STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0224-AOP-R22 AFIN: 15-00001

1. PERMITTING AUTHORITY:

Arkansas Department 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:

Elliott Marshall

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
9/5/2019	Modification	N/A

6. REVIEWER'S NOTES:

This permitting action is necessary to:

1. Update 40 C.F.R Part 63, Subpart MM conditions to be consistent with the revised rule issued October 11, 2017. As a result, previous Specific Conditions #44, #67 and #112 will be removed and additional Specific Conditions will be added. The removed conditions were startup, shutdown and maintenance (SSM) conditions (63.866(a)) that were marked reserved with the revision of Subpart MM. Sources SN-05A, SN-07 and SN-08 are the only sources affected by this change.

2. Remove previous Plantwide Condition #9. This condition was satisfied March 5, 2019.
3. Correct various source references, regulation citations, and source descriptions.

There are no changes to 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 pending or active enforcement actions.

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.
No emission increases with this modification.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-04, SN-15, and SN-46		NSPS Db
SN-23		NSPS BB
Facility		NESHAP M
Facility		MACT S
Facility		MACT MM
SN-39		MACT RR
SN-04, SN-05A, SN-07, SN-08, SN-09	PM	CAM
SN-07	PM TRS	NSPS BBa
SN-41, SN-42, SN-43, SN-44	HAPs	NESHAP ZZZZ
SN-45	HAPs	NSPS JJJJ

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-04, SN-15, SN-46		NESHAP DDDDD
SN-47	HAPs	NSPS IIII

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.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

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:

The non-criteria pollutants listed below were evaluated. Based on Department 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 Department 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).

No modeling was performed for this revision.

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Acetaldehyde	45.0	4.95	13.11	N
Acrolein	0.23	0.025	0.92	N
Formaldehyde	1.5	0.165	2.2	N
Hexachlorobenzene	0.002	0.00022	0.02	N
Hydrochloric Acid*	2.98	0.33	13.87	N
Hydrogen Sulfide	1.39	0.1529	49.877[1]	N
Methanol	262.09	28.83	115.68	N
Antimony	0.5	0.055	0.04	Y
Arsenic	0.01	0.0011	0.06	N
Barium	0.5	0.055	0.07	N
Beryllium	0.00005	0.0000055	0.06	N
Cadmium	0.01	0.0011	0.06	N
Chromium	0.5	0.055	0.06	N
Chromium VI	0.01	0.0011	0.04	N
Cobalt	0.02	0.0022	0.06	N
Copper	0.2	0.022	0.06	N
Manganese	0.02	0.022	0.15	N
Mercury	0.01	0.0011	0.06	N
Nickel	1.5	0.165	0.06	Y
Selenium	0.2	0.022	0.06	N
Sulfuric Acid*	0.2	0.022	1.1	N

[1]Includes H_2S from TRS.

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 Department 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	450.00	105.471	Y
Acrolein	2.3	0.772	Y
Formaldehyde	15.00	8.108	Y
Hexachlorobenzene	0.02	0.014	Y
Hydrochloric Acid	29.80	2.599	Y
Hydrogen Sulfide	13.9	*	N
Methanol	2620.90	864.583	Y
Arsenic	0.11	0.016	Y
Barium	5.00	0.285	Y
Beryllium	0.0005	0.016	Y
Cadmium	0.10	0.016	Y
Chromium	5.00	0.016	Y
Chromium VI	0.10	0.010	Y
Cobalt	0.20	0.016	Y
Copper	2.00	0.019	Y
Manganese	0.20	0.016	Y
Mercury	0.10	0.016	Y
Selenium	2.00	0.016	Y
Sulfuric Acid	2.00	0.057	Y

*The facility is exempt from the H_2S standards in A.C.A. §8-3-103, but H_2S emissions are still below the A.C.A thresholds with the exception of 1 receptor at the northern fence line for the 8-hr non-residential standard. Area sources were used to represent the ASB, clarifier, and holding ponds for the Wastewater Treatment System

(SN-12); area sources in AERMOD are known to overestimate emissions, therefore actual emissions are expected to be less than the modeled concentrations.

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.

The facility is exempt from H_2S standards because they are subject to Subpart BB, Standards of Performance for Kraft Paper Mills.

