

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1177-AOP-R20 AFIN: 02-00028

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Georgia-Pacific Chemicals LLC  
124 Paper Mill Road  
Crossett, Arkansas 71635

3. PERMIT WRITER:

Shawn Hutchings

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Other Basic Inorganic Chemical Manufacturing  
NAICS Code: 325180

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
9/10/2019	Minor Mod	New Boiler

6. REVIEWER'S NOTES:

Georgia Pacific Chemicals LLC, operates a chemical manufacturing plant located at 124 Paper Mill Road, Crossett, Arkansas 71635. This permit is a minor modification permit the Package Boiler, SN-152, currently allowed as a temporary source as a permanent source. Permitted annual emissions increased 1.9 tpy of particulate, .1 tpy of SO<sub>2</sub>, 0.6 tpy of VOC, 5.1 tpy of CO, and 4.5 tpy of NO<sub>x</sub>, and 0.13 tpy of HAPs.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The facility has an extension for a MACT in its compliance section.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? **N**  
 If yes, were GHG emission increases significant? **N**

b) Is the facility categorized as a major source for PSD? **Y**

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD. The increase in emissions from the project was less than PSD thresholds.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
See Table in Plantwide Condition #13	Record keeping only	40 C.F.R. Part 60, Subpart Kb
SN-11 and equipment in formaldehyde production	HAPs	40 C.F.R. Part 63, Subpart F, G, H (HON Rule)
SN-11 and equipment in wet strength resin production	HAPs	40 C.F.R. Part 63, Subpart W
SN-11 and equipment in Amino/Phenolic Resin Production	HAPs	40 C.F.R. Part 63, Subpart SS, UU, WW, OOO
Facility	Benzene	40 C.F.R. 61, Subpart FF
SN-140, 159, 150	HAPs	40 C.F.R. Part 63, Subpart ZZZZ
SN-149	Criteria Pollutants	40 C.F.R. Part 60, Subpart IIII
152	HAPs	MACT Subpart DDDDD
152	No specific limit	NSPS Subpart Dc

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? **N**

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? **N**  
 If not, explain why.

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

Based on Department procedures for review of non-criteria pollutants, emissions of non-criteria pollutants are below thresholds of concern.

c) H<sub>2</sub>S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H<sub>2</sub>S Standards Y/N  
 If exempt, explain: \_\_\_\_\_

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H <sub>2</sub> S	20 parts per million (5-minute average*)		
	80 parts per billion (8-hour average) residential area		
	100 parts per billion (8-hour average) nonresidential area		

\*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C<sub>p</sub> = 5-minute average concentration

C<sub>m</sub> = 1-hour average concentration

t<sub>m</sub> = 60 minutes

t<sub>p</sub> = 5 minutes

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments	
03	AP-42	Natural Gas Emission (lb/MMScf)				
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	7.6			
		SO <sub>2</sub>	0.6			
		NO <sub>x</sub>	100			
		CO	84			
		VOC	5.5			
		Pb	0.0005			
		Formaldehyde	0.075			
		Hexane	1.8			
		Naphthalene	0.00061			
		POM (Total)	0.000044			
		Toluene	0.0034			
		Cadmium	0.0011			
	Testing	Production Related Emissions (lb/hr)				
		Acetaldehyde	1.19			2.17
		Formaldehyde	1.83			2.20
		Methanol	12.3			21.74
		Phenol	0.71			0.89
		Dimethyl Ether	0.48			0.56
		Total VOC	27.7			27.70
		PM/PM <sub>10</sub> /PM <sub>2.5</sub>	11.5			11.50
Ammonia	0.02	0.03				
11			Thermal Oxidizer	99%		
9	Manuf. Specs. AP-42 (natural gas)	varied	Thermal Oxidizer	98%	Production Related PM/PM- <sub>10</sub> /PM <sub>2.5</sub> , NO <sub>x</sub> , & CO emissions	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	combustion)  Stack Testing				based on manufacturer specifications SO <sub>2</sub> – stack testing
134		Emissions were calculated based on equation 7 found in USEPA Technical Guidance for Hazardous Analysis, Emergency Planning for EHS, December 1987 (Appendix G)			
136 138 139	AP-42, Section 5.2				
140	AP-42 Table 3.3-1, 3.3-2.	Lb/MMBtu PM: 0.31 SO <sub>2</sub> : 0.29 NO <sub>x</sub> : 4.41 CO: 0.95 VOC: 0.36 Acetaldehyde: 7.67x10 <sup>-4</sup> Benzene: 9.33x10 <sup>-4</sup> Formaldehyde: 1.18x10 <sup>-3</sup> Naphthalene: 8.48x10 <sup>-5</sup> Toluene: 4.09x10 <sup>-4</sup> Xylene: 2.85x10 <sup>-4</sup> Total POM: 1.68x10 <sup>-4</sup>			
145	AP-42 13.2.1.3				
146		Emissions were estimated using emission factors and control efficiencies found in the document titles “Air Permit Technical Guidance for Chemical Sources – Equipment Leak Fugitives”, prepared by the Texas Commission on Environmental Quality, draft, October			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		2000			
148	Vendor		Dust collector	95%	Maximum air flow through the dust collector is 2,600 cfm Particulate emission from dust collector: 0.005 gr/cf
134		Emissions were calculated based on equation 7 found in USEPA Technical Guidance for Hazardous Analysis, Emergency Planning for EHS, December 1987 (Appendix G)			
145	AP-42 13.2.1.3				
146		Emissions were estimated using emission factors and control efficiencies found in the document titles "Air Permit Technical Guidance for Chemical Sources – Equipment Leak Fugitives", prepared by the Texas Commission on Environmental Quality, draft, October 2000			
149 150	AP-42 Engines and NSPS limits	Varied	None		
111 151	AP-42 Tanks	Equations	None		
153	AP-42	Varied	None	N/A	

