STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0224-AOP-R25 AFIN: 15-00001

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Green Bay Packaging Inc. - Arkansas Kraft Division
338 Highway 113 South
Morrilton, Arkansas 72110

3. PERMIT WRITER:

Shawn Hutchings

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Paperboard Mills
NAICS Code: 322130

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
4/5/2023	PSD Modification	See Reviewers Notes
5/1/2023	Minor Modification	Replacement Firepump Engine

6. REVIEWER'S NOTES:

Green Bay Packaging, Inc.-Arkansas Kraft Division (AKD) of 338 Highway 113, Morrilton, Conway County, Arkansas 72110 has owned and operated a fully integrated kraft pulp and paper mill in Oppelo, near Morrilton, since 1965.

This permit is a Prevention of Significant Deterioration (PSD) modification to expand the mill's papermaking capacity, improve its product performance, utilize its raw material advantages, and reduce its dependence on external utilities. This modification includes the installation of several new pieces of equipment, including but not limited to: No. 5

Paper Machine (SN-701) to replace the #2 Paper Machine (SN-25B); a No. 6 Recovery Boiler (SN-401) and associated evaporator upgrades to replace the existing Recovery Boiler (SN-05A) and evaporator systems; No. 3 Lime Kiln (SN-501), new No. 3 Lime Slaker (SN-502) and associated causticizing upgrades to replace the existing #2 Lime Kiln (SN-08), Lime Slaker (SN-36) and causticizing area; Pulp Mill Upgrades, including a new continuous digester and pulp washing system; Relocation of Chip Mill on-site, including a Debarker (SN-102) and Chipper (SN-103); New Bubbling Fluidized Bed (BFB) No. 5 Power Boiler (SN-601) to replace the #3 Wood Waste Boiler (SN-04).

This permit also includes a minor modification to replace the Emergency Firepump Engine, SN-41, with a new engine.

Permitted emission rates increased: 339.4 tpy of PM, 701.8 tpy of PM_{10}, 646.1 of $PM_{2.5}$, 355.3 tpy of SO_2, 2095.9 tpy of VOC, 1543.7 tpy CO, 1498.5 tpy of NO_x, 2.2 million tons of GHG, 0.02 tpy of lead, 37.5 tpy of H_2S, 29.96 of sulfuric acid mist, 95.87 tpy of TRS, 1282.42 tpy of HAPs, 31.3 tpy of Acetone, and 34.2 tpy of ammonia.

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/GHG APPLICABILITY:

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

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*

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-04, SN-15, SN-46, SN-401, SN-601	PM, NO_x, CO	NSPS Db
SN-23 (#5 Digester Only)	PM, TRS	NSPS BB
Facility	Asbestos	NESHAP M
Facility	HAPs	MACT S
SN-05A, SN-07, SN-08, 301 401, 501	PM, TRS	MACT MM

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-39, 304	HAPs	MACT RR
SN-07, 301, 302, 303, 401, 501, 601	PM TRS	NSPS BBa
SN-41, SN-42, SN-43, SN-44, 47, 610, 611, 902A-F	HAPs	NESHAP ZZZZ
SN-45	HAPs	NSPS JJJJ
SN-04, SN-15, SN-46, 601	PM, CO, NO_x, HAPs	NESHAP DDDDD
SN-47, 610, 611, 902A-F	Criteria	NSPS IIII

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
None				

11. 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 Rule 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N/A

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
301	SO_2	Precontrol below 100
401	PM_{10}	Post 90 NSPS or NESHAP
501	PM_{10}	Post 90 NSPS or NESHAP
501	PM_{10}	Precontrol below 100
507	PM_{10}	Inherent Process Equipment
508	PM_{10}	Inherent Process Equipment
509	PM_{10}	Inherent Process Equipment
601	PM_{10}	Precontrol below 100

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
602	PM_{10}	Inherent Process Equipment
603	PM_{10}	Inherent Process Equipment
702	PM_{10}	Inherent Process Equipment
703	PM_{10}	Inherent Process Equipment
46	NO_x	Post 90 NSPS or NESHAP

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

PSD modeling is performed in two stages: the significance analysis and the full impact analysis. The significance analysis considers the net emissions change associated with PSD affected emissions units to determine if the increased emissions will have a significant impact upon the surrounding area. If the results of the significance analysis are below the corresponding Modeling Significance Levels, the full impact analysis is not required. The facility used Tier-1 Screening of Ozone impacts using MERPS. The below results for the ozone SIL represent the calculated cumulative consumption of the ozone SIL. A summary of the results of the significance analysis is in the table below.

Pollutant	Averaging Period	Modeled Concentration ($\mu g/m^3$)	Significance Level ($\mu g/m^3$)
CO	1-hour	47.6	2,000
	8-hour	20.1	500
PM_{10}	24-hour	18.7	5
	Annual	3.2	1.0
$PM_{2.5}$	24-hour	9.1	1.2
	Annual	0.95	0.3
SO_2	1-hour	61.49	7.8
	3-hour	42.4	25

Pollutant	Averaging Period	Modeled Concentration ($\mu g/m^3$)	Significance Level ($\mu g/m^3$)
	24-hour	5.5	5
	Annual	0.04	1.0
NO_2	1-hour	59.7	7.52
	Annual	0.59	1.0
Ozone	8-hour	2.98 ppb	1 ppb

A full impact analysis was required for PM_{10} annual and 24-hr, $PM_{2.5}$ annual and 24-hr, SO_2 1-hr, 3-hr, and 24-hr, and NO_2 1-hr. The full impact analysis modeling must show that the emissions from the facility and surrounding existing sources will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment. For the $PM_{2.5}$, Tier-1 Screening of Secondary $PM_{2.5}$ impacts using MERPS was used to estimate the concentration of $PM_{2.5}$ secondary formation from NO_X and SO_2. The concentration from secondary formation was added to the modeled concentration for primary $PM_{2.5}$. That value is represented in the table below with the concentrations for other pollutants.

