	PSD, 40 CFR Part 60, Subpart BB
09	PM	40 CFR Part 60, Subpart BB
	PM ₁₀	40 CFR Part 60, Subpart BB
	TRS	40 CFR Part 60, Subpart BB
12	NO _x	40 CFR Part 60, Subpart Db
14	PM	PSD, 40 CFR Part 60, Subpart BB
	PM ₁₀	PSD, 40 CFR Part 60, Subpart BB
	SO ₂	PSD
	NO _x	PSD
	TRS	PSD, 40 CFR Part 60, Subpart BB
15	PM	PSD, 40 CFR Part 60, Subpart BB
	PM ₁₀	PSD, 40 CFR Part 60, Subpart BB

Source	Pollutant	Regulation
	SO ₂	PSD
	TRS	PSD, 40 CFR Part 60, Subpart BB
Facility	N/A	40 CFR Part 63, Subpart S

9. EMISSION CHANGES:

The following table summarizes plantwide emission changes associated with this permitting action.

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 287-AOP-R2	Air Permit 287-AOP-R3	Change
VOC	2829.2	2863.0	33.8
CO	11958.1	12473.3	515.2
Methanol	560.20	536.82	-23.38
Styrene	1.43	1.20	-0.23

10. MODELING: Criteria Pollutants

The only increase is in CO emissions, which exceed the 100 tpy PSD significance level, thus requiring modeling to determine if the PSD significant impact level has been exceeded. The following table gives the ultimate results of modeling of facility emissions alone.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m ³)	Averaging Time	Highest Concentration (µg/m ³)	% of NAAQS
CO	3003.8	10,000	8-hour	416	4%
		40,000	1-hour	1,250	3%

11. MODELING: Non-Criteria Pollutants

There have been no increases in HAP emission rates for this permit.

12. CALCULATIONS:

Increases in emissions at SN-16,SN-17, SN-18, SN-45, and SN-46 were based on tests performed in the oxygen lignification system.

13. TESTING REQUIREMENTS:

The following tests have been added to Specific Condition #268 to verify that substitution of draft fan amperage is a satisfactory substitute parameter for inlet air flow rates at SN-18:

To ensure compliance with Subpart S, the substituted parameter will be monitored for effectiveness with the following tests and inspections:

1. An annual pressure differential test shall be performed to ensure that the Bleach Plant Scrubber fans maintain the required negative pressure across the system;
2. monthly visual inspections under the Leak Detection and Repair plan for the Scrubber fans and associated process;
3. periodic preventive maintenance of the Bleach Plant Scrubber fan to ensure proper operation;
4. an initial performance test to determine the acceptable range of electrical current to the fans that provides an acceptable pressure differential across the Scrubber system and demonstrates compliance with the provisions of Specific Condition #265; and

14. MONITORING OR CEMS

The following are sources and pollutants that must be monitored with CEMS (with the exception of opacity monitors). The reporting of the CEMS will be done according to the Department's CEMS standards.

Source Number	Pollutant to be Monitored
01	CO
01	NOx
02	TRS
02	CO
05	CO

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Source Number	Pollutant to be Monitored
05	NOx
05	SO2
06	TRS
06	SO2
06	CO
06	NOx
09	TRS
09	CO
14	TRS
14	NOx
14	CO
14	SO2

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SN	Parameter to be Monitored	Method of Monitoring	Pollutants for Which Compliance Will Be Demonstrated	Frequency of Monitoring
01	Temperature	Temperature monitor	VOC	Continuous
02	% solids in the lime mud	Testing	VOC	Once per 8-hour shift
02	NO _x concentration	Various flow monitors and equation listed in permit	NO _x	Readings every 15 minutes, average calculated once per hour
03	Temperature	Temperature monitor	VOC	Continuous
05	Temperature	Temperature monitor	VOC	Continuous
05	Scrubbing liquid flow rate	Scrubber flow rate monitors	Pb	Recording Device
05	Scrubbing liquid flow rate	Scrubber flow rate monitors	PM/PM ₁₀	Recording Device
05	Pressure loss of gas stream across scrubber	Pressure drop monitor	PM/PM ₁₀	Recording Device
05	Pressure loss of gas stream across scrubber	Pressure drop monitor	Pb	Recording Device
06	Temperature	Temperature monitor	VOC	Continuous
06	SO ₂ emissions in ppm and flow rate	CEMS for SO ₂ and equation listed in permit	Hydrogen Chloride	Daily
06	SO ₂	CEMS for SO ₂	Sulfuric Acid	Continuous

