

STATEMENT OF BASIS

For the issuance of Air Permit # 1712-AR-7 AFIN: 22-00064

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Maxwell Hardwood Flooring
190 Wilson Mill Road
Monticello, Arkansas 71655

3. PERMIT WRITER:

Skylar Redman

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
8/25/2023	Modification	Addition of a generator (SN-05)

6. REVIEWER'S NOTES:

Maxwell Hardwood Flooring owns and operates a hardwood flooring facility in Monticello, Arkansas. The facility manufactures rough cut hardwood lumber. The fresh cut lumber is placed in kilns that are heated and moisture controlled by the steam that is produced from the wood waste fired boiler. This modification is to add a generator (SN-05). The emission changes are as follows: an increase in 0.1 tpy of PM/PM₁₀, 0.1 tpy of SO₂, 0.1 tpy of VOC, 0.1 tpy of CO, 0.3 tpy of NO_x, 0.01 tpy of single HAPs, and 0.1 tpy of total HAPs.

7. COMPLIANCE STATUS:

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

The facility was last inspected April 20, 2023 and no violations were identified. The facility is subject to 40 CFR 63 Subpart JJJJJJ (*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*) because they have an existing wood waste boiler (27.45 MMBtu/hr) that is fired by sawdust which is considered biomass.

https://echo.epa.gov/detailed-facility-report?fid=110025060813&ej_type=sup&ej_compare=US

8. PSD/GHG 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*

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-04	HAPs	NESHAP Part 63 Subpart JJJJJ
SN-05	HAPs	NESHAP Part 60 Subpart JJJ
		NESHAP Part 63 Subpart ZZZZ

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. 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 DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

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	0.025	0.11	N
Manganese	0.22	0.022	0.044	N

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 ($\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
Acrolein	2.29	0.048	Y
Manganese	2.25	0.019	Y

a) H₂S Modeling:

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

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H ₂ S	20 parts per million (5-minute average*)	N/A	N/A
	80 parts per billion (8-hour average) residential area	N/A	N/A
	100 parts per billion (8-hour average) nonresidential area	N/A	N/A

*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
01	AP-42 Table 1.6-1	<u>Lbs/ton</u> PM = 7.2 PM ₁₀ = 6.5 NO _x = 0.38 SO _x = 0.075 CO = 6.6	Cyclone	75%	Remove from service in 2006
02	AP-42 Table 1.4-1	Lbs/MMscf PM = 12.0 NO _x = 100 CO = 21	N/A		
03	Weyerhaeuser Study	Lbs/MBF VOC = 1.0	N/A		Hardwood throughput is 15.8 MMBF/year

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
04	<u>AP-42 Table</u> 1.6-1 1.6-2 1.6-3 1.6-4	<u>Lb/MMBtu</u> PM = 0.30 PM ₁₀ = 0.27 NO _x = 0.49 VOC = 0.017 SO _x = 0.03 CO = 0.60 Acrolein: 4E-3 Benzene: 4.2E-3 Chlorine: 7.9E-4 Formaldehyde: 4.4E-3 Hydrogen Chloride: 1.9E-2 Styrene: 1.9E-3 Arsenic: 2.2E-5 Chromium, Hexavalent: 3.5E-6 Lead: 4.8E-5 Manganese: 1.6E-3	Multi-Cyclone	75%	27.45 MMBtu/hr 8760 hr/yr
05	AP-42 3.2-3 Table (7/00)	<u>lb/MMBtu</u> PM = 0.00751 PM ₁₀ = 0.00751 SO ₂ = 0.00751 VOC = 0.00751 CO = 0.00751 NO _x = 0.0826 Formaldehyde = 0.000751 Acrolein = 0.000751 Benzene = 0.000751	Uncontrolled	N/A	Generac 22 kW natural gas <u>0.0751 MMBtu/hr</u> Emergency <100 hr/yr

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
04	N/A	Tune Up	Initial & Biennially	40 C.F.R. § 63 Subpart JJJJJ