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
None				

15. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
10, 11	Firebox Temperature	Temperature Monitoring Device	Continuous	Y
03, 05, 13, 18, 19	Pressure Drop	Visual Inspection	Weekly	N

16. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
All Kb Tanks	Dimensions	N/A		N
10	Firebox Temperature	1600 °F	Continuous	Y
11	Combustion Chamber Temperature	910°C	Continuous	Y
11	Transfer rack design analysis and throughput	None	Annual	Y
11 and Subpart OOO processes	Leak Detection Requirements	None	Varied	Y
Facility	Production Rates	See Plantwide Conditions #13 and #25	Monthly	Y
135	Ammonia Throughput	1,300,000 gallons	Monthly	Y
95	HAP	0.25 tpy single or	Monthly	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		combination		
140 149 150	Hours of Operation	1,500 500/12 mo 500/12 mo	Monthly	Y
149 150	RICE Records	None	As needed	Y
111 151	Throughput	35,000,000 gallons tall oil	Monthly	Y

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
3, 6, 9,13, 18, 19, 148	5%	Department Guidance	Weekly Observations
10, 11	5%	Department Guidance	Natural Gas Combustion
149 150	20	Department Guidance	Emergency Engines
153	5%	Department Guidance	Natural Gas Combustion

18. DELETED CONDITIONS:

Former SC	Justification for removal
	None

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						HAPs	
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	Single	Total	
325hp Hydroblaster	A1	0.15	0.14	0.17	0.44	2.01	0.002		
1,000 gal Dowtherm Storage Tank	A3			0.00004					
Sodium Hydroxide Storage Tank	A4								

Sodium Hydroxide Storage Tank	A4							
Sodium Hydroxide Process Weigh Tank	A4							
Sodium Hydroxide Process Weigh Tank	A4							
Dilute Caustic Storage	A4							
Sodium Hydroxide Storage Tank	A4							
Urea Storage Silo	A13	1.63						
Kettle Urea Feed Hoppers	A13	1.63						
Epichlorohydrin Storage Tank	A13			0.48			0.48	0.48
DETA Railcar Storage and Transfer to Trucks	A13			0.09				
Phenol Storage Tank	A13			0.12			0.12	0.12
Urea Solution Storage Tank	A13			0.05				
Wet Strength Resin and Urea Solution Dilute Tank	A13			0.03				
Novacote and Glassmat Resin Blend Storage Tanks	A13							
Onsite Storage of Epichlorohydrin: 2-7,200 gallon trailers	A13			0.00001			0.0001	0.0001
RCI Distillate Tank	A13			0.042			0.042	0.042

Hexamine Storage Tank	A13			0.0008				
Crude Tall Oil Storage Tank	A13			0.04				
Methanol Railcar Maintenance	A13			0.27			0.27	0.27
Portable Pump with Diesel Engine	A13	0.07	0.06	0.08	0.20	0.89	0.0008	0.0008
10 hp Self-Priming Water Pump	A13	0.01	0.01	0.06	0.02	0.03		
208 hp Non-Road, Non-Stationary Emergency Generator	A13	0.06	0.05	0.07	0.17	0.77	0.0007	0.0007
111 hp Non-Road, Non-Stationary Diesel Fired Air Compressor	A13	0.01	0.01	0.01	0.02	0.07	0.00006	0.00006

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1177-AOP-R19

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Revised 03-11-16

Georgia-Pacific Chemicals LLC  
 Permit #: 1177-AOP-R20  
 AFIN: 02-00028

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	297.45
Permit Type	Minor Mod	Permit Fee \$	500

Minor Modification Fee \$	500
Minimum Modification Fee \$	1000
Renewal with Minor Modification \$	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	<input checked="" type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	7
Initial Title V Permit Fee Chargeable Emissions (tpy)	

*HAPs not included in VOC or PM:*

*Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride*

*Air Contaminants:*

*All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensible PM, H2S in TRS, etc.)*

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		54.5	55.5	1		
PM <sub>10</sub>		54.4	56.3	1.9	1.8	56.3
PM <sub>2.5</sub>			0	0		
SO <sub>2</sub>		1.9	2	0.1	0.1	2
VOC		182.3	182.9	0.6	0.6	182.9
CO		38	43.1	5.1		
NO <sub>x</sub>		28.8	33.3	4.5	4.5	33.3
Acetaldehyde	<input checked="" type="checkbox"/>	10.77	10.77	0		















