

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 1177-AOP-RI

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Georgia Pacific Resins, Inc
Highway 82 and Paper Mill Road
Crossett, Arkansas 71635

3. PERMIT WRITER:

Charles Hurt

4. PROCESS DESCRIPTION AND SIC CODE:

SIC Description: Resin and Formaldehyde Manufacturing Facility, Tall Oil Manufacturing Facility
SIC Code: 2821, 2869, 2861

5. SUBMITTALS: August 9, 2002 and August 19, 2002

6. REVIEWER'S NOTES:

Georgia-Pacific Resins, Inc.(GPRI), a subsidiary of Georgia-Pacific Corporation, operates a resin, formaldehyde, and tall oil manufacturing facility located at Highway 82 and Paper Mill Road in Crossett, Arkansas. GPRI submitted an application on August 9, 2002 requesting to increase the hourly VOC emission rate to 3.0 lb/hr and reduce the hours of operation to 4,400 hr/year for the CTO cooker (SN-12). The facility will now have to keep monthly records and twelve month rolling totals for SN-12. The records are required to be submitted in a report to the Air Division in accordance with General Provision 7. The facility is not increasing the annual VOC emissions at SN-12. GPRI submitted a second application requesting permission to construct a 835,000 gallon tank (SN-40) to store crude tall oil (CTO). The emissions from the new tank will be 0.1 lb/hr and 0.4 tpy of VOC.

7. COMPLIANCE STATUS: The following summarizes the current compliance status of the facility including active/pending enforcement actions and recent compliance activities and issues.

The facility signed a CAO on March 4, 2002 which addressed the CTO cooker exceeding its hourly limit of 1.5 lb VOC per hour. The CAO required the facility to submit to the Air Division an application with an updated hourly emission rate for SN-12. The application submitted on August 9, 2002 satisfies the requirement of the CAO.

8. APPLICABLE REGULATIONS:

A. Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera) (Y/N) **N**

Has this facility underwent PSD review in the past (Y/N) **N** Permit # **N/A**

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) **N/A**

B. PSD Netting

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

If so, indicate increases and decreases used in netting for PSD purposes only.

C. Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u>]
See Table In Plantwide Condition 18	record keeping only	60 Subpart Kb
SN-11 and equipment in formaldehyde production	HAP	63 Subpart F, G, and H (HON Rule)
SN-11 and equipment in wet strength resin production	HAP	63 Subpart W
SN-11 and equipment in Amino/Phenolic Resin Production	HAP	63 Subpart OOO, SS, UU, and WW
SN-130	Fuel Usage Records Only	60 Subpart Dc

Permit #: 1177-AOP-R1

CSN #: 02-0028

Page 3 of 11

9. EMISSION CHANGES:

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

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 1177-AOP-R0	Air Permit 1177-AOP-R1	Change
PM/PM ₁₀	391.1	391.1	0
SO ₂	151.7	151.7	0
VOC	182.3	182.7	0.4
CO	97.6	97.6	0
NO_x	143.1	143.1	0
Dimethylether	0	0	0
Methylformate	0	0	0
Hydrogen Sulfide	1.3	1.3	0
Sulfuric Acid	0.4	0.4	0
Phenol	9.7	9.7	0
Formaldehyde	22.4	22.4	0
Methanol	16.0	16.0	0
Epichlorohydrin	0.4	0.4	0
Phenol	14.5	9.7	-4.8
O-cresol	0.8	0.8	0
Maleic Anhydride	2.5	2.5	0

10. MODELING:

A. Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ($\mu\text{g}/\text{m}^3$)	Averaging Time	Highest Concentration ($\mu\text{g}/\text{m}^3$)	% of NAAQS
PM ₁₀	89.5	50	Annual	31.8	64%
		150	24-hour	82.4	55%
SO ₂	34.9	80	Annual	19	24%
		1,300	3-hour	306.4	24%
		365	24-hour	103.7	28%
NO _x	35	100	Annual	23.1	23%
CO	23	10,000	8-hour	6217.8	62%
		40,000	1-hour	8546.5	21%