13. 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	lb/lb steam PM_{10} $1.34x10^{-4}$ PM: $1.28x10^{-4}$ VOC: $2.81x10^{-5}$ CO: $2.63x10^{-4}$ NOx: $3.13x10^{-4}$ SO_2: $1.49x10^{-5}$	Multiclones Wet Scrubber		
05A	Test/CEMs Data/NCASI TB 1020, Table 4.12 & NCASI TB 973 Table 4.24	lb/TBLS PM: 0.227 PM_{10}: 0.327 SO_2: 0.393 VOC: 0.0403 CO: 2.36 NO_X: 1.56 Lead: $1.18x10^{-5}$ TRS: 0.0445	ESP	99.8%	401,400 TBLS annually

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
07	Test Data NCASI TB 1020, Table 4.15 NCASI TB 973, Table 4.29 Test Data	lb/ton BLS: PM: 0.112 PM_{10}: 0.121 lb/TBLS: SO_2: $7.2x10^{-3}$ VOC: $1.0x10^{-2}$ CO: $9.6x10^{-3}$ lb/TBLS: Lead: $8.3x10^{-7}$ lb/TBLS: TRS: $7.5x10^{-4}$	Venturi Scrubber		401,400 TBLS annually
08	NCASI TB 1020, Table 4.13, 4.27, and 4.28	lb/tCaO PM (filterable): 1.59 PM_{10}: 1.26 $PM_{2.5}$:0.402 SO_2: $2.4x10^{-2}$ VOC: $2.3x10^{-2}$ CO: $6.0x10^{-2}$ NO_x: 0.7 Lead: $3.43x10^{-4}$ TRS: $9.55x10^{-2}$	High Efficiency Scrubber		
11	Emissions routed to SN-04		HVLC Collection System		

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
12	NCASI	lb/ODTP Acetaldehyde: 0.017 Methanol: 0.23 Total HAPS 0.25 VOC: 0.25 Concentration, ppb H_2S: 2402 Percent Volatilized 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	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 NOx:100 lb/10^6 ft^3 gas SO_2:0.6 lb/10^6 ft^3 gas	FGR		
16	Testing and throughput	Emergency use only			
17	NCASI TB 1020, Table 4.1 & NCASI TB 973, Table 4.30	lb/tTO VOC: 3.48 Acetaldehyde: $1.32x10^{-3}$ Acetone: $2.38x10^{-2}$ Acrolein: $1.97x10^{-3}$ Methanol: $1.12x10^{-1}$ TRS: 7.04E-02	None		
22	Testing	SO_2: 10.92 lb/MMBtu	None		