Pollutant	Averaging Period	Maximum Predicted Increment Consumption ($\mu g/m^3$)	PSD Class II Increment ($\mu g/m^3$)	Percent of Class II Increment (%)
PM_{10}	24-hour	9.75	30	32.5
	Annual	1.19	17	7
NO_2	Annual	0.59	25	2.36
$PM_{2.5}$	24-hour	8.98	9	99.8
	Annual	1.01	4	25.3
SO_2	3-hour	29.33	512	5.73
	24-hour	2.79	91	3.07
	Annual	0.04	20	0.2

Arkansas Rule 19 requires that if the issuance of a permit for any major stationary source or any major modification would result in the consumption of more than fifty percent of the available annual increment or eighty percent of any short term increment, the person applying for such a permit shall submit to the Division an

assessment of the effects that the proposed consumption would have upon the industrial and economic development within the area of the proposed source and the alternatives to such consumption including alternate siting of the proposed source. To address this requirement, the facility submitted the following.

Since the fine grid receptors only extend approximately three km in each direction from the plant, evaluation of the impacts on the medium and coarse grids is a more accurate assessment of how PSD Increment consumption will affect existing or future industrial sites. The medium and coarse grid impacts are more important in rural areas because industrial sources are generally located further apart than in an urban setting. All medium or coarse grid receptors showed impacts well below 50% of the 24-hr Increment. The area with elevated Increment consumption is rural farmland and no other industrial sources would be expected in this rural area so near the AKD Mill. The nearest developed area (Morrilton) is approximately 6 km (3.7 miles) north of the AKD Mill, across the Arkansas River. The $PM_{2.5}$ 24-hr Increment consumption near the south side of Morrilton (across the river) is on the order of 1 µg/m3 (less than 11% of the standard). Note that Morrilton's designated industrial park area (Ruby Croom Industrial Park) is on the far northeast side of Morrilton (6 miles, or 9.5 km from AKD). Therefore, industrial growth in the Morrilton area will not be hindered because of the limited near-field $PM_{2.5}$ Increment consumption associated with this project. Alternative siting options for AKD are not feasible due to the proximity of the Arkansas River and existing investments in utilities and transportation at the existing Mill site. The proposed site is significantly rural with no reasonable likelihood of other industrial development. The location of new equipment associated with this project was optimized considering terrain, location of public roads, environmental impact, and proximity to utilities.

The full impact modeling analysis also requires modeling to show that the emissions from the facility and surrounding existing sources will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS).

For the $PM_{2.5}$, Tier-1 Screening of Secondary $PM_{2.5}$ impacts using MERPS was used to estimate the concentration of $PM_{2.5}$ secondary formation from NO_X and SO_2. The concentration from secondary formation was added to the modeled concentration for primary $PM_{2.5}$. A summary of the results of the NAAQS analysis is in the table below.

Pollutant		Averaging Period	Maximum Modeled Impact (µg/m^3)	Background Concentration (µg/m^3)	Total Impact (µg/m^3)	NAAQS (µg/m^3)
PM_{10}		24-hour	15.96	34.3	50.30	150
$PM_{2.5}$		24-hour	8.98	19.0	27.98	35

Pollutant		Averaging Period	Maximum Modeled Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)
		Annual	2.44	7.9	10.31	12
SO_2		1-hour	29.72	20.9	50.66	196
NO_2		1-hour	115.88	48.9	164.8	188
		Annual	0.59	9.4	9.99	100
Ozone		8-hour	2.92 ppb	60 ppb	62.92 ppb	70 ppb

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Division of Environmental Quality has deemed the PAER 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?
Acetaldehyde	45.04	4.9544	34.94	No
Acrolein	0.23	0.0253	1.88	No
Beryllium	5E-05	5.5E-06	6.57E-05	No
Biphenyl	1.26	0.1386	5.62	No
Cadmium	0.01	0.0011	1.90E-03	No
Chlorine	0.29	0.0319	1.03	No
Chlorine Dioxide	0.28	0.0308	1.14	No
Chromium VI	4.25E-04	4.68E-05	1.89E-03	No
Formaldehyde	1.5	0.165	9.8	No
HCl	2.98	0.3278	7.0	No

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
H_2S	1.39	0.1529	134.38	No
Manganese	0.02	0.0022	5.28E-02	No
Mercury	0.01	0.0011	1.54E-03	No
Methanol	262.09	28.8299	304.98	No
Phenol	19.25	2.1175	4.59	No
Phosphorus	0.1	0.011	0.484	No
Sulfuric Acid Mist	0.2	0.022	7.9	No
Toluene	75.37	8.2907	6.25	YES

2nd Tier Screening (PAIL)

AERMOD 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 has been deemed by the Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Acetaldehyde	450.4	50.9	YES
Acrolein	2.3	0.932	YES
Beryllium	5E-04	1.89E-06	YES
Biphenyl	12.6	4.5	YES
Cadmium	0.1	2.4E-04	YES
Chlorine	2.9	0.821	YES
Chlorine Dioxide	2.8	0.913	YES
Chromium VI	4.25E-03	5E-05	YES
Formaldehyde	15	5.99	YES
HCl	29.8	0.201	YES
H_2S	13.9	135	YES

Pollutant	PAIL ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Manganese	0.2	0.00152	YES
Mercury	0.1	6E-05	YES
Methanol	2620.9	427	YES
Phenol	192.5	2.68	YES
Phosphorus	1	0.0139	YES
Sulfuric Acid Mist	2	0.227	YES

The facility performed a refined analysis for H_2S by comparing the results to the residential and non-residential thresholds established in A.C.A. δ8-3-103. The H_2S impacts were all below the non-residential thresholds and only exceeded the residential thresholds at 10 receptors that were either along the eastern property line or just over the Arkansas River. Those receptors are all either along the AKD property line or over open water in places where nobody does or could reside.

