

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0427-AOP-R10 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:

Alexander Sudibjo

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Other Millwork (including Flooring)
NAICS Code: 321918

5. SUBMITTALS:

6/17/2013

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 is the third Title V permit renewal for this facility. With this renewal, the facility is requesting the following changes:

1. Move the 150-kW Natural Gas Fired Emergency Generator from the insignificant activity list into a permitted source subject to 40 CFR Part 63, Subpart ZZZZ.
2. Change the process in the material handling dust collection system (SN-37 and SN-38) and replace an existing baghouse fan with a new similar unit. No increase in emissions is expected.
3. Replace UV curing ovens on the finishing line (SN-01 through SN-12).
4. Incorporate provisions of 40 CFR Part 63, Subpart JJJJJ for the two wood-fired boilers (SN-13 and SN-41).

The facility's permitted annual emissions are increasing by 23.2 tpy, 0.3 tpy, 0.4 tpy, 0.9 tpy, and 5.2 tpy for PM/PM₁₀, SO₂, VOC, CO, and NO_x respectively.

7. COMPLIANCE STATUS:

As of June 17, 2013, there are no compliance issues with the facility.

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 $\geq 100,000$ tpy and ≥ 100 tpy/ ≥ 250 tpy 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)
41	PM	NSPS Subpart Dc
13 and 41	-	NESHAP Subpart JJJJJ
44 and 45	-	NESHAP Subpart ZZZZ

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:

New NAAQS evaluation is deemed unnecessary because there is no increase in emissions from the modifications. The following NAAQS evaluation is taken from Permit #0427-AOP-R7.

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	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
NOx	40.0	100	Annual	8.8	8.8

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) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acrolein	0.23	0.0253	0.36	N
Benzene	1.59	0.175	0.37	N
Beryllium	0.004	0.0004	8.98E-05	Y
Cadmium	0.46	0.051	3.34E-04	Y
Chlorine	1.45	0.16	0.08	Y
Chromium VI	0.01	0.011	2.85E-04	Y
Ethyl Benzene	434	47.74	3.03	Y
Ethylene Glycol	85.2*	9.372	3.00	Y
Formaldehyde	1.5	0.165	0.50	N
Hydrochloric Acid	2.98	0.3278	1.56	N

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
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	0.03	Y
Toluene	188.0	20.68	3.10	Y
Xylene	434.0	47.74	3.04	Y
Styrene	85.2	9.37	0.18	Y
Pb	0.05	0.0055	0.0125	N

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

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	0.384	Y
Benzene	15.9	0.391	Y
Pb	0.5	0.03	Y
Manganese	2.0	0.25	Y
Formaldehyde	15	0.417	Y
Hydrogen Chloride	29.8	1.75	Y

* Emissions from SN-44 and SN-45 are not modeled because they are limited-use engines.

13. 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	0.7056 lb/MMBtu PM 0.2856 lb/MMBtu CO 0.017 lb/MMBtu PM condensable	cyclone with flyash reinjection	50	2011 stack averages with 20% safety factor. 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 through testing SO ₂ , VOC, NO _x : AP-42	0.0022 lb/MMBtu PM 0.21 lb/MMBtu CO 0.017 lb/MMBtu PM condensable	ESP and flyash reinjection	96.4	2011 stack averages with 20% safety factor. 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/month 2 truck/hr	Baghouse	75% equipment 80% building contained	22.5 ton/truck capacity, 2.0 lb/ton
44	AP-42 3.2 and 3.3	<u>Units in lb/MMBtu</u> PM/PM ₁₀ : 0.31 SO ₂ : 0.29 VOC: 0.36 CO: 0.95 NO _x : 4.41	-	-	2.67 MMBtu/hr 500 hours per year operation
45	AP-42 3.2	<u>Units in lb/MMBtu</u> PM/PM ₁₀ : 0.01 SO ₂ : 5.88e-4 VOC: 0.118 CO: 0.317	-	-	2.10 MMBtu/hr 500 hours per year operation

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		NO _x : 4.08			

14. 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.
13 & 41	Energy assessment	-	One time	§63.11201

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)
41	Secondary Current and Voltage	N/A	Daily	Y
44 and 45	Hours of Operation	Non-resettable hour meter	As necessary	N