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 4.4 & NCASI 973, Table 4.18	lb/ADTUBP PM: $3.56x10^{-2}$ ($4.27x10^{-2}$) VOC: $2.91x10^{-3}$ ($3.49x10^{-3}$) CO: $1.24x10^{-2}$ ($1.49x10^{-2}$) NOx: $4.69x10^{-2}$ ($5.63x10^{-2}$) TRS: $4.55x10^{-4}$ ($5.46x10^{-4}$) Acetaldehyde: $3.01x10^{-4}$ ($3.61x10^{-4}$) Acetone: $2.86x10^{-4}$ ($3.43x10^{-4}$) Formaldehyde: $1.46x10^{-4}$ ($1.75x10^{-4}$) Methanol: $1.27x10^{-3}$ ($1.53x10^{-3}$)			
23	NCASI TB 973 & 1020	Lb/ODT (tons of oven dried chips) VOC: $1.4\ x10^{-2}$ TRS: $6.3\ x10^{-4}$ Acetaldehyde: $3.4x10^{-4}$ Acetone: $4.4\ x10^{-4}$ Methanol $5.7x10^{-3}$	None		Adjusted Emission Factor includes a 20% safety factor
24	AP-42 13.2.4	<u>Wood Chips</u> PM: 0.0013 lb PM/ton PM_{10}: 0.0006 lb PM_{10}/ton	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 884 NCASI TB 1020 NCASI 723	<u>Chip Cyclone</u> PM/PM_{10}: $9.1x10^{-5}$ lbs/ BDT Truck Unloading lb/ton Wood Waste/Chips: PM: $1.06x10^{-3}$ PM_{10}: $5.0x10^{-4}$ Stacking lb/ton: Wood Waste/Chips PM:$1.30x10^{-3}$ PM_{10}: $6.0x10^{-4}$ Storage Piles lb/day-acre: Chips PM: $2.08x10^{-4}$ PM_{10}: $1.04x10^{-4}$ Bark PM: $2.67x10^{-3}$ PM_{10}: $1.34x10^{-3}$ Chip Pile Loblolly Pine $VOC_{active/inactive}$: 2.792 tpy Bark: 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*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	l<u>b/ADTFP</u> PM: 0.020 PM_{10}: 0.06 VOC = HAPs Acetone: $3.4x10^{-2}$ Acetaldehyde: $1.8x10^{-1}$ Acrolein: $6.9x10^{-3}$ Formaldehyde: $1.35x10^{-2}$ Methanol: $9.2x10^{-1}$	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
25B	NCASI TB 942, Table 5.2, Mill D NCASI TB 973, Table 4.33 & 10.1	lb/ADTFP PM: 0.02 PM_{10}: 0.06 VOC: 0.3558 Acetone: $1.74x10^{-2}$ Acetaldehyde: $5.24x10^{-2}$ Acrolein: $2.08x10^{-3}$ Formaldehyde: $9.26x10^{-3}$ Methanol: $4.15x10^{-1}$	None		248,500 ADTFP/yr
26 27	AP-42 Section 1.4 Tables 1.4-1 and 1.4-2	lb/10^6 scf PM: 1.9 PM_{10}:7.6 SO_2:6.0 NOx:100 CO: 84 VOC: 5.5 Formaldehyde: 0.075	None		
30	LandGEM v 3.2/NCASI TB 790 AP-42 Section 13.2.4	VOC: 37.42 tpy CO: 2.84 tpy Acetone: 0.29 tpy Total HAPs: 1.78 tpy PM: 0.00106 lb/ton PM_{10}: 0.00050 lb/ton	None		
31	NCASI TB 1020, table 4.3, SR-14-01 Addendum, to TB 973 NCASI TB 973, Table 4.19	lb/hr/tank $6.42x10^{-1}$ TRS: $2.47x10^{-1}$ Acetaldehyde: $5.69x10^{-4}$ Acetone: $1.92x10^{-2}$ Acrolien: $1.63x10^{-4}$ Formaldehyde: $2.40x10^{-4}$ Methanol: $1.56x10^{-1}$	None		349,200 ODTKP/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
32	NCASI TB 1020 Table 4.14 NCASI TB 973, Table 4.19	VOC: $6.6x10^{-2}$lb/TCaO TRS: $4.40x10^{-2}$ lb/hr/tank lb/hr/tank Acetaldehyde: $3.1x10^{-2}$ ($3.7x10^{-2}$) Methanol 3.7 (4.4) Acetone: $1.2x10^{-1}$ ($1.4x10^{-1}$) lb/T CaO Acetaldehyde: $1.0x10^{-4}$ ($1.2x10^{-4}$) Methanol 0.13 (0.16) Acetone: $1.5x10^{-3}$ ($1.8x10^{-3}$)	None		
36	NCASI TB 973, Table 4.31 NCASI TB, 1020, Table 4.14	Slacker: lb/ton Cao Acetaldehyde:$1.6x10^{-2}$ ($1.9x10^{-2}$) Methanol:$5.3x10^{-2}$ ($6.5x10^{-2}$) Ammonia: 0.30 (0.36) VOC: $4.1x10^{-2}$ ($4.9x10^{-2}$) TRS: $8.8x10^{-2}$ (0.11) Causticizer: lb/ton Cao Acetaldehyde:$9.6x10^{-4}$ ($1.15x10^{-3}$) Acrolein: $1.70x10^{-5}$ ($2.04x10^{—5}$) Formaldehyde: $2.11x10^{-5}$ ($2.53x10^{-5}$) Methanol:$5.5x10^{-4}$ ($6.6x10^{-4}$) Ammonia: 0.126 (0.151) VOC: $8.3x10^{-4}$ ($9.60x10^{-4}$) TRS: $5.55x10^{-2}$ ($6.66x10^{-2}$)	None		
37	NCASI TB 1020, Table 4.2 NCASI TB 849, Table B-4,IV.B NCASI TB 973, Table 4.15 NCASI SR 14-01-Addendum to TB 973	lb/ADTUBP VOC: 0.71 (0.852) TRS: 0.11 (0.132) Acetone: 0.0485 (0.0582) Acetaldehyde: 0.0114 (0.0137) Acrolein: ($6.46x10^{-3}$ (7.75x10-3) Formaldehyde:$5.40x10^{-3}$ ($6.48x10^{-3}$) Methanol: 0.075 (0.090)	#2 Lime Kiln NCG Flare		