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SN	Parameter to be Monitored	Method of Monitoring	Pollutants for Which Compliance Will Be Demonstrated	Frequency of Monitoring
08	Scrubbing liquid flow rate	Scrubber flow rate monitors	PM/PM ₁₀	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
08	Scrubbing liquid flow rate	Scrubber flow rate monitors	SO ₂	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
08	Scrubbing liquid flow rate	Scrubber flow rate monitors	VOC	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
08	Scrubbing liquid flow rate	Scrubber flow rate monitors	Methanol	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
08	Scrubbing liquid flow rate	Scrubber flow rate monitors	TRS	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
09	Scrubbing liquid flow rate	Scrubber flow rate monitors	PM/PM ₁₀	Recording Device
09	% solids in the lime mud	Testing	VOC	Once per 8-hour shift
09	NO _x concentration	Various flow monitors and equation listed in permit	NO _x	Readings taken once every fifteen minutes, Averages calculated once per hour
14	Temperature	Temperature monitor	VOC	Continuous

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SN	Parameter to be Monitored	Method of Monitoring	Pollutants for Which Compliance Will Be Demonstrated	Frequency of Monitoring
14	SO ₂ emissions in ppm and flow rate	CEMS for SO ₂ and equation listed in permit	Hydrogen Chloride	Daily
14	SO ₂	CEMS for SO ₂	Sulfuric Acid	Continuous
15	Scrubbing liquid flow rate	Scrubber flow rate monitors	VOC	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
15	Scrubbing liquid flow rate	Scrubber flow rate monitors	Methanol	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
15	Scrubbing liquid flow rate	Scrubber flow rate monitors	PM/PM ₁₀	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
15	Scrubbing liquid flow rate	Scrubber flow rate monitors	SO ₂	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
15	Scrubbing liquid flow rate	Scrubber flow rate monitors	TRS	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
16	Scrubbing liquid flow rate	Scrubber flow rate monitors	VOC	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.

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SN	Parameter to be Monitored	Method of Monitoring	Pollutants for Which Compliance Will Be Demonstrated	Frequency of Monitoring
16	Scrubbing liquid flow rate	Scrubber flow rate monitors	Methanol	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
16	Scrubbing liquid flow rate	Scrubber flow rate monitors	Chlorine	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
16	Scrubbing liquid flow rate	Scrubber flow rate monitors	Chlorine Dioxide	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
17	Scrubbing liquid flow rate	Scrubber flow rate monitors	VOC	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
17	Scrubbing liquid flow rate	Scrubber flow rate monitors	Methanol	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
17	Scrubbing liquid flow rate	Scrubber flow rate monitors	Chlorine	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
17	Scrubbing liquid flow rate	Scrubber flow rate monitors	Chlorine Dioxide	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
18	Inlet air flow rate	Amperage on Induced Draft Fans	HAPs	Read Amperage to fans once per 8 hour shift. Average the three daily readings for daily average.

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SN	Parameter to be Monitored	Method of Monitoring	Pollutants for Which Compliance Will Be Demonstrated	Frequency of Monitoring
18	Scrubbing liquid flow rate	Scrubber flow rate monitors	VOC	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
18	Scrubbing liquid flow rate	Scrubber flow rate monitors	Methanol	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
18	Scrubbing liquid flow rate	Scrubber flow rate monitors	Chlorine	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
18	Scrubbing liquid flow rate	Scrubber flow rate monitors	Chlorine Dioxide	Read flow rate once per 8 hour shift. Average the three daily readings for daily average.
21	ASB concentrations	Cluster Rule Method	All	Daily
22	Shower water concentration	Testing shower water	VOC	Monthly
22	Shower water concentration	Testing shower water	Acetone	Monthly
22	Shower water concentration	Testing shower water	Methanol	Monthly
36	Temperature	Temperature monitor	VOC	Daily
36	Temperature	Temperature monitor	TRS	Daily
36	Temperature	Temperature monitor	Methanol	Daily