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 Y
If exempt, explain: facility instituting control technology as allowed under 8-3-103(d)

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H_2S	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

$Cp = Cm\ (t_m/t_p)^{0.2}$ where

Cp = 5-minute average concentration
Cm = 1-hour average concentration

t_m = 60 minutes
t_p = 5 minutes

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
04	Test Data/NCASI	lb/lb steam PM_{10} $9.79x10^{-5}$ *1.2 PM: $8.93x10^{-5}$ *1.2 VOC: $2.52x10^{-5}$ *1.2 CO: $2.47x10^{-4}$ *1.2 SO_2: $1.65x10^{-5}$ *1.2 lb/MMBtu NOx: 2.03E-01 *1.2	Multiclones Wet Scrubber		
05A	Test/CEMs Data/NCASI TB 1050, Table 4.52 & Table 4.53 & Table 4.54	lb/T BLS PM: 0.260 *1.2 PM_{10}: 0.199 *1.2 SO_2: 0.393 *1.2 VOC: 0.041 *1.2 CO: 2.36 *1.2 NO_X: 1.130 *1.2 Lead: $1.2x10^{-5}$*1.2 TRS: 0.0257*1.2 H_2S: $1.62x10^{-2}$*1.2	ESP	99.8%	401,400 TBLS annually
07	Test Data NCASI TB 1020, Table 4.15 NCASI TB 1050, Table 4.63 and 4.62	lb/T BLS: PM: 0.114 *1.2 PM_{10}: 0.1319 *1.2 lb/T BLS SO_2: $6.0x10^{-3}$ *1.2 VOC: $1.0x10^{-1}$ CO: $8.0x10^{-3}$ *1.2 lb/T BLS: Lead: $7.64x10^{-7}$ *1.2 TRS: $1.87x10^{-2}$ *1.2 H_2S: $1.18x10^{-2}$ *1.2	Venturi Scrubber		401,400 T BLS annually

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
08	Stack Test NCASI TB 1020, Table 4.13, NCASI TB 1050 4.56, and 4.59	lb/T CaO PM:0.76 *1.2 PM_{10}: 1.26 *1.2 $PM_{2.5}$:0.402 *1.2 SO_2: $2.49x10^{-2}$ *1.2 VOC: $4.32x10^{-2}$ CO: $6.0x10^{-2}$ *1.2 NO_x: 0.7 *1.2 Lead: $1.54x10^{-4}$ *1.2 TRS: 40 ppm hourly (CEMS) TRS: 20 ppm annually (CEMS) H_2S: $5.64x10^{-2}$ *1.2	High Efficiency Scrubber		
11	Emissions routed to SN-04	HVLC Collection System			
12	NCASI	<u>lb/ODTP</u> Acetaldehyde: 0.05 Methanol: 0.42 Total HAPS 0.47 VOC: 0.47 H_2S: 0.08 <u>Percent Volatilized (H_2S)</u> Primary Clarifier: 1.4% Aerated Stabilization Basin: 8.8%	None		Total HAP and VOC emissions are calculated as the sum of the methanol and acetaldehyde
15	AP-42 PSD BACT Limit	PM/PM_{10}:7.6 lb/10^6 ft^3 gas VOC:5.5 lb/10^6 ft^3 gas CO:84 lb/10^6 ft^3 gas SO_2:0.6 lb/10^6 ft^3 gas NO_x: 0.067 lb/MMBtu	FGR		

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	established in R0				
17	NCASI TB 1020, Table 4.1 & NCASI TB 1050, Table 4.65 and 4.66	lb/T TO VOC: 2.90 Acetaldehyde: $2.42x10^{-3}$ *1.2 Acetone: $2.60x10^{-2}$ *1.2 Acrolein: $1.64x10^{-3}$ *1.2 Methanol: $9.33x10^{-2}$ *1.2 TRS: $5.87x10^{-2}$ *1.2 H_2S: $2.83x10^{-2}$ *1.2	None		
22	Testing	SO_2: 10.92 lb/MMBtu	None		
	NCASI TB 1020, Table 4.4 & NCASI TB 1050, Table 4.35, & Table 4.36	lb/ADTUBP PM: 0.036*1.2 VOC: 0.008 CO: 0.012*1.2 NOx: 0.047*1.2 TRS: $4.55x10^{-4}$ *1.2 Acetaldehyde: $4.08x10^{-4}$ *1.2 Acetone: $2.85x10^{-4}$*1.2 Formaldehyde: $7.92x10^{-5}$ *1.2 Methanol: $3.45x10^{-3}$ *1.2			
23	NCASI TB 1020, Table 4.2, NCASI TB 1050, Table 4.30 & Table 4.31	lb/ODT (tons of oven dried chips) VOC: 1.2 $x10^{-2}$ *1.2 TRS: 6.3 $x10^{-4}$ *1.2 Acetaldehyde: $2.8x10^{-4}$ *1.2 Acetone: $3.65x10^{-4}$ *1.2 Methanol $4.75x10^{-3}$ *1.2	None		
24		<u>Chip Cyclone</u> PM/PM_{10}: 0.003 lbs/ BDT <u>Truck Unloading lb/ton Wood Waste/Bark</u>	None		360,000 ADTFP/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	NCASI TB 1020 Table 9.1 ADEQ MEMO AP-42 NCASI TB 723 Table 4	PM: $4.4x10^{-3}$ PM_{10}: $3.4x10^{-4}$ <u>Truck Unloading lb/ton Chips</u> PM: 0.0008 PM_{10}: 0.00008 <u>Storage Pile lb/day-acre</u> Wood Waste/Bark PM: $1.34x10^{-3}$ PM: $6.68x10^{-4}$ <u>Chips</u> PM: $1.04x10^{-4}$ PM: $5.2x10^{-5}$ Chip Acres: 7 Bark Acres: 5 <u>Emissions from Chip Piles</u> VOC_{active}: 60.78 lb/hr $VOCin_{active}$:3.67 lb/hr <u>Emissions from Bark</u> VOC: 2.73 lb/Tdw			
					VOC_{active} = [0.323 mg CH_4/m^2/sec*(surface area) m^2 * 2.2046E-06 lb/mg*(3600*24*365) sec/yr*(1/2000)ton/lb $VOC_{inactive}$ = [0.013mg CH_4/m^2/sec*(surface area) m^2 * 2.2046E-06 lb/mg*(3600*24*