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 SR 14-01-Addendum to TB 973	lb/ADTUBP VOC: 0.215 (0.258) TRS: 0.185 (0.222) Acetone: 0.0415 (0.0498) Acetaldehyde: $1.4x10^{-3}$ ($1.68x10^{-3}$) Methanol: 0.350 (0.420)	#2 Lime Kiln NCG Flare		
40	AP-42 Chap. 13.2.1 & 13.2.2	<u>Unpaved</u> PM_{10}: 1.91 lb/VMT (Daily Max) PM_{10}: 1.36 lb/VMT (Annual) PM: 7.19 lb/VMT (Daily Max) PM: 5.12 lb/VMT (Annual) <u>Paved</u> PM_{10}: 0.02 lb/VMT (Daily Max) PM_{10}: 0.02 lb/VMT (Annual) PM: 0.10 lb/VMT (Daily Max) PM: 0.11 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: 0.007 SOx: 0.002 PM/PM_{10}: 0.002 VOC: 0.002 Acetaldehyde: $5.37x10^{-6}$ Acrolein: $6.48x10^{-7}$ Formaldehyde: $8.26x10^{-6}$	None		
45	AP-42 Table 3.2-3	<u>lb/MMBtu</u> NOx: 2.27 CO: 3.72 SOx: 0.001 PM_{10}: 0.01 PM: 0.01 VOC: 0.03 Acetaldehyde: $2.79x10^{-3}$ Acrolein: $2.63x10^{-3}$ Formaldehyde: $2.05x10^{-2}$ Methanol: $3.06x10^{-3}$			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
46	Vendor AP-42, Table 1.4-2, 1.4-3, 1.4-4 AP-42, Table 1.3-1, 1.3-2, 1.3-3, 1.3-5	Natural Gas Combustion lb/MMBtu VOC: 0.0066 PM: 0.005 PM_{10}: 0.005 $PM_{2.5}$:0.005 SO_2:0.0012 CO: 0.048 NOx: 0.0326 Lead: 0.005 lb/MMscf Fuel Oil Combustion lbs/10^3 gallons CO: 5 PM: 3.3 PM: 2.3 $PM_{2.5}$: 1.6 SO_2: 0.213 VOC: 0.2 HVLC Combustion SO_2: 0.6467 lb/ADTUBP			Natural Gas Emission factors includes the vendor guarantee plus a 20% safety factor
47	AP-42 Table 3.3-1	lb/hp-hr NOx: 0.031 CO: 0.007 SOx: 0.002 PM_{10}: 0.002 VOC: 0.002 Acetaldehyde: $5.37x10^{-6}$ Acrolein: $6.48x10^{-7}$ Formaldehyde: $8.26x10^{-6}$			
48	NCASI TB 1020, Table 4.3, Table 4.19	lb/hr/tank VOC:5.81 Acetaldehyde: $6.24x10^{-3}$ Acetone: $1.01x10^{2}$ Methanol: $2.88x10^{-1}$			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
49	NCASI TB 973, Table 4.19, NCASI TB 1020 Table 4.3	lb/hr/tank TRS: 8.92×10^{-2} VOC: 0.136 Acetaldehyde: 2.42×10^{-2} Acetone: 3.36×10^{-2} Acrolein: 2.15×10^{-5} Formaldehyde: 6.00×10^{-4} Methanol: 0.156			
50	NCASI TB 1020, table 4.14 and TB 973, Table 4.31	lb/tCaO VOC: 2.16×10^{-2} Acetaldehyde: 9.14×10^{-3} (1.10×10^{-2}) Acrolein: 5.35×10^{-5} (6.40×10^{-5}) Formaldehyde: 1.75×10^{-4} (2.10×10^{-4}) Methanol: 4.62×10^{2} (5.54×10^{-2})			
51	NCASI TB 973, Table 4.19	lb/hr/tank TRS: 2.32×10^{-4} VOC: 0.0372 Acetone: 1.20×10^{-2} Methanol: 3.72×10^{-2}			
52	NCASI TB 973, Table 4.31	lb/tCaO VOC: 1.23×10^{-2} Acetaldehyde: 3.60×10^{-4} (4.32×10^{-4}) Methanol: 9.85×10^{-3} (1.18×10^{-2}-)			
53	NCASI TB 973, Table 4.35, Table 4.16	lb/TBLS Acetaldehyde: 1.07×10^{-4} (1.28×10^{-4}) Acrolein: 6.04×10^{-6} (7.24×10^{-6}) Formaldehyde: 6.40×10^{-6} (7.68×10^{-6}) Methanol: 9.80×10^{-4} (1.18×10^{-3}) VOC: 1.30×10^{-3} (1.56×10^{-3})			

