

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1803-AOP-R6 AFIN: 07-00212

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Georgia-Pacific Wood Products, LLC Fordyce OSB
#1 Georgia-Pacific Road
Fordyce, Arkansas 71742

3. PERMIT WRITER:

Siew Low

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Reconstituted Wood Product Manufacturing
NAICS Code: 321219

5. SUBMITTALS:

10/2/07, 1/10/08, 1/17/08, 2/1/08, 2/22/08, 3/11/08, 3/13/08, 3/17/08, 3/18/08, 3/27/08,
4/1/08, 4/2/08, 4/18/08, 4/22/08, 5/21/08, 6/2/08, 6/11/08, and 7/24/08.

6. REVIEWER'S NOTES

The modification incorporates the provisions of 40 CFR Part 63, Subpart DDDD, *National Emissions Standards for Hazardous Air Pollutants for Surface Coating of Wood Building Products*, and permitted the existing Stencil/Marking/Logo application (SN-11). Specific Conditions for SN-02 are also been clarified as the facility is authorized to have the option of operation the oxidizer either as a TCO or RTO. CAM requirement has been removed as the sources subject to CAM are now subject to emission limitation in MACT. The facility also proposes to modify the specific conditions for SN-10, the overlay application process to allow the flexibility to utilize alternative adhesives and increase the adhesive application hourly rate from 0.75 lb per 4' x 8' panel to 0.85 lb per 4' x 8' panel.

The permittee has requested Routine Control Device Maintenance Exemption (RCDME). The permittee shall conduct RCDME according to Plantwide Condition #9 to comply with NAAQS and Non Criteria Air Pollutant Control Strategy during the period; and Plantwide Condition #10 so the emissions increases due to RCDME stay below the PSD Significant Emission Rates for PM, PM₁₀, and VOC. A copy of the RCDM has been included in the permit as Appendix B per § 63.2251(c).

7. COMPLAINT STATUS:

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

Last inspection was performed on August 1, 2007. The facility was in compliance as the result of this inspection.

8. APPLICABLE REGULATIONS:

PSD Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)?	N
Has the facility undergone PSD review in the past?	Y
Is the facility categorized as a major source for PSD?	Y
≥ 100 tpy and on the list of 28?	Y
≥ 250 tpy all other?	Y

PSD Netting

Was netting performed to avoid PSD review in this permit?	N
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Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
Facility	Formaldehyde, Methanol, and Phenol	112G
Facility	PM/PM ₁₀ , VOC, CO, and NO _x	PSD
Facility	HAPs	40 CFR Part 63, Subpart DDDD, <i>National Emissions Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products</i>
SN-10	HAPs	40 CFR Part 63, Subpart QQQQ, <i>National Emissions Standards for Hazardous Air Pollutants for Surface Coating of Wood Building Products</i>

9. EMISSION CHANGES:

See Appendix A.

10. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling based on the changes in this permit is not warranted at this time. Previous permits have included full PSD modeling.

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) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acetaldehyde	45.04	4.96	1.37	YES
Formaldehyde	0.37	0.04	7.18	NO
Methanol	262.08	28.83	10.67	YES
Phenol	15.39	1.69	2.96	NO
POM	0.2	0.022	0.001	Yes

2nd Tier Screening (PAIL)

ISCST3 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. These numbers are based on the original PSD modeling adjusted for the new emission levels.

Pollutant	PAIL ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Formaldehyde	15.0*	8.646	Yes
Phenol	153.9	0.77	Yes

* Surrogate screening value adopted by ADEQ (see Steve Patrick memo of October 19, 1998).

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling of formaldehyde was performed on the estimated hourly emissions from the following sources in 1803-AOP-R6, 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 ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Formaldehyde	15.0*	2.78	Yes

* Surrogate screening value adopted by ADEQ (see Steve Patrick memo of October 19, 1998).