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
					365) sec/yr*(1/2000)ton/lb Surface area of active pile: 11,331.3m^2 Surface area of inactive pile: 16,997.0 m^2
25A	NCASI TB 942, Table 5.2, Mill D NCASI TB 973, Table A16a, Mill PMMH NCASI TB 1050, Table A16a	<u>lb/ADTFP</u> PM: 0.020*1.2 PM_{10}: 0.06*1.2 VOC = 1.61 Acetone: $3.4x10^{-2}$*1.2 Acetaldehyde: $1.8x10^{-1}$*1.2 Acrolein: $6.9x10^{-3}$ *1.2 Formaldehyde: $1.35x10^{-2}$*1.2 Methanol: $9.2x10^{-1}$*1.2	None		360,000 ADTFP/yr
25B	NCASI TB 942, Table 5.2, Mill D NCASI TB 1050	<u>lb/ADTFP</u> PM: 0.020*1.2 PM_{10}: 0.06*1.2 VOC = 1.61 Acetone: $3.4x10^{-2}$*1.2 Acetaldehyde: $1.8x10^{-1}$*1.2 Acrolein: $6.9x10^{-3}$ *1.2 Formaldehyde: $1.35x10^{-2}$*1.2 Methanol: $9.2x10^{-1}$*1.2	None		270,000 ADTFP/yr
26 27	AP-42 Section 1.4	lb/10^6 scf PM: 7.6	None		

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	Tables 1.4-1 and 1.4-2	PM_{10}:7.6 SO_2:0.6 NOx:100 CO: 84 VOC: 5.5 Formaldehyde: 0.075			
30	LandGEM v 3.02 AP-42 Section 13.2.4	VOC: 37.42 tpy CO: 2.9 tpy Acetone: 0.20 tpy Total HAPs: 9.92 tpy PM: 0.00108 lb/ton PM_{10}: 0.00051 lb/ton	None		
31	NCASI TB 1020, table 4.3, NCASI TB 1050, Table 4.37 and 4.38	<u>lb/hr/tank</u> VOC: $5.40x10^{-1}$*1.2 TRS: $2.06x10^{-1}$*1.2 H_2S: $3.28x10^{-3}$*1.2 Acetaldehyde: $5.06x10^{-4}$*1.2 Acetone: $1.60x10^{-2}$*1.2 Acrolein: $1.86x10^{-4}$*1.2 Formaldehyde: $1.21x10^{-4}$*1.2 Methanol: $1.16x10^{-1}$*1.2	None		349,200 ODTP/yr
32	NCASI TB 1020 Table 4.14 NCASI TB 1050, Table 4.43 and 4.44	<u>VOC lb/T CaO</u> VOC: $7.92x10^{-2}$ <u>Green Liquor Tanks (2) lb/hr/tank</u> Acetone: $1.2x10^{-1}$ *1.2 TRS: $4.37x10^{-2}$ *1.2 Acetaldehyde: $3.1x10^{-2}$ *1.2 Methanol: 3.65*1.2 <u>Green Liquor Clarifiers lb/T CaO</u> Acetone: $1.5x10^{-3}$ *1.2 TRS: $6.2x10^{-4}$*1.2	None		

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		Acetaldehyde: $1.0x10^{-4}$ *1.2 Methanol: 0.13 *1.2			
36	NCASI TB 1020, Table 4.14 NCASI TB, 1050, Table 4.69, Table 4.70, & Table 4.71	Slaker: lb/T CaO Acetaldehyde:$2.89x10^{-2}$ *1.2 Methanol:$3.49x10^{-1}$ *1.2 Ammonia: $2.99x10^{-1}$ *1.2 VOC: $4.10x10^{-2}$ *1.2 TRS: $8.78x10^{-2}$ *1.2 Causticizer: lb/T CaO Acetaldehyde:$9.6x10^{-4}$ *1.2 Acrolein: $1.70x10^{-5}$ *1.2 Formaldehyde: $1.75x10^{-5}$ *1.2 Methanol:$5.5x10^{-4}$ *1.2 Ammonia: 0.126 *1.2 VOC: $8.30x10^{-4}$ *1.2 TRS: $5.55x10^{-2}$ *1.2	None		
37	NCASI TB 1020, Table 4.2 NCASI TB 849, Table B-4,IV.B NCASI TB 1050 Table 4.28	lb/ADTUBP VOC: 0.71*1.2 TRS: 0.11 *1.2 Acetone: $3.0x10^{-2}$ *1.2 Acetaldehyde: $7.60x10^{-3}$ *1.2 Acrolein: $4.74x10^{-3}$ *1.2 Formaldehyde: $5.40x10^{-3}$ *1.2 Methanol: 0.075 *1.2	#2 Lime Kiln NCG Flare		
		lb/ADTUBP	#3		