14. 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

SN	Pollutants	Test Method	Test Interval	Justification
04	HCL Mercury PM 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, 2020 and every 5 years thereafter	40 CFR 63 Subpart MM
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 annually 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
15	SO_2	6C	Annual	Verify emissions
39	HAP conc.	Collection 305	Initial Annual	40 CFR 63, Subpart S
41	CO	As listed in Table 4 Item 3 of Subpart ZZZZ	Initial	40 CFR 63 Subpart ZZZZ
46	CO NO_x	10 7E	Every 5 years	Verify Emissions
	Opacity	Method 9	Initial	Verify Emissions

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)
04	Liquid flow to the scrubber	Strip Chart	Hourly or continuously	N
04	Pressure drop across scrubber	Strip chart	Hourly or continuously	N
04	CO and oxygen or CO_2	Oxygen analyzer	Continuously	Y
05A	TRS O_2	TRS Monitor (Perf. Spec. #5) O_2 Monitor (Perf. Spec. #3)	Continuously	N
05A	Opacity	COMS	Continuously	N
07	Pressure drop and Flow	CPMS	Continuously, but reduced to 12-hr block averages	N
08 22	TRS emission rate O_2	H_2S on dry basis	12 hour average	N
08	Pressure drop across scrubber	Strip Chart	Hourly or continuously	N
08	Liquid flow to the scrubber	Strip Chart	Hourly or continuously	N
22	Temperature Hours of Operation			
15	NOx	CEM	Continuously	N
23	Temperature of gases from batch digesters 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
41	NOx O_2	CEM	Continuous	Y

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)
04	Steam throughput	270,000 lb/hr 2,100,000,000 lb/12 months	Monthly	Y
	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	Steam generation Black liquor throughput	401,400 tons/12 months	Monthly	Y
	Fuel Type	Black liquor solids Natural gas	Monthly	Y
	Black liquor throughput	401,400 tons/12 months	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

SN	Recorded Item	Permit Limit	Frequency	Report (Y/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 minimize emissions in accordance with §60.11(d)	See Specific Condition 102	As necessary and reported semiannually	Y
08 32	Lime throughput	84,950 tons/12 months	Monthly	Y
12	Pulp throughput (oven dried)	349,200 tons/12 months	Monthly	Y
15	Natural Gas Throughput	205 MMBtu/hr 1,795,800,000 MMBtu/year	Daily Monthly	Y
	Distilled Oil combusted	90,000 gallons/year	Monthly	N
	NOx	39.0 tpy		
17	Production or process of soap	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	248,500 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

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	Maintenance Activities	-	As Done	N
	Inspection of LVHC	-	As Done	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
5, 7, and 8	PM	Established	Monthly	N
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	Fuel Oil	1,000,000 gallons/yr	Monthly	Y
	Hours of operation as backup control device for SN-38	2,880 hours/yr	As used On a hourly basis	Y
	sulfur content in fuel oil	0.0015%	Monthly	Y
	SO_2 emission rate	0.32 lb/MMBtu	Monthly	Y
	NOx	0.2 lb/MMBtu	Monthly	Y
	Hours of operation	500 hours per calendar year	Monthly	Y
47	Hours of operation	Maintenance Check: 100 hours/year Non-emergency: 50 hours/yr	As Needed	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
04	20	(NSPS)	Flow Rate & Pressure Differential
05A	20	Previous permit limit	Daily
07	20	Previous permit limit	Daily
08 22	20 20	Previous permit limit	N/A
15	20	Previous permit limit	Daily
26, 27	5	Previous permit limit	Burning natural gas
41, 42, 43, 44, 47	20	Department Guidance	Annually
45	5	Department Guidance	Burning natural gas
46	20	Department Guidance §60.43b(f) and §60.43b(g)	While burning fuel oil, Daily observations
	5	Department Guidance	While burning natural gas

