STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1177-AOP-R16 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
8/7/2017	Modification	None. Added MACT compliance extension only.
02/21/2018	Administrative Amendment	None. Insignificant NaOH tank now also NaOH and KOH.

6. REVIEWER'S NOTES:

Georgia Pacific Chemicals LLC, formerly Georgia-Pacific Resins, Inc., located at 124 Paper Mill Road, Crossett, Arkansas 71635. This permit is to add a previously approved extension for 40 C.F.R. Part 63, Subpart OOO – *National Emission Standards for Hazardous Air Pollutants for Amino/Phenolic Resins Production* until October 9, 2018 to the permit. 40 C.F.R. § 63.6(i)(4)(a) requires the facility, since they requested an extension, apply for a modification to their title V permit and requires that the conditions of that extension be added to the permit. This permit modification incorporates that requirement. The category A-4 insignificant activity NaOH and

Water Dilution Tank, T-84, was updated to NaOH/KOH and Water Dilution Tank T-84 as requested in an application for administrative amendment. There are no changes in permitted emission rates.

7. COMPLIANCE STATUS:

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

There are no known enforcement issues with the facility.

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
SN-05, SN-129, SN-42, SN-51, SN-25, SN-120, SN-121, SN-122, SN-41, SN-06, SN-123, SN-126, SN-134	HAPs	40 C.F.R. 63, Subpart FFFF
Facility	Benzene	40 C.F.R. 61, Subpart FF
SN-140	HAPs	40 C.F.R. Part 63, Subpart ZZZZ

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

No changes in emission rates no evaluation performed.

c) 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			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	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 $PM/PM_{10}/PM_{2.5}$ 11.5 11.50 Ammonia 0.02 0.03			
05	Stack Testing AP-42, Table 1.4-1, 1.41-2, 1.4-3, 1.4-4 (natural gas combustion)	varied	Boiler Scrubber Condenser	98% 98% 98%	Production Related $PM/PM_{10}/PM_{2.5}$, NOx, VOC/HAP & CO emissions based on stack test data
11			Thermal Oxidizer	99%	
~~12~~ 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			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		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: $9.33x10^{-4}$ 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

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
					2,600 cfm Particulate emission from dust collector: 0.005 gr/cf

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
05 129	Temperature	Temperature Monitoring Device	Continuous	Y
~~12~~	~~pH, Liquid flow rate~~	~~Monitoring Device~~	~~Weekly~~	~~Y~~
03, 05~~, 09~~, 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
129	Temperature	1,410 ^{o}F	Daily	N
~~114~~	~~Throughput~~	~~500,000 gal~~	~~Monthly~~	~~Y~~
Facility	Production Rates	See Plantwide Conditions #13 and #25	Monthly	Y
~~12~~	~~Hours of Operation~~	~~4,400~~	~~Monthly~~	~~Y~~
~~12~~	~~pH~~	~~9.0 or greater~~	~~Weekly~~	~~Y~~
~~12~~	~~Liquid flow rate~~	~~80-120 gallons/min~~	~~Weekly~~	~~Y~~
~~70~~	~~Throughput~~	~~500,000 gal~~	~~Monthly~~	~~Y~~
135	Ammonia Throughput	1,300,000 gallons	Monthly	Y
05	Firebox Temperature	1100 ^{o}F	Daily	N
95	HAP	0.25 tpy single or combination	Monthly	Y
140	Hours of Operation	1,500	Monthly	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
3, 6, 9,13, 18, 19, 148	5%	Department Guidance	Weekly Observations
5	20%	Department Guidance	Weekly and per batch observations
10, 11	5%	Department Guidance	Natural Gas

SN	Opacity	Justification for limit	Compliance Mechanism
			Combustion
129	20%	Department Guidance	Weekly Observations

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				
4,000 gal Therminol Charging Tank	A3			0.00029				
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							

Sodium Hydroxide Storage Tank	A4							
Potassium Hydroxide Storage Tank	A4							
NaOH/KOH and Water Dilution 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				
Column	A13			0.18				
XTOL Light Distilled Head Storage tank	A13			0.45				

Test Tank	A13							
XTOL Railcar Loading	A13			0.32				
Therminol Surge Tank	A13			0.00007				
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
Ethylene Glycol Tank	A13						0.00001	0.00001

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
1177-AOP-R15

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Georgia-Pacific Chemicals LLC
Permit #: 1177-AOP-R16
AFIN: 02-00028

$/ton factor	23.93	Annual Chargeable Emissions (tpy)	702.6
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)	0
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		249	249	0	0	249
PM_{10}		248.7	248.7	0		
$PM_{2.5}$		0	0	0		
SO_2		99.5	99.5	0	0	99.5
VOC		219.5	219.5	0	0	219.5
CO		102.2	102.2	0		
NO_X		112.8	112.8	0	0	112.8
Acetaldehyde	☐	11.55	11.55	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Acrolein	☐	0.03	0.03	0		
Chlorine	☑	1.3	1.3	0	0	1.3
Chloroform	☐	0.76	0.76	0		
Ethylene Glycol	☐	4.6	4.6	0		
Epichlorohydrin*	☐	0.27	0.27	0		
Formaldehyde*	☐	13.6	13.6	0		
Hexane	☐	1.62	1.62	0		
Hydrogen Chloride	☑	4.47	4.47	0	0	4.47
Maleic Anhydride*	☐	0.46	0.46	0		
Methanol*	☐	108	108	0		
O-Cresol*	☐	0.05	0.05	0		
Phenol*	☐	11.1302	11.1302	0		
Lead Compounds	☐	0.4	0.4	0		
Cadmium	☐	0.07	0.07	0		
POM (Total)	☐	0.08	0.08	0		
Total Other HAPs	☐	0.18	0.18	0		
Total Iodine	☐	3.8	3.8	0		
Formic Acid	☑	0.2	0.2	0	0	0.2
Ammonia	☑	15.83	15.83	0	0	15.83
Dimethyl Ether (DME)	☐	2.45	2.45	0		
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