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
38	NCASI TB 1020, Table 4.6 NCASI TB 1050, Table D5, and Table 4.34	VOC: 6.78x10-1 TRS: 0.185 *1.2 Acetone: 4.2x10-2 *1.2 Acetaldehyde: 1.4x10-3 *1.2 Methanol: 0.350 *1.2	WW Boiler #4 Package Boiler		
39	Emissions Routed to SN-04	HVLC Collection System			
40	AP-42 Chap. 13.2.1 & 13.2.2	<u>Unpaved</u> PM_{10}: 1.93 lb/VMT (Daily Max) PM_{10}: 1.375 lb/VMT (Annual) PM: 7.24 lb/VMT (Daily Max) PM: 5.159 lb/VMT (Annual) <u>Paved</u> PM_{10}: 0.08 lb/VMT (Daily Max) PM_{10}: 0.08 lb/VMT (Annual) PM: 0.42 lb/VMT (Daily Max) PM: 0.39 lb/VMT (Annual)			
41 42 43 44	AP-42 Table 3.3-1, 3.3-2	<u>lb/hp-hr</u> NOx: 0.031 CO: 6.68 $x10^{-3}$ SO_2: 2.05 $x10^{-3}$ PM/PM_{10}: 2.2 $x10^{-3}$ VOC: 2.51 $x10^{-3}$ Acetaldehyde: 7.67$x10^{-4}$ Formaldehyde: 1.18$x10^{-3}$	None		500 hr/yr each
45	AP-42 Table 3.2-3	<u>lb/MMBtu</u> NOx: 2.21			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		CO: 3.72 SO_2: $5.88x10^{-4}$ PM_{10}: $1.86x10^{-2}$ PM: $9.5x10^{-3}$ VOC: $2.96x10^{-2}$ Acetaldehyde: $2.79x10^{-3}$ Acrolein: $2.63x10^{-3}$ Formaldehyde: $2.05x10^{-2}$ Methanol: $3.06x10^{-3}$			
46	Vendor AP-42, Table 1.4-2, 1.4-3, 1.4-4	Natural Gas Combustion lb/MMBtu VOC: 0.0066 PM: 0.005 PM_{10}: 0.005 SO_2:0.0012 CO: 0.048 NOx: 0.0326 Lead: $5.0x10^{-4}$ lb/MMscf HVLC Combustion SO_2: 0.6467 lb/ADTUBP			Natural Gas Emission factors includes the vendor guarantee
47	AP-42 Table 3.3-1 3.3-2 NSPS IIII	lb/hp-hr SO_2: $2.05x10^{-3}$ VOC: 2.47 $x10^{-3}$ Acetaldehyde: $7.67x10^{-4}$ Formaldehyde: $1.18x10^{-3}$ g/hp-hr NO_x: 5.6 CO: 6.0 PM/PM_{10}: 0.3			
48	NCASI TB 1020, Table 4.3 NCASI TB 1050, Table	lb/hr/tank VOC:4.84*1.2 TRS: $5.33x10^{-1}$ *1.2 Acetaldehyde: $5.20x10^{-3}$ *1.2			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	4.45 and 4.46	Acetone: $8.45x10^{-3}$ *1.2 H_2S: $1.13x10^{-2}$ *1.2 Methanol: $2.40x10^{-1}$ *1.2			
49	NCASI TB 1020, Table 4.3, NCASI TB 1050 Table 4.39 and 4.40	<u>lb/hr/tank</u> TRS: $7.43x10^{-2}$ *1.2 VOC: $2.88x10^{-1}$ Acetaldehyde: $2.02x10^{-2}$ *1.2 Acetone: $2.80x10^{-2}$ *1.2 Acrolein: $1.78x10^{-5}$ *1.2 Formaldehyde: $5.0x10^{-4}$ *1.2 Methanol: 0.130 *1.2			
50	NCASI TB 1020, table 4.14 and TB 1050, Table 4.73, and Table 4.74	<u>lb/T CaO</u> VOC: $8.18x10^{-2}$ <u>Precoat Filter</u> Acetaldehyde: $1.99x10^{-3}$ *1.2 Acrolein: $5.32x10^{-5}$ *1.2 Formaldehyde: $2.0x10^{-4}$ *1.2 Methanol: $1.12x10^{-2}$*1.2 <u>Precoat Filter Vacuum Pump Exhaust</u> Acetaldehyde: $7.6x10^{-3}$ *1.2 Methanol: $3.5x10^{-2}$*1.2			
51	NCASI TB 1050, Table 4.41 and 4.42	<u>lb/hr/tank</u> TRS: $1.93x10^{-4}$ *1.2 VOC: $5.2x10^{-2}$ Acetone: $1.00x10^{-2}$ *1.2 H_2S: $9.19x10^{-3}$ *1.2 Methanol: $3.10x10^{-2}$ *1.2			
52	NCASI TB 1050, Table 4.75	<u>lb/T CaO</u> VOC: 9.10 $x10^{-2}$ Acetaldehyde: $3.60x10^{-4}$ *1.2 Methanol: $9.84x10^{-3}$ *1.2			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
53	NCASI TB 1020, Table 4.16 and NCASI TB 1050, Table 4.88	lb/T BLS Acetaldehyde: $1.07x10^{-4}$ *1.2 Acrolein: $6.04x10^{-6}$ *1.2 Formaldehyde: $9.50x10^{-6}$ *1.2 Methanol: $9.80x10^{-4}$ *1.2 VOC: $2.74\ x10^{-3}$			
101	BACT NCASI SR-15-01 Table 6.1 NCASI TB 1020 NCASI TB 723, Table 4	PM_{10} (lb/T) $PM_{2.5}$ - 4.5E-04 - 1.2E-03 2.2E-04 - 1.6E-04 2.8E-05 VOC equation	None		