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SN	Parameter to be Monitored	Method of Monitoring	Pollutants for Which Compliance Will Be Demonstrated	Frequency of Monitoring
37	White water concentration	Testing white water	VOC	Monthly
42	Shower water concentration	Testing shower water	VOC	Monthly
42	Shower water concentration	Testing shower water	Acetone	Monthly
42	Shower water concentration	Testing shower water	Methanol	Monthly
44a - 44d	Shower water concentration	Testing shower water	VOC	Monthly
44b thru 44d	Shower water concentration	Testing shower water	Methanol	Monthly

15. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded and the frequency of updating records. Unless otherwise noted, all items below are to be included in the semiannual report.

SN	Recorded Item	Limit	Frequency
01	Fuel type	none	N/A
02	Fuel type	none	N/A
03	Fuel oil usage	900,000 gal/ 12 months	Monthly
23	Methanol throughput	12,220,000 lbs/ 12 months	Monthly
24	Ammonia throughput	800,000 lbs/ 12 months	Monthly
25	Phosporic Acid throughput	1,500,000 lbs/ 12 months	Monthly
26	Sulfuric Acid throughput	105,120 lbs/ 12 months	Monthly
28	Formic Acid throughput	240,000 lbs/ 12 months	Monthly
29	Lime processed	420,500 tons/ 12 months	Monthly
38	Woodchips processed	4,320,000 tons/ 12 months	Monthly
39	Time sample port is opened	only when retrieving sample	Daily
40	Spacing of digester blows	Minimum of 25 minutes	Daily
41	Sludge put in landfill	163,000 tons/ 12 months	Monthly
43	Fuel Consumption	258,000 gallons/months	Monthly

16. OPACITY

SN	Opacity %	Justification	Compliance Mechanism
01	20	Boiler fired with many different fuels	CEMS - submittals in accordance with CEM standards
02	20	This is a lime kiln. Particulate emissions are present which are not entirely caused by fuel combustion.	CEMS - submittals in accordance with CEM standards

SN	Opacity %	Justification	Compliance Mechanism
03	20	Power boiler which burns mostly fuel oil and bark.	Daily observations - no submittal of records required
	5	This is the limit when firing only natural gas.	No compliance mechanism is needed when burning only natural gas.
05	20	This is a boiler which is fired with many different types of fuel.	Scrubber parameters - no submittal of records required.
06	20	Recovery boiler. The highest allowable under the NSPS is 35%. The boiler is limited to 20% because of Department regulations.	CEMS - submittals in accordance with CEM standards
08	20	Smelt tank with 18 lb/hr of particulate matter emissions.	Scrubber parameters - no submittal of records required
09	20	This is a lime kiln which has particulate matter emissions from fuel combustion as well as from proper operation of the kiln.	Scrubber parameters - no submittal of records required.
11	5	Natural gas fired boiler. Department study has shown that natural gas fired sources should not have any visible emissions when operated properly.	Natural gas as the only fuel used to fired this source.
12	5	Natural gas fired boiler. Department study has shown that natural gas fired sources should not have any visible emissions when operated properly.	Natural gas as the only fuel used to fired this source.
14	20	Recovery boiler. The highest allowable under the NSPS is 35%. The boiler is limited to 20% because of Department regulations.	CEMS - submittals in accordance with CEM standards
15	20	Smelt tank with PM emissions of 18.7 lb/hr.	Scrubber parameters - no submittal of records required.
30	5	gr/scf is 0.055, therefore there should not be visible emissions from this source when operated properly	Weekly observations - no submittal of records required

SN	Opacity %	Justification	Compliance Mechanism
31	5	gr/scf is 0.055, therefore there should not be visible emissions from this source when operated properly	Weekly observations - no submittal of records required
32	5	gr/scf is 0.055, therefore there should not be visible emissions from this source when operated properly	Weekly observations - no submittal of records required.
33	5	gr/scf is 0.055, therefore there should not be visible emissions from this source when operated properly	Weekly observations - no submittal of records required
43	5	Tub grinder fired with diesel fuel.	Weekly observations - no submittal of records required

17. DELETED CONDITIONS:

No Specific Conditions included in the previous permit were deleted for the current permitting action.

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

Permit #
287-AOP-R2

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Thomas Rheume, P.E.