STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0688-AOP-R10 AFIN: 30-00015

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Flakeboard America Limited
1275 Willamette Road
Malvern, Arkansas 72104

3. PERMIT WRITER:

Joseph Hurt

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Reconstituted Wood Product Manufacturing
NAICS Code: 321219

5. SUBMITTALS:

8/7/2013

6. REVIEWER'S NOTES:

Flakeboard America Limited (Flakeboard), formerly Weyerhaeuser, operates a medium density fiberboard (MDF) manufacturing facility outside the city of Malvern, AR. Flakeboard is submitting this application to:

- Modify the maximum throughput limit for SN-01 from 49,100 oven dried pounds per hour [24.55 oven dried tons (ODT)/hr] to 45,429 oven dried pounds per hour (22.71 ODT/hr);
- Modify the maximum throughput limit for SN-26 from 63,000 oven dried pounds per hour (31.5 ODT/hr) to 56,000 oven dried pounds per hour (28.0 ODT/hr); and
- Reduce the 3-hr block average fire-box temperature for SN-26 to a minimum of 744 °F.

There are no permitted emission changes due to this modification.

7. COMPLIANCE STATUS:

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

The last inspection, performed on September 12, 2012, indicated that the facility was in compliance at the time of the inspection.

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? N

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list, or*
- *CO_2e potential to emit ≥ 100,000 tpy and ≥100 tpy/≥250tpy of combined GHGs?*

If yes, explain why this permit modification is not PSD.

9. GHG MAJOR SOURCE (TITLE V):

Indicate one:

☐ Facility is classified as a major source for GHG and the permit includes this designation

☒ Facility does not have the physical potential to be a major GHG source

☐ Facility has restrictions on GHG or throughput rates that limit facility to a minor GHG source. Describe these restrictions: _____

10. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-30	SO_2 CO	NSPS, Subpart Dc
Plantwide	HAPs	NESHAP, Subpart DDDD
SN-35A	There are no specific emission limits or pollutants identified, but the rules generally regulate HAPs	NESHAP, Subpart ZZZZ
SN-35B	CO PM NMHC + NO_x	NSPS, Subpart IIII

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. NAAQS EVALUATIONS AND NON-CRITERIA POLLUTANTS:

a) NAAQS:

(i) List the reason for a NAAQS evaluation (i.e. what changes are being permitted that would require the evaluation) and pollutants affected. If a NAAQS evaluation is not required, indicate why not.

This permit modification does not result in an emission increase.

b) Non-Criteria Pollutants:

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).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Acetaldehyde	45.04	4.95	9.04	NO
Acetone	1187	130	0.77	Yes
Cadmium	0.002	2.2E-04	0.03	NO
Formaldehyde	0.368	0.04	11.20	NO
Hexane	176	19.3	9.03	Yes
Methanol	262	28.8	12.09	Yes
MIBK	81.9	9.01	8.89	Yes
Phenol	19.2	2.11	9.81	NO

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?
Cadmium	0.02	0.01783	Yes
Acetaldehyde	450.4	2.76823	Yes
Formaldehyde	15	10.1751	Yes
Phenol	192.0	64.46801	Yes

Modeling was not performed with this permitting action. The results above are from modeling for Permit 0688-AOP-R9.

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01 & 26	Source Testing & NCASI Factor	lb/hr: 17.3 PM 2.0 SO_2 26.7 VOC 85.4 CO 56.9 NO_x 0.2 Acetone 0.2 Acetaldehyde 12.05 Formaldehyde 5.8 Methanol 0.2 MIBK 0.2 Phenol	RCO	90%	
04, 09, 22, 22a, 27, & 28	Testing NCASI	0.001 grain/ft^3 lb/ODT: Formaldehyde: 8.9E-3 Methanol: 6.9E-3	Baghouse	99.2% and higher	38,500 cfm
12	Testing NCASI	0.01 grain/ft^3 lb/ODT: Methanol: 6.9E-3 Phenol: 8.6E-3	Baghouse	99.96%	38,500 cfm

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
13	Testing NCASI	0.001 grain/ft^3 lb/ODT: Acetone: 4.8E-3 Formaldehyde: 8.9E-3 Methanol: 6.9E-3 Phenol: 8.6E-3	Baghouse	99.96%	93,000 cfm
14	Testing	0.001 grain/ft^3	Baghouse	99.9%	3,000 cfm
16	Testing	0.001 grain/ft^3	Baghouse	99.99%	38,500 cfm
18	Testing	2.2 lb PM/hr	Cyclone	--	--
19	Testing	2.5 E-04 lb/ton of material stored	--	--	--
29	Testing NCASI	0.001 grain/ft^3 lb/ODT[1]: Acetaldheyde: 4.7 E-3 Acetone: 4.8E-3 Formaldehyde: 8.9E-3 Methanol: 6.9E-3	Baghouse	99.99%	38,500 cfm
30	AP-42 Section1.4-2 & Vendor Data for CO and NO_x	lb/MMBtu NO_x: 0.04 CO: 0.04 PM: 7.6 SO_2: 0.6 VOC: 5.5	Low NO_x burners	--	--
32	Testing	0.001 grain/ft^3	Baghouse	99.98%	10,500 cfm
33	AP-42 Section 13.4-1	0.019 lb/10^3 gal	None	N/A	4 Cooling Towers each rated at 600 gpm
34	AP-42 Section 13.2.1	lb/VMT: 2.66 PM 0.52 PM_{10}	Street Sweeper	None applied	--