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)		Control Equipment	Control Equipment Efficiency	Comments
102 103	NCASI memo from Zach Emerson - "PM2.5 Emissions from Drum Debarking - July 2014 Update", average value with a 20% safety factor applied. 19% of PM assumed to be PM2.5; assumed PM = PM10	PM 2.84E-04 PM_{10} 2.84E-04 $PM_{2.5}$ 5.40E-05		None		
301	NCASI Bulletin 1020, Table 4.4, median value GHG from Part 98 HAPs NCASI Bulletin 1050, Table 4.35	PM(all) SO2 VOC CO NOx HAPs	0.043 0.054 0.008 0.014 0.056 See Application	This source is an incinerator controlling other sources. Wet Scrubber	Not specified	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
302	VOC: NCASI Bulletin 1020, Table 4.2	9.42E-01 lb/ADTUBP			
	HAPs/Acetone: NCASI Bulletin 1050, Table 4.28	Many See Applicaton.			
	H_2S,TRS: NCASI Bulletin 1050, Table 4.29	H2S 2.64E-01 lb/ADTUBP TRS 1.51E+00 lb/ADTUBP			
303	VOC: NCASI Bulletin 1020, Table 4.2, 4.3, 4.5, 4.6, and 4.7	8 different sources combined see application			
	HAPs: Bulletin 1020, Table 4.5	Many See Application			
	H_2S,TRS: NCASI Bulletin 1050, Table 4.29	H_2S 9.43E-03 TRS 2.22E-01			
401	BACT	Varied see listed in Section 6 above.	ESP		
501	No. 3 Lime Kiln	Varied see listed in Section 6 above.	ESP		
502 A	No. 3 Lime Slaker and Causticizers	PM(All) 3.48E-02 VOC Slaker 4.92E-02 VOC Caust. 9.96E-04	Wet Scrubber		

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
503	NCASI Bulletin 1020, Table 4.14	VOC 7.92E-02 lb/ton TRS 5.24E-02 lb/hr/tank			
504	NCASI Bulletin 1020, Table 4.14	VOC 7.92E-02 lb/ton			
505	NCASI Bulletin 1020, Table 4.14	9.00E-03 lb/ton 2.32E-04 lb/hr/tank			
506	NCASI Bulletin 1020, Table 4.14	4.80E-03 lb/ton 5.18E-02 lb/ton			
507 508	BACT	0.012 gr/dscf	Fabric Filter		
509	BACT	0.012 gr/dscf	Fabric Filter		
601	BACT	Varied see listed in Section 6 above.	Baghouse SNCR WFDS or DFDS		
602	BACT	0.012 gr/dscf	Fabric Filter		
603	BACT	0.012 gr/dscf	Fabric Filter		
610 611 902 A-F	BACT	Varied see listed in Section 6 above.			
612 613	AP-42 Chapter 7.1	Equations			
701	BACT	Varied see listed in Section 6 above.			
702 703	BACT	0.012 gr/dscf			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
901	VOC: NCASI TB 1020, Table 7.2	1.38E-02 lb/ADTFP			
	HAPS NCASI TB 1050, Table 9.5	Too many to list see application			
903 904	3-Cell Cooling Tower	1500 TDS 0.005% Drift Rate	Mist Eliminator		
990	Post-Scion Mill Roads	Equation	Dust Suppressant		

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
04	PM_{10} VOC SO_2 CO	202 or 5 25A 6C 10	Every 5 years	Verify emissions
04	HCL Mercury PM or TSM CO O_2	26 or 26A 29, 30A, 30B, or 101A 5or 17 29 10 3A or 3B	Annual	40 CFR 63 Subpart DDDDD
05A	PM_{10} VOC SO_2 CO NO_x	201 or 201A, 202 25A 6C 10 7E	Every 5 Years	Verify emissions
	PM	5 or 29	No later than October 13,	40 CFR 63 Subpart MM

SN	Pollutants	Test Method	Test Interval	Justification
			2020 and every 5 years thereafter	
07	PM PM_{10}	202 and 5	Every 5 years	Verify emissions
	PM	5 or 29	No later than October 13, 2020 and every 5 years thereafter	40 CFR 63 Subpart MM
	TRS	16	No later than December 31, 2016 and every 5 years thereafter	§19.804(B)
08	PM	5 or 29	Initial	40 CFR 63 Subpart MM
	PM	5 or 29	No later than October 13, 2020 and every 5 years thereafter	40 CFR 63 Subpart MM
39	HAP conc.	Collection 305	Initial	40 CFR 63, Subpart S
41	CO	As listed in Table 4 Item 3 of Subpart ZZZZ	Initial	40 CFR 63 Subpart ZZZZ
41, 42, 43, 44, & 47	Opacity	Method 9	Annual	Verify Emissions
46	CO NO_x	10 7E	Every 5 years	Verify Emissions
401	$PM_{2.5}$ PM_{10} SO2 VOC CO NOx	201A 201A 6C 18 7E 10	Initial every then 12 months. Extendable to 60 months.	Verify Emissions
401	Methanol	308 or approved	Initial	Verify Emissions
501	$PM_{2.5}$ PM_{10}	201A 201A	Initial every then 12 months.	Verify Emissions

SN	Pollutants	Test Method	Test Interval	Justification
	SO2 VOC CO NOx	6C 18 7E 10	Extendable to 60 months.	
502A	TRS	16, 16A, 16B or approved	Initial every then 12 months. Extendable to 60 months.	Verify Emissions
601	PM	5	Initial	Db/limit verification
	Fuel Analyisis or testing	Mercury, HCl, TSM	Initial	DDDDD limit

