STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1177-AOP-R19 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:

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
11/16/2018	Modification	To add 2 tanks back to the permit which the facility requested to be removed in a previous permitting action.

6. REVIEWER'S NOTES:

Georgia Pacific Chemicals LLC, located at 124 Paper Mill Road, Crossett, Arkansas 71635. This permit is a modification to add Tanks 56 and 4, SN-111 and SN-151 back to the GP Chemical permit. These tanks were removed in a previous permitting action. SN-151 was previously listed as an insignificant activity before removal. The facility is requesting it be added as a source. Specific Condition 38 was updated to allow the 50 hours for non-emergency use for SN-149 as allowed by the federal regulation. Permitted emissions increased 5.1 tpy of VOC.

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. This modification was to add two tanks previously removed from the permit back. They are currently unpermitted.

8. PSD APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? 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, explain why this permit modification is not PSD. No physical modifications or changes in method of operation.

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

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

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.

a) Non-Criteria Pollutants:

New HAPs emissions were below levels of concern.

b) H_2S 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_2S Standards N
If exempt, explain:

12. 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) $PM/PM_{10}/PM_{2.5}$ 7.6 SO_2 0.6 NO_x 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			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)		Control Equipment	Control Equipment Efficiency	Comments
		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			
		$PM/PM_{10}/PM_{2.5}$	11.5 11.50			
		Ammonia	0.02 0.03			
11				Thermal Oxidizer	99%	
9	Manuf. Specs. AP-42 (natural gas combustion) Stack Testing	varied		Thermal Oxidizer	98%	Production Related $PM/PM_{10}/PM_{2.5}$, NOx, & CO emissions based on manufacturer specifications SO_2 – 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_2: 0.29 NOx: 4.41 CO: 0.95 VOC: 0.36 Acetaldehyde: $7.67x10^{-4}$ Benzene: $9.33x10^{-4}$				

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		Formaldehyde: $1.18x10^{-3}$ Naphthalene: $8.48x10^{-5}$ Toluene: $4.09x10^{-4}$ Xylene: $2.85x10^{-4}$ Total POM: $1.68x10^{-4}$			
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			
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			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		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		

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
none				

14. 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

15. 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 ^{o}F	Continuous	Y
11	Combustion Chamber Temperature	910^{o}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 combination	Monthly	Y
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

16. 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

17. DELETED CONDITIONS:

Former SC	Justification for removal
No conditions were deleted	

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							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

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1177-AOP-R18

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Georgia-Pacific Chemicals LLC
Permit #: 1177-AOP-R19
AFIN: 02-00028

$/ton factor	23.93	Annual Chargeable Emissions (tpy)	288.57
Permit Type	Modification	Permit Fee $	1000

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	☐
If Hold Active Permit, Amt of Last Annual Air Permit Invoice $	0
Total Permit Fee Chargeable Emissions (tpy)	5.1
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		54.6	54.6	0	0	54.6
PM_{10}		54.5	54.5	0		
$PM_{2.5}$				0		
SO_2		1.9	1.9	0	0	1.9
VOC		176.9	182	5.1	5.1	182
CO		38	38	0		
NO_X		28.8	28.8	0	0	28.8
Acetaldehyde	☐	10.77	10.77	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Chlorine	☑	0.97	0.97	0	0	0.97
Chloroform	☐	0.49	0.49	0		
Epichlorohydrin*	☐	0.27	0.27	0		
Formaldehyde*	☐	13.2	13.2	0		
Hexane	☐	0.13	0.13	0		
Hydrogen Chloride	☑	4.47	4.47	0	0	4.47
Methanol*	☐	107.58	107.58	0		
O-Cresol*	☐	0.05	0.05	0		
Phenol*	☐	10.8502	10.8502	0		
Cadmium	☐	0.03	0.03	0		
POM (Total)	☐	0.04	0.04	0		
Total Other HAPs	☐	0.3	0.3	0		
Formic Acid	☐	0.2	0.2	0		
Ammonia	☑	15.83	15.83	0	0	15.83
Dimethyl Ether (DME)	☐	2.45	2.45	0		
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