18. DELETED CONDITIONS:

Former SC	Justification for removal
#44, #67 and #112	NESHAP MM revision was issued October 11, 2017. With this revision these conditions were marked reserved.
PW #9	This condition was satisfied March 5, 2019. The purpose of this condition was to verify, upon completion of the changes to the lime kiln (SN-08), the decreases at SN-08 were sufficient to avoid PSD review for $PM_{2.5}$ in permit 0224-AOP-R21.

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)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Pocket Vent System Heater #1 (SN-28)	1	0.06	0.02	0.17	2.52	3.01		0.06
Pocket Vent System Heater #2 (SN-29)	1	0.06	0.02	0.17	2.52	3.01		0.06

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Defoamer Tank (Pulp Mill)	3							
Used Oil Tank, 1900 gallon tank	3			0.0001				
Diesel Storage Tank, 288 gallon tank	3			0.0008				
Diesel Storage Tank, 1061 gallon tank	3			0.0006				
Diesel Oil Storage Tank, 1943 gallon tank	3			0.0004				
50% Caustic Storage Tanks Recovery Area	4							
50% Caustic Storage Tanks Tall Oil Area	4							
50% Caustic Storage Tanks Secondary Recovery Area	4							
Main Laboratory Vents	5			0.2				0.2
Test Labs in Process Areas	5			0.2				0.2
Small Fuel Oil Tanks (SN-33)	13			0.012				
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			1.73			0.47	1.49
Turpentine Loading Operation (SN-35)	13			0.57				
Turpentine Storage Tank (SN-34)	13	Sealed System with no emissions						
Cooling Towers	13	4.0						

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Gasoline Storage Tank	13			0.18				
Sludge Press Area – Vent Exhaust	13			0.10			0.10	0.10

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 #
0224-AOP-R21

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Green Bay Packaging Inc. - Arkansas Kraft Division
Permit Number: 0224-AOP-R22
AFIN: 15-00001

$/ton factor	23.93	Annual Chargeable Emissions (tpy)	3222.11
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		539.3	539.3	0	0	539.3
PM_{10}		460.9	460.9	0		
$PM_{2.5}$		0	0	0		
SO_2		275.5	275.5	0	0	275.5
VOC		1084.1	1084.1	0	0	1084.1
CO		1164.9	1164.9	0		
NO_X		1065	1065	0	0	1065
Pb	☐	0.16	0.16	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Acetaldehyde	☐	51.82	51.82	0		
Acrolein	☐	2.11	2.11	0		
Formaldehyde	☐	7.4	7.4	0		
Hexachlorobenzene	☐	0.02	0.02	0		
Hydrochloric Acid*	☑	59.4	59.4	0	0	59.4
Methanol	☐	391.51	391.51	0		
Antimony	☐	0.04	0.04	0		
Arsenic	☐	0.06	0.06	0		
Barium	☐	0.12	0.12	0		
Beryllium	☐	0.06	0.06	0		
Cadmium	☐	0.06	0.06	0		
Chromium	☐	0.06	0.06	0		
Chromium VI	☐	0.04	0.04	0		
Cobalt	☐	0.06	0.06	0		
Copper	☐	0.09	0.09	0		
Manganese	☐	0.48	0.48	0		
Mercury	☐	0.07	0.07	0		
Nickel	☐	0.07	0.07	0		
Selenium	☐	0.06	0.06	0		
Total HAPs	☐	565.54	565.54	0		
Total Chargeable HAPs	☑	2.37	2.37	0	0	2.37
Acetone	☑	15.03	15.03	0	0	15.03
Ammonia	☑	48	48	0	0	48
Sulfuric Acid	☑	4.4	4.4	0	0	4.4
TRS	☑	114.51	114.51	0	0	114.51
H2S	☑	14.5	14.5	0	0	14.5