

STATEMENT OF BASIS

for the issuance of Air Permit # 427-AOP-R4

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Robbins Hardwood Flooring
Hwy 15 S. at Hwy 4 Bypass
Warren, Arkansas 71671

3. PERMIT WRITER:

Paula Parker

4. SIC DESCRIPTION AND SIC CODE:

SIC Description: Hardwood Flooring Manufacturer
SIC Code: 2426
NAICS: 321113

5. SUBMITTALS: 3-3-04

6. REVIEWER'S NOTES:

Armstrong Wood Products, Inc. owns and operates Robbins Hardwood Flooring, Inc. - Witt Plant (formerly Robbins, Inc.) located at Highway 15 South at Highway 4 Bypass, Warren, Arkansas. The facility submitted a minor modification in order to correct the CAM requirements for the ESP which controls particulate from a wood-fired boiler, SN-41. There is no emission change associated with this modification.

CAM parameters for the ESP at SN-41 were erroneously based upon primary voltage and spark rate. After consultation with the ESP manufacturer's representative, the facility determined that the correct parameters are secondary voltage and secondary current. Additionally, the facility is required to verify that both parameters are zero when the unit is not operating and to log maintenance/inspections and any repair work performed.

The facility also submitted a minor modification in order to increase the allowable unloading limit at SN-43 from 173 trucks per month to 350. There was a 2.4 ton/yr emission increase of particulate from this change.

7. COMPLIANCE STATUS:

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

The facility is currently under no enforcement actions.

8. APPLICABLE REGULATIONS:

PSD Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera)?	N		
Has this facility undergone PSD review in the past?	N	Permit#	N/A
Is this facility categorized as a major source for PSD?	N		
\$ 100 tpy and on the list of 28 (100 tpy)?	N		
\$ 250 tpy all other	N		

PSD Netting

Was netting performed to avoid PSD review in this permit? N

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u>]
13, 41	Opacity	<i>NSPS Subpart Dc</i>
41	PM	<i>NSPS Subpart Dc</i>
SN-01 through SN-12	HAPs	<i>NESHAP QQQQ</i>

9. EMISSION CHANGES:

The following table summarizes plant wide emission changes associated with this permitting action.

Pollutant	Air Permit 427-AOP-R3	Air Permit 427-AOP-R4	Change
PM	89.3	91.7	+2.4
PM ₁₀	89.3	91.7	+2.4
SO ₂	9.0	9.0	0
VOC	242.9	242.9	0
CO	67.4	67.4	0
NO _x	175.1	175.1	0
Ethyl Benzene	3.73	3.73	0
EGMPE	3.24	3.24	0
Toluene	14.58	14.58	0
Xylene	18.14	18.14	0
MEK	20.1	20.1	0
MIBK	19.90	19.90	0
Acrolein	1.44	1.44	0
Benzene	1.51	1.51	0
Chlorine	0.29	0.29	0
Formaldehyde	1.59	1.59	0
Phenol	0.02	0.02	0
Styrene	0.69	0.69	0

Pollutant	Air Permit 427-AOP-R3	Air Permit 427-AOP-R4	Change
Manganese	0.57	0.57	0

10. MODELING:

Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ($\mu\text{g}/\text{m}^3$)	Averaging Time	Highest Concentration ($\mu\text{g}/\text{m}^3$)	% of NAAQS
PM ₁₀	24.5	50	Annual	8.98	18.0%
		150	24-hour	61.45	41.0%
SO ₂	2.1	80	Annual	1.26	1.5%
		1,300	3-hour	3.79	0.3%
		365	24-hour	0.110	0.03%
NO _x	40.1	100	Annual	2.10	2.1%
VOC	159.0	0.12	1-hour (ppm)	0.0161	13.3%
CO	15.5	10,000	8-hour	21.13	0.2%
		40,000	1-hour	34.73	0.08%

11. 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 deemed 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?
Ethylbenzene	434	47.74	2.21	Y
EGMPE	16.0	1.76	1.92	N
Toluene	188.0	20.68	8.64	Y
Xylene	434.0	47.74	10.75	Y
MEK	590	64.9	29.2	Y
MIBK	205	22.55	28.9	N
Acrolein	0.23	0.0253	0.34	N
Benzene	1.6	0.176	0.35	N
Chlorine	1.5	0.165	0.08	Y
Formaldehyde	1.5	0.165	0.37	N
Manganese	0.2	0.022	0.14	N
Phenol	19	2.09	0.01	Y
Styrene	85.2	9.37	0.17	Y

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 was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Finishing Line emissions were modeled as a single, pseudo-point source with an above ground height of 25 ft and temperature of 70°F.

Pollutant	(PAIL, $\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
EGMPE	160.0	74.23	Y
MIBK	2050.0	1117.3	Y
Acrolein	2.3	0.205	Y
Benzene	16.0	0.211	Y
Formaldehyde	15.0	0.223	Y
Manganese	2.0	0.085	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
1-12	MSDS	(gal/yr) x (lb/gal) x VOC content	None	N/A	Maximum coating usage 12 gal/hr Maximum cleaning usage 4.3 gal/hr
13	PM, CO factor through testing SO ₂ , VOC, NO _x : AP-42	various	cyclone with flyash reinjection	50	Emission factor for PM includes a 20% safety factor to testing data
37	AP-42, Table 10.4-1	1.0 lb/ton	Baghouse	99%	Based upon 2 tons/hr capacity
38	AP-42, Table 10.4-1	1.0 lb/ton			

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
41	PM, CO factor through testing SO ₂ , VOC, NO _x : AP-42	various	ESP and flyash reinjection	96.4	
15-35 39,40 42	PM, VOC: Arkansas recommended emission factors	various	None	N/A	1.0 lb VOC/ 10 ⁶ bdf
43	AP-42 10.4-2	350 trucks/mon. truck/hr	Baghouse	75% equipment efficiency, 80% contained in the building	22.5 ton/truck capacity, 2.0 lb/ton

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
13 & 41	PM,CO	1, 5,10	3 years	Verify estimates and control effectiveness of particulate control
13 & 41	NO _x	10E	Initial	Verify emission rates.

14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and the need for records included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
41	Secondary Current and Voltage	N/A	Daily	Y

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)
 ** Indicates whether the parameter needs to be included in reports.

15. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
01-12	VOC Usage	189.9 tpy	Monthly	Y
01-12	HAPs Usage	3.73 tpy Ethyl benzene 3.24 tpy EGMPE 14.58 tpy Toluene 18.14 tpy Xylene 20.1 tpy MEK 19.9 tpy MIK	Monthly	Y
13	Wood Waste Usage limits	15,600 tons/yr	Daily	Y
41	Wood Waste Usage Limits	31,300 tons/yr	Daily	Y
41	ESP Operating Parameters	10 mADC 20 kV	Daily	Y

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
15-35 39, 40 42	Hardwood Lumber purchases	76,470,000 board feet/yr	Annual	Y
43	Trucks Loaded	4200 trucks/yr	Monthly	N

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)

** Indicates whether the parameter needs to be included in reports.

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
37	5%	Departmental Guidance	Weekly Observation
38	20%	Departmental Guidance	Daily Observation
15-35 39, 40 42	10%	Departmental Guidance	Weekly Observation
13,41	20%	NSPS Subpart Dc	Daily Observation
43	10%	Departmental Guidance	Daily Method 9

17. DELETED CONDITIONS:

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
3,6-9,11	MSDS maintenance for lb/gal basis sufficient to show compliance with HAP limits.
22-26	SN-36 no longer in operation at the facility.

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
427-AOP-R3

19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Lyndon Poole, P.E.