

STATEMENT OF BASIS

For the issuance of Air Permit # 0427-AOP-R12 AFIN: 06-00014

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Armstrong Flooring Inc. - 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. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
5/25/2018	Renewal	Replace 254 hp emergency generator with new 231 hp emergency generator

6. REVIEWER'S NOTES:

This is the fourth Title V renewal for this facility. With this renewal, the facility is removing the 254 hp natural gas fired emergency generator (SN-45) and replacing it with a new emergency generator (SN-51). SN-51 is subject to the provisions of 40 C.F.R. Part 60, Subpart JJJJ. The facility's permitted annual emissions are increasing by 0.3 tpy CO. The facility's permitted annual emissions are decreasing by 1.9 tpy NOx.

7. COMPLIANCE STATUS:

There are no compliance issues with the facility as of May 25, 2018. ECHO's CAA history violation for this facility is currently under development (<https://echo.epa.gov/detailed-facility-report?fid=110000450967>).

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N  
If yes, were GHG emission increases significant?

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 for 8(b), 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
13 and 41	-	NESHAP Subpart JJJJJ
44 and 51	-	NESHAP Subpart ZZZZ
51	-	NSPS Subpart JJJJ

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N/A  
If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

Non-criteria evaluation was not performed for this permit modification. Modeling information was taken from permit #0429-AOP-R10

1<sup>st</sup> 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<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × 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

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
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	0.03	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.

## 2<sup>nd</sup> 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 <sup>3</sup> ) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m <sup>3</sup> )*	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-51 are not modeled because they are limited-use engines.

## c) H<sub>2</sub>S Modeling:

The facility doesn't emit any H<sub>2</sub>S emissions.

## 13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01-12	MSDS	VOC: Mass	None	N/A	Max coat usage 19 gal/hr.
13	PM, CO factor through testing SO <sub>2</sub> , VOC, NO <sub>x</sub> : 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 <sub>2</sub> , VOC, NO <sub>x</sub> : 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 & 46-50	PM, VOC: Arkansas recommended emission factors	various	None	N/A	1.0 lb VOC/ 10 <sup>6</sup> 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	Units in lb/MMBtu PM/PM <sub>10</sub> : 0.31 SO <sub>2</sub> : 0.29 VOC: 0.36 CO: 0.95 NO <sub>x</sub> : 4.41	-	-	2.67 MMBtu/hr 500 hours per year operation
51	AP-42 3.2	Units in lb/MMBtu PM/PM <sub>10</sub> : 0.01 SO <sub>2</sub> : 5.88e-4	-	-	0.59 MMBtu/hr 500 hours per year operation
	NSPS JJJJ	In g/HP-hr VOC: 1.0			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		CO: 4.0 NOx: 2.0			

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 <sub>x</sub>	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 51	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 content	7.0 lb/gal	As necessary	Y
01-12	VOC Usage	189.9 tpy	Monthly	Y
01-12	HAPs Usage	Plantwide Total limit	Monthly	Y
01-12	Hourly usage of VOC/HAP-containing materials	19 gallons total for all VOC/HAP-containing material per hour	Daily	N
01-12	HAP content for coating, solvent, and adhesive material	<u>Units in lb/gal</u> 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	Ethoxyethoxyethylacrylate content for primers	0.5 lb/gal	As necessary	N
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 & 46-50	Hardwood Lumber Dried	76,470,000 board feet/yr	Monthly	Y
43	Trucks Loaded	350 trucks/month	Monthly	N
44	Hours of Operation	500 hours per 12-month rolling period	As necessary	N
44	Records of Maintenance	See Specific Conditions #50 and #51	As necessary	N
51	Hours of Operation	500 hours per calendar year	As necessary	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
37	5%	Reg.18.501	Daily Observation
38	5%	Reg.18.501	Daily Observation
14-29 & 46-50	10%	Reg.18.501	Weekly Observation
13 & 41	20%	Reg.19.304 and 40 C.F.R. § 60.43c	Daily Observation
43	10%	Reg.18.501	Observation when Loading
44	20%	Reg.18.501	Observation during operation
51	5%	Reg.18.501	Observation during operation

18. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	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-11	--	--	0.065	--	--	--	--
Drums and small containers for coating and cleanup solvent storage and handling	A-2	--	--		--	--	--	--
Green Planer	A-13	0.014	--	--	--	--	--	--



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20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
0427-AOP-R11



## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Armstrong Hardwood Flooring--Witt  
 Facility  
 Permit Number: 0427-AOP-R12  
 AFIN: 06-00014

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	573.93
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)	-1.9
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		135.9	135.9	0		
PM <sub>10</sub>		135.9	135.9	0	0	135.9
PM <sub>2.5</sub>		0	0	0		
SO <sub>2</sub>		9.3	9.3	0	0	9.3
VOC		243.2	243.2	0	0	243.2
CO		102.1	102.4	0.3		
NO <sub>x</sub>		180.3	178.4	-1.9	-1.9	178.4
Lead	<input type="checkbox"/>	0.03	0.03	0		