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
35A	AP-42 Section 3.3	lb/MMBtu: 0.31 PM/PM_{10} 0.29 SO_x 0.36 VOC 0.95 CO 4.41 NO_x	None	N/A	
35B	NSPS IIII & AP-42 Section 3.3	lb/MMBtu: 0.29 SO_x g/hp-hr: 0.60 PM 3.7 CO 7.8 NMHC + NO_x	None	N/A	Vendor guarantees of 0.16 NMHC and 5.78 NO_x is below NSPS requirement, and are calculated and permitted separately.

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	PM_{10} NO_x CO Opacity	201A or 5, & 202 7E 10 9	No later than February 1, 2013, and once every 5-years thereafter.	Necessary to verify emissions
	VOC	25A	No later than February 1, 2014, and once every 5-years thereafter on the same schedule as the PM_{10}, NO_x, CO, and opacity.	
26	PM_{10} NO_x CO VOC (inlet and outlet) Opacity	201A or 5, & 202 7E 10 25A 9	No later than February 1, 2013, and once every 5-years thereafter.	Necessary to verify emissions
33	PM/PM_{10} (TDS)	Conductivity and TDS	Weekly conductivity testing, with quarterly direct TDS testing	To ensure proper maintenance and operation

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	Frequency	Report
01 & 26	Min. avg. Combustion Temperature 671°F (SN-01) & 866°F (SN-26)	CPMS	Combustion Temp: Recorded – 15 min. Averaged – 3 hr (block)	No
01 & 26	Pressure Differential	CPMS	Pressure Differential: Recorded – 1 hr Averaged – 24 hr	No

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)
01 & 26	Material Throughput	470,820 tons	Monthly	Yes
01 & 26	MDF production	205 $MMft^3/yr$	Monthly	Yes
18	Hours of Operation	4,000 hr per consecutive 12 months	Monthly	Yes
19	Green wood chips received	450,000 tons per consecutive 12 months	Monthly	Yes
30	Natural Gas Burned	701 $MMft^3/yr$	Monthly	Yes
35A	Hours of operation	100 hours per consecutive 12 months	Monthly	Yes
	Maintenance Records	See Specific Condition 43	As required	No
	Emergency operation hours	See Specific Condition 52	As required	No
35B	Hours of operation	100 hours per consecutive 12 months	Monthly	Yes

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
04, 09, 12-14, 16, 18, 22, 22a, 27-29, 32	5 %	Dept. Guidance	Weekly Observations
01 & 26	10 %	Dept. Guidance	Weekly Observations
30	5 %	Dept. Guidance	Natural gas only
33	20 %	Dept. Guidance	Conductivity & TDS sampling
34	5% off-site	Dept. Guidance	Inspections
35A & 35B	20 %	Dept. Guidance	Annual observations

18. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

19. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
Diesel Storage Tank (300 gal)	3			0.01			0.01	0.01
Resin Tanks (6 with a total capacity of 10,000)	13			0.01				
Gasoline Storage Tank (1,000 gal)	13			0.03			0.03	0.03
Woodwaste Loadout	13	0.75						
Diesel Storage Tank (1,000 gal)	13			0.01			0.01	0.01

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0688-AOP-R9

21. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

Karen Cerney, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 08-26-13

Facility Name: Flakeboard America Limited
Permit Number: 0688-AOP-R10
AFIN: 30-00015

$/ton factor	23.42	Annual Chargeable Emissions (tpy)	339.67
Permit Type	Minor Mod	Permit Fee $	500

Minor Modification Fee $	500
Minimum Modification Fee $	1000
Renewal with Minor Modification $	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	☐
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		77.8	77.8	0	0	77.8
PM_{10}		53.8	53.8	0		
SO_2		6.4	6.4	0	0	6.4
VOC		99.9	99.9	0	0	99.9
CO		227.9	227.9	0		
NO_X		152.4	152.4	0	0	152.4
Acetaldehyde	☐	37.89	37.89	0		
Cadmium	☐	0.03	0.03	0		
Formaldehyde	☐	46.88	46.88	0		
Hexane	☐	37.94	37.94	0		
Methanol	☐	50.64	50.64	0		
MIBK	☐	37.33	37.33	0		
Phenol	☐	41.16	41.16	0		
Acetone	☑	3.17	3.17	0	0	3.17