17. 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)
04	Liquid flow to the scrubber	CPMS	Hourly or continuously, reduced to 3-hr rolling average	N
04	Pressure drop across scrubber	CPMS	Hourly or continuously, reduced to 3-hr rolling average	N
04	CO and oxygen or CO_2	Oxygen analyzer	Continuously	Y
04	NOx CO_2	CEMS	Continuously	Y
05A	TRS O2	TRS Monitor (Perf. Spec. #5), H2S on dry basis, corrected to 8% O2 O2 Monitor (Perf. Spec. #3)	Continuously TRS reduced to 12-hr average	N
05A	Opacity	COMS	Continuously	N
07	Pressure drop and Flow	CPMS	Continuously, but reduced to 12-hr block averages	N

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
08	TRS emission rate O2	H2S on dry basis	12 hour average	N
08	Pressure drop across scrubber	CPMS	Hourly or continuously	N
08	Liquid flow to the scrubber	CPMS	Hourly or continuously	N
22	Temperature Hours of Operation			
15	NOx	CEM	Continuously	N
23	Temperature of gases from the #5 batch digester to be incinerated	Temperature CEM accurate within 1% of the temperature being measured	Continuously	N
37 38 39	Negative pressure Leak detection	Anemometer, smoke tubes Part 60, Method 21	Annual	N
39	Condensate flow Pulp flow Pulp consistency	Flow meter or mass balance Consistency meter	Continuous	N
46	NOx O_2	CEM	Continuous	Y
301	Temperature	Temperature	Continuous	Y
401	TRS, O_2	CEM	Continuous	Y
501	TRS, O_2	CEM	Continuous	Y
502A	Scrubber Flow Rate	Flow Meter	Daily	Y
501	TRS, NOx, O_2	CEM	Continuous	Y
601	Optional CO, PM, HCl	CEMS	Continuous/optional	Y
903, 904	TDS	Sample	Monthly	Y

18. 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)
04	Steam throughput	270,000 lb/hr	Monthly	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		2,100,000,000 lb/12 months		
	Fuel combusted each day	Cellulosic Biomass, clean cellulosic biomass, natural gas and/or other approve fuel	Monthly	Y
	Opacity	20%		
	Mercury PM TSM CO	Heat Input / Steam Output Lb/MMBTU 5.70E-06/ 6.40E-06 0.44/0.55 4.50E-4/5.7E-4 3,500ppm/3.5	Monthly	Y
	Tune-up	-	Annually	Y
	Energy Assessment	-	Initial	Y
	Fuel Analyses	-	Monthly	Y
	Type and amount of all fuels burned	-		Y
05A	Black liquor throughput	401,400 tons/12 months	Monthly	Y
	Fuel Type	Black liquor solids Natural gas	Monthly	Y
07	Black liquor throughput	401,400 tons/12 months	Monthly	Y
	Pressure drop and scrubbing liquid flow rate	To be established during initial performance test	Continuously, but reduced to 12-hr block averages	N
	Excess emissions based on pressure drop and scrubbing liquid flow rate	All 12-hr block averages below minimum liquid flow and pressure drop	As necessary and reported semiannually	Y
	Occurrence and duration of each malfunction and any action taken to	See Specific Condition 102	As necessary and reported semiannually	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	minimize emissions in accordance with §60.11(d)			
08 32	Lime throughput	84,950 tons/12 months	Monthly	Y
12	Pulp throughput (oven dried)	349,200 tons/12 months	Monthly	Y
15	Fuel Combusted/Capacity Factor		Daily/Quarterly	Y
	NOx	0.067 lb/MMBtu	Monthly	Y
17	Production or process of Tall Oil	15,012 tons/12 months	Monthly	Y
22	Hours of operation	1000 hours/12 months	Daily	Y
	Minimum Temperature	1200°F	Daily	Y
25A	Production rate of finished paper	360,000 air dried tons/year	Monthly	Y
25B	Production rate of finished paper	270,000 air dried tons/year	Monthly	Y
30	Annual uncompacted waste acceptance rate	489,000 yd^3/hr	Monthly	Y
31	Pulp throughput (oven dried)	349,200 tons/12 months	Monthly	Y
36	Lime throughput	84,950 tons/12 months	Monthly	Y
37	Excess emission releases	Emissions in excess of NESHAP limit of 1%	Semi-annual	Y
	Maintenance Activities	-	As Done	N
	Inspection of LVHC	-	As Done	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
38	Excess emission releases	Emissions in excess of NESHAP limit of 4%	Semi-annual	Y
	Maintenance Activities	-	As Done	N
	Inspection of HVLC	-	As Done	N
39	Mass, flow and consistency of pulp	General recording	Monthly	Y
41	Hours of operation	500 hours per calendar year	Monthly	Y
42, 43, 44, 45	Maintenance	-	As Applicable	N
	Hours of operation	500 hours per calendar year	Monthly	Y
	Hours of operation	Maintenance Check: 100 hours/year Non-emergency: 50 hours/yr	As Needed	N
46	Hours of operation as backup control device for SN-38	2,880 hours/yr	As used On a hourly basis	Y
	Fuel Combusted/Capacity Factor		Daily/Quarterly	Y
	NOx	0.2 lb/MMBtu	Monthly	Y
47	Hours of operation	500 hours per calendar year	Monthly	Y
	Hours of operation	Maintenance Check: 100 hours/year Non-emergency: 50 hours/yr	As Needed	N
101	Throughput	2,956,950 tons/12 months	Monthly	Y
401	Throughput	821,250 tons/ 12-months	Monthly	Y
	Startup notification for Db	None	Once	Y
501	Throughput	121,180 tons/12-months	Monthly	Y