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)
01-12	VOC Usage	189.9 tpy	Monthly	Y
01-12	HAPs Usage	Plantwide Total limit	Monthly	Y
01-12	Hourly usage of	19 gallons total for all	Daily	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	VOC/HAP-containing materials	VOC/HAP-containing material per hour		
01-12	HAP content for coating, solvent, and adhesive material	Units in lb/gal Ethyl benzene = 0.16 Ethylene Glycol Mono Propyl Ether = 0.16 Toluene = 0.16 Xylene = 0.16 Methyl Isobutyl Ketone = 0.16	As necessary	N
01-12	Ethoxyethoxyethylcrylate content for primers	0.5 lb/gal	As necessary	N
13 & 41	HAPs from WW combustion	Various	Monthly	Y
13	Wood Waste Usage limits	15,600 tons/yr	Monthly	Y
41	Wood Waste Usage Limits	31,300 tons/yr	Monthly	Y
41	ESP Operating Parameters	10 mADC 20 kV	Daily	Y
13 & 41	Records of biennial tune-ups	-	No more than 25 months after the previous tune-up	N
14-29	Hardwood Lumber Dried	76,470,000 board feet/yr	Monthly	Y
43	Trucks Loaded	350 trucks/month	Monthly	N
44 & 45	Hours of Operation	500 hours per 12-month rolling period for each source	As necessary	N
44 & 45	Records of Maintenance	See Specific Conditions #50, #51, #58, and #59	As necessary	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
37	5%	Departmental Guidance	Daily Observation
38	5%	Departmental Guidance	Daily Observation
14-29	10%	Departmental Guidance	Weekly Observation
13,41	20%	NSPS Subpart Dc	Daily Observation

SN	Opacity	Justification for limit	Compliance Mechanism
43	10%	Departmental Guidance	Observation when Loading
44 & 45	5%	Departmental Guidance	Inspector Observation

18. DELETED CONDITIONS:

Former SC	Justification for removal
	None

19. 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	--	--		--	--	--	--
Green Planer	A-13	0.014	--	--	--	--	--	--

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0427-AOP-R9

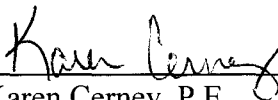
Permit #: 0427-AOP-R10

AFIN: 06-00014

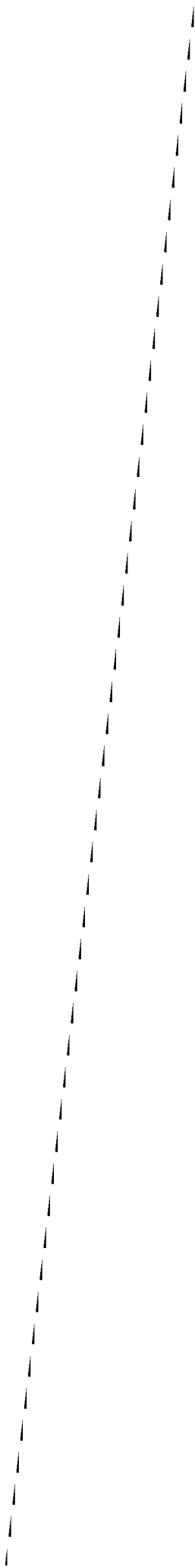
Page 9 of 9

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: Armstrong Hardwood Flooring--Witt
 Facility
 Permit Number: 0427-AOP-R10
 AFIN: 06-00014

\$/ton factor	23.42	Annual Chargeable Emissions (tpy)	575.83
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	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	29.1
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 condensable 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		112.7	135.9	23.2		
PM ₁₀		112.7	135.9	23.2	23.2	135.9
SO ₂		9	9.3	0.3	0.3	9.3
VOC		242.8	243.2	0.4	0.4	243.2
CO		101.2	102.1	0.9		
NO _x		175.1	180.3	5.2	5.2	180.3
Lead	<input type="checkbox"/>	0.03	0.03	0		
Total HAPs	<input type="checkbox"/>	23.75	23.75	0		
Chlorine	<input checked="" type="checkbox"/>	0.29	0.29	0	0	0.29
Hydrochloric Acid	<input checked="" type="checkbox"/>	6.84	6.84	0	0	6.84