11. Non-Criteria Pollutants

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The PAER was deemed by the Department to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Formaldehyd	1.7	0.187	11	N

Pollutant	TLV (mg/m³)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
e				
Phenol	19.3	2.123	4.1	N
Methanol	262.1	28.831	7.7	Y
Epichlorohydrin	1.89	0.2079	0.1	Y
O-Cresol	22.1	2.431	0.2	Y
Maleic Anhydride	0.4	0.044	7.4	N

2nd Tier Screening (PAIL)

ISCST3 air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Pollutant	(PAIL, µg/m³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m³)	Pass?
Formaldehyde	15	2.9	Y
Phenol	192	17.6	Y
Maleic Anhydride	10	8.6	Y

12. CALCULATIONS:

Permit #: 1177-AOP-R1

CSN #: 02-0028

Page 6 of 11

SN	Emission Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
All uncontrolled tanks	Tanks 4.0 Program	varied	N/A	N/A	
05	Mass balance and testing	varied	The boiler is itself the final step in a VOC control chain it follows a scrubber and condenser.	98%	
10 and 11	testing	varied	thermal oxidizers	minimum 95% required	
129	mass balance and AP-42	varied	SN-129 is a control device used to operate when SN-05 is shutdown		
130	AP-42 testing verified	varied	none	N/A	
All Baghouses	Grain loadings for PM emissions any VOC emissions calculated from Tanks 4 or testing	varied			
12	Testing	varied	scrubber	99.0	
40	Tanks	0.1 lb	none	N/A	uncontrolled

Permit #: 1177-AOP-R1
CSN #: 02-0028
Page 7 of 11

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
	4.0	VOC/hr			

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
05	PM10 CO NOx VOC SO2	EPA approved methods	initial	Department Guidance
11	HAP destruction efficiency	Outlined in Subpart G	initial	Initial after start up of Kettle K-6
129	SO2 VOC	EPA approved methods	initial	Department Guidance
130	NOx CO	EPA approved methods	initial	Department Guidance. To verify emission rates.
03	PM10	EPA approved test method	initial	The source is a 97.2 tpy PM source.

14. MONITORING OR CEMS

The following are parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
10	firebox	temperature monitoring device	continuous	Y

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
and 11	temperature			
129	temperature	temperature monitoring device	continuous	Y

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)
 ** Indicates whether the parameter needs to be included in reports.

15. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
All Kb tanks see permit for list	Dimension Analysis	N/A	Size of tanks to be maintained on site	N
05	Opacity	20% and 40%	weekly and upon every occurrence of iodine emission	N
10 and 11	Firebox temperature	1600, and 1650 deg F	continuous	Y
11	transfer rack design analysis and throughput.	None	annual	Y
11 and Subpart OOO processes	Leak detection requirements	none	varied	Y

SN	Recorded Item	Limit (as established in permit)	Frequency *	Report (Y/N)**
129	temperature	1650 degrees F	daily	N
130	fuel usage	536.67 MMscf	monthly	Y
114	throughput	500,000 gallon	monthly	Y
3, 6, 9, 13, 18, and 19	opacity observations	5%	weekly	Y
all	production rates	see plantwide condition 14	monthly	Y
12	hours of operation	4,400	monthly	Y

* Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)
 ** Indicates whether the item needs to be included in reports

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
3, 6, 9, 13, 18, and 19	5	Department Guidance	weekly observation
05	20/40	Department Guidance - see administrative agreement in appendix of permit.	Weekly and per batch observations
10 & 11	5	Department Guidance	Natural gas combustion
129	20	Department Guidance	weekly observation
130	5	Department Guidance	Natural Gas combustion

17. DELETED CONDITIONS:

There were no conditions deleted from the previous permit.

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

List all active permits for this facility which are voided/superseded/subsumed by issuance of this permit.

Permit #
1177-AOP-R0

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Phillip Murphy, P.E.
Engineering Supervisor, Air Division