RCDME

1st Tier Screening (PAER) for RCDME

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	4.96	3.0	YES
Formaldehyde	0.37	0.04	20.0	NO
Methanol	262.08	28.83	53.1	NO
Phenol	15.39	1.69	11.8	NO
POM	0.2	0.022	0.002	YES
Acrolein	0.229	0.0252	2.0	NO
Benzene	1.6	0.175	0.18	NO
Cumene	245	27	1.5	YES
Methyl Isobutyl Ketone	233	25.6	0.23	YES
Propionaldehyde	118.8	13.0	0.27	YES

2nd Tier Screening (PAIL) for RCDME

Refined AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources in during RCDME (see Plantwide Condition 9 for permitted scenarios), 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 (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Formaldehyde	15.0	14.06	YES
Methanol	2620	37	YES
Phenol	153	8.23	YES
Acrolein	2.2	1.4	YES
Benzene	16	0.12	YES

11. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Testing	14.89 lb/hr PM/PM ₁₀ 25.25 lb/hr VOC 200.0 lb/hr CO 14.66 lb/hr NO _x 0.37 lb/hr Formaldehyde	RTO	90 90 40 - 90	-
01A	AP-42	Natural Gas	None	n/a	
02	Testing	2.83 lb/hr PM 20.05 lb/hr VOC 7.25 lb/hr CO 10.73 lb/hr NO _x 0.24 lb/hr Formaldehyde	TCO	75 90 - - 90	
03	AP-42	0.01 Gr/dscf	Bag Filter	99.96	
04	AP-42	0.01 Gr/dscf	Bag Filter	99.73	
05	AP-42	0.01 Gr/dscf	Bag Filter	98.67	
06	AP-42	0.01 Gr/dscf	Bag Filter	99.74	
07	AP-42	0.01 Gr/dscf	Bag Filter	99.96	
08	AP-42	0.01 Gr/dscf	Bag Filter	99.28	
09	AP-42	0.01 Gr/dscf	Bag Filter	99.96	
10	AP-42	Various Factors	-	-	
11	Mass Balance	-	None	n/a	Worst case usage rate: 50 gal/mmsf

12. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	PM10 NOX CO VOC Formaldehyde Opacity	5 7E 10 25A Acetylacetone 9	Every 5 Years, except for CO which is annually	Basis for calculations
02	PM10 NOX CO VOC Formaldehyde Opacity	5 7E 10 25A Acetylacetone 9	Every 5 Years	Basis for calculations
01 and 02	Total HAPs	25A	One time	Initial performance test

13. 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)
01	RTO Temperature	CEM	15 minutes	N
01	RTO Flow Rate	CEM	15 minutes	N
01	ID Fan Static Pressure	CEM	Hourly	N
02	RTO Temperature	CEM	15 minutes	N
02	RTO Flow Rate	CEM	15 minutes	N
02	ID Fan Static Pressure	CEM	Hourly	N

14. RECORD KEEPING 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)
Facility	OSB Throughput	600 million square feet on a 3/8-inch basis	Annual	Y
SN-01A	Venting to Atmosphere and Fuel used	Only Natural Gas	Monthly	N
SN-10	See Specific Condition 66	Any countable HAPs (i.e.: less than 0.1% for OSHA defined carcinogens and less than 1% by mass for other organic HAP compounds). The facility must submit a modification prior to any changes that result in a HAP content greater than 0.1% for OSHA defined carcinogens and greater than 1% by mass for other organic HAP	Monthly	N
SN-11	VOC content and VOC emitted. Only using non-HAP coatings (See Specific Condition 71)	0.31 lb VOC/gal 4.7 tpy Non-HAP coating is defined as a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds.	Monthly	N
SN-01 and SN-02	RCDM	See Plantwide Conditions #9 and 10	As occurred	N

15. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	10%	Dept. Guidance	Weekly
01	20%	Dept. Guidance During Bakeout	Daily During Bakeout
02	10%	Dept. Guidance	Weekly
02	20%	Dept. Guidance During Bakeout	Daily During Bakeout
03	10%	Dept. Guidance	Weekly
04	10%	Dept. Guidance	Weekly
05	10%	Dept. Guidance	Weekly
06	10%	Dept. Guidance	Weekly
07	10%	Dept. Guidance	Weekly
08	10%	Dept. Guidance	Weekly
09	10%	Dept. Guidance	Weekly
10	20%	Dept. Guidance	Daily

16. DELETED CONDITIONS:

Former SC	Justification for removal
8 and 9	Conditions repeated in Subpart DDDD conditions

17. No Insignificant Activities are added in this modification.

18. VOIDED, SUPERCEDED, OR SUBSUMED PERMITS:

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

Permit #
1803-AOP-R5

Permit #: 1803-AOP-R6

AFIN: 07-00212

Page 10 of 10

18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



Karen Cerney, Supervisor

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