SN	Pollutants	Test Method	Test Interval	Justification
04	N/A	Energy Assessment	Initial	40 C.F.R. § 63 Subpart JJJJJ

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)
N/A				

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)
Facility	Hardwood throughput	2.5 MMBF/month 30.0 MMBF/year	Monthly	N
05	Total Operating Hours	Maximum 100 hrs/yr each total (emergency and non-emergency)/rolling 12 months	Monthly	No
05	Emergency Situation	May continue operating during emergency, must document any exceedance over 100 hrs/yr	As occurs	No
05	Compliance with NESHAP Subpart JJJJ	Applicable emission & operating limitations, no later than October 19, 2013	Monthly	No
	Compliance with NESHAP Subpart ZZZZ			
05	Non-emergency operation: maintenance checks and readiness testing	Any operation other than emergency operation, for 50 hours per year, which count towards the 100 hours/calendar year maintenance and testing	As occurs	No
05	Subpart ZZZZ of Part 63 –	Operating limitations and other requirements apply at all times.	As occurs – Report any deviation	Yes

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	monitoring results, maintenance log			
05	Manufacturer's written Instructions	Follow manufacturer's maintenance instructions & NESHAP Subpart JJJJ and NESHAP Subpart ZZZZ or develop and follow own maintenance plan	Keep on-site	No
05	Maintenance Logs	<p>a. Change oil and filter every 500 hours of op or annually, whichever occurs first. The permittee has the option to utilize an oil analysis program as described in §63.6625(j) in order to extend the specified oil change requirement in Table 2C of Subpart ZZZZ of Part 63, items #6, footnote 2;</p> <p>b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;</p> <p>c. Inspect all hoses and belts every 500 hours of operation, or annually, whichever comes first, and replace as necessary.</p>	As stated	No

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
02	5%	Department Guidance	Inspector Observations
03	5%	Department Guidance	Inspector Observations
04	20%	Department Guidance	Inspector Observations
05	5%	§18.501 & A.C.A.	Inspector Observations

17. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

18. 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 ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Fuel Storage House	A-13	< 1 tpy						
Peerless Loading Bin	A-13	< 1 tpy						
Load out Bin II	A-13	< 1 tpy						
Load out Bin II	A-13	< 1 tpy						
Peerless Bin Cyclone "A"	A-13	< 1 tpy						
Boiler House Cyclone "B"	A-13	< 1 tpy						
Fuel House Cyclone "C"	A-13	< 1 tpy						
Fuel House Cyclone "D"	A-13	< 1 tpy						
Fuel House Cyclone "E"	A-13	< 1 tpy						

Fuel House Cyclone "E"	A-13	< 1 tpy						
Fuel House Cyclone "G"	A-13	< 1 tpy						
Fuel House Cyclone "J"	A-13	< 1 tpy						
Fuel House Cyclone "H"	A-13	< 1 tpy						

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
1712-AR-6

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: Maxwell Hardwood,
Inc.

Permit Number: 1712-AR-7

AFIN: 22-00064

			<table><tr><th>Old Permit</th><th>New Permit</th></tr><tr><td>60.5</td><td>60.8</td></tr></table>	Old Permit	New Permit	60.5	60.8
Old Permit	New Permit						
60.5	60.8						
\$/ton factor	28.14	Permit Predominant Air Contaminant	60.5				
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0.3				
Minimum Initial Fee \$	500						
		Permit Fee \$	400				
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	60.8				

Pollutant (tpy)	Old Permit	New Permit	Change
PM	37.9	38	0.1
PM ₁₀	34.3	34.4	0.1
PM _{2.5}	0	0	0
SO ₂	3.1	3.2	0.1
VOC	10.2	10.3	0.1
CO	72.9	73	0.1
NO _x	60.5	60.8	0.3
Single HAPs	2.29	2.3	0.01
Total HAPs	4.33	4.34	0.01