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
601	Annual capacity for Natural Gas	30%	Monthly	Y
601	DDDDD and Db Records	None	As needed	Y
610, 611, 902A-F	Hours	500 hr per year	Monthly	Y
610, 611, 902A-F	IIII Records	None	As needed	Y
701	Production	865,050 ADTPH/12 mo.	Daily	Y
901	Throughput	438,000 tons/12 mo.	Monthly	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
04	20	(NSPS)	Flow Rate &Pressure Differential
05A	20	Department Guidance	Daily
07	20	NEHSAP Subpart MM	Flow Rate &Pressure Differential
08 22	20 20	Department Guidance	N/A
15	5	Department Guidance	Burning natural gas
26, 27	5	Department Guidance	Burning natural gas
41, 42, 43, 44, 47	20	Department Guidance	Annually
45	5	Department Guidance	Burning natural gas
301	5%	Department Guidance/BACT	Burning natural gas
401	5%	Department Guidance/BACT	COMs
501	5%	Department	COMs

SN	Opacity	Justification for limit	Compliance Mechanism
		Guidance/BACT	
502A	5%	Department Guidance/BACT	Weekly Opacity Readings
507, 508, 509	5%	Department Guidance/BACT	Weekly Opacity Readings
601	5%	Department Guidance/BACT	COMs
610, 611	20%	Department Guidance/BACT	Annual on backup engines.
602, 603 702, 703	5%	Department Guidance/BACT	Weekly Opacity Readings
701	5%	Department Guidance/BACT	Proper equipment operation

20. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

21. GROUP A INSIGNIFICANT ACTIVITIES:

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

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Pocket Vent System Heater #1 (SN-28)	1	0.23	0.02	0.17	2.52	3.01		0.17
Pocket Vent System Heater #2 (SN-29)	1	0.23	0.02	0.17	2.52	3.01		0.17
A-1 Totals		0.46	0.04	0.34	5.04	6.02		0.34

Used Oil Tank, 1900 gallon tank	3			<0.01				<0.01
Diesel Storage Tank, 288 gallon tank	3			<0.01				<0.01
Diesel Storage Tank, 1061 gallon tank	3			<0.01				<0.01
Diesel Oil Storage Tank, 1943 gallon tank	3			<0.01				<0.01
A-3 Totals				<0.01				<0.01
50% Caustic Storage Tanks Recovery Area	4							
50% Caustic Storage Tanks Tall Oil Area	4							
50% Caustic Storage Tanks Secondary Recovery Area	4							
A-4 Totals								
Main Laboratory Vents	5			0.2				0.2

Test Labs in Process Areas	5			0.2				0.2
A-5 Totals				0.4				0.4
Fly Ash Bunker	13	0.01						
#1 Lime Silos (Sodium Carbonate) (SN-18)	13	0.20						
#2 Lime Silos (Sodium Carbonate) (SN-19)	13	0.20						
Secondary Fiber Plant	13			1.68			0.47	1.50
Turpentine Loading Operation (SN-35)	13			0.07				
Turpentine Storage Tank (SN-34)	13	Sealed System with no emissions		0.08				
Cooling Towers	13	4.0						
Gasoline Storage Tank	13			0.23				0.23
Sludge Press Area – Vent Exhaust	13			0.10			0.10	0.10
Defoamer Tank	13			0.05				0.05
Soda Ash Silos (2)	13	0.02						
A-13 Totals		4.43		2.21			0.47 (max)	1.88

22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0224-AOP-R24

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Green Bay Packaging Inc. - Arkansas Kraft Division
Permit #: 0224-AOP-R25
AFIN: 15-00001

$/ton factor	27.27	Annual Chargeable Emissions (tpy)	8357
Permit Type	Modification	Permit Fee $	129341.06

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)	4742.98
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		473.8	813.2	339.4		
PM_{10}		370.2	1071	700.8	597.2	1071
$PM_{2.5}$			646.1	646.1		
SO_2		275.5	630.8	355.3	355.3	630.8
VOC		1523.9	3619.8	2095.9	2095.9	3619.8
CO		1164.9	2708.6	1543.7		
NO_X		1086.2	2584.7	1498.5	1498.5	2584.7
GHG	☐	0	2194900	2194900		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Lead	☐	0.16	0.17801	0.01801		
H_2S	☐	26.54	38	11.46		
Sulfuric Acid Mist	☑	4.4	34.59	30.19	30.19	34.59
TRS	☑	122.8	218.68	95.88	95.88	218.68
Acetaldehyde	☐	82.29	137.7	55.41		
Acrolein	☐	3.28	6.37	3.09		
Antimony	☐	0.04	0.04	0		
Arsenic	☐	0.08	0.08	0		
Beryllium	☐	0.04	0.04	0		
Biphenyl	☐	0	12.93	12.93		
Cadmium	☐	0.06	0.06	0		
Chromium	☐	0.08	0.08	0		
Chromium VI	☐	0.04	0.04	0		
Cobalt	☐	0.06	0.06	0		
Formaldehyde	☐	12.18	30.73	18.55		
Hydrochloric Acid	☑	59.4	59.4	0	0	59.4
Hydrogen Fluoride	☑	0	0.16	0.16	0.16	0.16
Methanol	☐	536.45	1393.32	856.87		
Manganese	☐	0.48	0.48	0		
Mercury	☑	0.07	0.11	0.04	0.04	0.11
Methylene Chloride	☑	0	4.31	4.31	4.31	4.31
Nickel	☐	0.08	0.08	0		
Phosphorus	☐	0.45	0.45	0		
Selenium	☐	0.04	0.04	0		
Total HAPs	☐	728.57	2019.04	1290.47		
Acetone***	☑	19.95	51.25	31.3	31.3	51.25
Ammonia***	☑	48	82.2	34.2	34.2	82.2
	☐	0	0	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
	☐	0	0	0		
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Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
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Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
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Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
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