

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0427-AOP-R9 AFIN: 06-00014

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Armstrong Hardwood Flooring Company - Witt Plant
688 Hwy 278 Bypass
Warren, Arkansas 71671

3. PERMIT WRITER:

Travis Porter

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Finished Hardwood Flooring Manufacturer
NAICS Code: 321918

5. SUBMITTALS:

2/15/2011, 3/29/2011

6. REVIEWER'S NOTES:

Armstrong Hardwood Flooring Company, formerly Robbins Hardwood Flooring, Inc., is located at 688 Highway 278 Bypass, Warren, Arkansas. The facility manufactures finished hardwood flooring. This permit activity combines a minor modification and an administrative amendment. Armstrong proposes to use a new UV cured finishing coating, PPG Primer R2061Z74, containing 0.03 lb./gallon Toluene and up to 0.5 lb./gallon Ethoxyethoxyethylacrylate (CAS #7328-17-8) in the finishing lines (SN-01 through SN-12). Per the manufacturer's letter dated January 26, 2011, the Ethoxyethoxyethylacrylate, while a HAP, is a non-volatile material in this application. Permitted emissions are unchanged with this minor modification. The administrative amendment corrects the valid dates for the permit. The active permit, R8, shows the valid dates as 1/31/2007 through 1/30/2012, which are incorrect. The correct dates are 12/17/2008 through 12/16/2013.

7. COMPLIANCE STATUS:

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

The latest inspection, on June 18, 2010, resulted in no enforcement actions.

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

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
41	PM	NSPS Subpart Dc

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m ³)	Averaging Time	Highest Concentration (µg/m ³)	% of NAAQS
PM ₁₀	29.2*	50	Annual	9.95	19.9
		150	24-Hour	48.35	32.2
CO	23.1	10,000	8-Hour	73.3	0.733
		40,000	1-Hour	91.1	0.91
NO _x	40.0	100	Annual	8.8	8.8

*R8 Note--Modeling in the table was performed for the previous version, 0427-AOP-R7 at 31.2 pph for PM₁₀. Since permitted emissions are decreasing, it was not necessary to rerun the modeling at the new, lower rate.

*R9 Note—Rates did not change, and modeling was not performed for this activity.

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?
Acrolein	0.23	0.0253	0.34	N
Benzene	1.59	0.175	0.02	Y
Beryllium	0.004	0.0004	8.98E-05	Y
Cadmium	0.46	0.051	3.34E-04	Y
Chlorine	1.45	0.16	0.0954	Y
Chromium VI	0.01	0.011	1.17E-04	Y
Ethyl Benzene	434	47.74	3.02	Y
Ethylene Glycol	85.2*	9.372	3.02	Y
Formaldehyde	1.5	0.165	0.35	N
Hydrochloric Acid	2.98	0.3278	1.56	N
MIBK	205	22.55	3.0	Y
Manganese	0.2	0.022	0.14	N
Mercury	0.025	0.00275	2.85E-4	Y
Phenol	19	2.09	0.02	Y
Toluene	188.0	20.68	3.08	Y
Xylene	434.0	47.74	3.02	Y
Styrene	85.2	9.37	0.17	Y

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Pb	0.05	0.0055	0.0125	N

* No TLV listed in ACGIH. Haz chem. Desk Ref. Pg 1040.

*R9 Note—Rates did not change, and modeling was not performed for this activity.

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 (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Acrolein	2.3	0.67	Y
Pb	0.5	0.03	Y
Manganese	2.0	0.25	Y
Formaldehyde	15	0.71	Y
Hydrogen Chloride	29.8	3.07	Y

Other Modeling

Odor: N/A

H₂S Modeling: N/A

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 H₂S Standards

N/A

If exempt, explain: _____

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	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

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

C_p = 5-minute average concentration

C_m = 1-hour average concentration

t_m = 60 minutes

t_p = 5 minutes

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
1-12	MSDS	VOC: Mass	None	N/A	Max coat usage 19 gal/hr.
13	PM, CO factor through testing SO ₂ , VOC, NO _x : AP-42	9.3 lb/hr CO 14.6 lb/hr PM 0.017 lb/MMBtu PM condensable	cyclone with flyash reinjection	50	2003 stack averages: 7.1 lb/hr CO and 1.3 safety 10.85 lb/hr PM and 1.3 fos plus PM-condensable) No reduction in particulate HAPs assumed
37&38	Baghouse exhaust PM concentration	0.006 gr/scf	Baghouses	99%	BH-1 49,250 scfm BH-2 27,000 scfm BH-3 45,000 scfm
41	PM, CO factor	13.8 lb/hr CO	ESP and flyash	96.4	2003 stack averages:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	through testing SO ₂ , VOC, NO _x : AP-42	1.9 lb/hr PM 0.017 lb/MMBtu PM condensable	reinjection		10.62 lb/hr CO and 1.3 safety 0.77 lb/hr PM and 1.3 fos plus PM-condensable No reduction in particulate HAPs assumed
14-29	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 80% building contained	22.5 ton/truck capacity, 2.0 lb/ton

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
13 & 41	PM,CO	1, 5,10	5 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.)

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

15. 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)
01-12	VOC Usage	189.9 tpy	Monthly	Y
01-12	HAPs Usage	Plantwide Total limit	Monthly	Y
13,41	HAPs from WW combustion	Various	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
14-29	Hardwood Lumber purchases	76,470,000 board feet/yr	Annual	Y
43	Trucks Loaded	4200 trucks/yr	Monthly	N

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
37	5%	Departmental Guidance	Weekly Observation
38	20%	Departmental Guidance	Daily Observation

SN	Opacity	Justification for limit	Compliance Mechanism
14-29	10%	Departmental Guidance	Weekly Observation
13,41	20%	NSPS Subpart Dc	Daily Observation
43	10%	Departmental Guidance	Daily Method 9

17. DELETED CONDITIONS:

Former SC	Justification for removal
	None

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
1,000 gallon diesel tank	A-3	--	--		--	--	--	--
Chemical storage room and exhaust fan	A-13	--	--	0.016	--	--	--	--
Small (11 gallon) Solvent Distillation Unit	A-10	--	--	0.065	--	--	--	--
Drums and small containers for coating and cleanup solvent storage and handling	A-2	--	--		--	--	--	--
Diesel-Fired Fire Pump (345 hp)	A-1	0.21	0.2	0.25	0.64	2.95	--	--
150-kW Natural Gas Fired Emergency Generator	A-1	0.005	0.0003	0.25	0.17	2.2	--	--
Green Planer	A-13	0.018	--	--	--	--	--	--

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

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Permit #
0427-AOP-R8

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



Phil Murphy, P.E.