

STATEMENT OF BASIS

For the issuance of Air Permit # 2055-AR-2 AFIN: 70-00004

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Watson Sawmill, Inc.
170 Mill Road
Mount Holly, Arkansas 71758

3. PERMIT WRITER:

Amanda Leamons

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Sawmills
NAICS Code: 321113

5. SUBMITTALS:

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
3/23/2015	Modification	Add existing Chip Mill and Gas Storage Tank to permit as SN-13 and SN-14, respectively. Update and add federal requirements to permit.
8/6/2014	Deminimis	Install two new indirect fired kilns (SNs-11 & 12) and increase lumber throughput by 8MMbdf/yr.

6. REVIEWER'S NOTES:

Watson Sawmill, Inc. (Watson Lumber) operates a hardwood sawmill and chipmill located at 170 Mill Road in Mount Holly, Union County, Arkansas. This permit revision includes a significant modification and a previously approved de minimis modification. The purpose of this permit revision is as follows:

- To update the Process Description.
- To allow Watson Lumber to install and operate two additional kilns (SN-11 and SN-12) in order to increase the drying capacity of the mill to 100,000 board feet per batch.
- To decrease the boiler fuel throughput limit to 4,393 tons per year set based on the most recent stack test.
- To remove the requirement to stack test the boiler every 5 years.
- To incorporate applicable provisions of 40 CFR Part 63, Subpart JJJJJJ into the permit.
- To permit the existing chip mill as SN-13.
- To permit the existing gasoline storage tank as SN-14.
- To incorporate applicable provisions of 40 CFR Part 63, Subpart CCCCCC into the permit.
- To add a diesel storage tank to the Insignificant Activity List as a Group A-3 activity.
- To remove four 2 MMBtu/hr Kiln Burners from the insignificant activity list because the burners are no longer at the facility.

This permitting action allows overall annual emission limit increases of 1.5 ton of PM₁₀, 0.9 ton of PM, 38 tons of VOC, and 3.17 tons 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.

Currently, there are no pending/active enforcement actions or compliance issues. The last inspection was conducted in December of 2014 and the facility was found to be in compliance.

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)
04	NA	NSPS Dc
	CO, HAPs	NESHAP JJJJJJ
14	HAPs	NESHAP CCCCCC

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

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	0.0253	0.0281	No

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	2.3	0.4	Y

c) H₂S Modeling: NA

12. CALCULATIONS:

SN	Emission Factor Source	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	AP-42, 1985	PM – 0.02 lb/ton PM ₁₀ – 0.011 lb/ton	None	NA	
02	AP-42, 1985	PM – 0.35 lb/ton PM ₁₀ – 0.20 lb/ton	None	NA	
03	AP-42, 1985	PM – 1.00 lb/ton PM ₁₀ – 0.36 lb/ton	None	NA	
04	AP-42, 1985	PM – 0.40 lb/ton PM ₁₀ – 0.40 lb/ton	None	NA	
05	AP-42, 1985	PM – 1.00 lb/ton PM ₁₀ – 1.00 lb/ton	Cyclone	80%	
06	Stack Test	250 hp 70% efficient Fuel rate = 4,393 tons/yr heat content = 4,500 BTU/hr Tested rate: PM/PM ₁₀ – 1.51 lb/hr Limit based on: PM/PM ₁₀ – 2.4 lb/hr	Multi-clone	80%	
07 – 12	NCDENR Wood Kiln	SNs 07-10: 85 MBF/batch SNs 11&12: 100 MBF/batch 22 MMBF/yr 144 hr/cycle minimum 0.022 lb _{PM/PM10} /MBF 4.09 lb _{VOC} /MBF 0.052 lb _{acetaldehyde} /MBF 0.0075 lb _{acrolein} /MBF 0.0183 lb _{formaldehyde} /MBF 0.199 lb _{methanol} /MBF 0.01 lb _{phenol} /MBF	None	NA	
13	AP-42	Fuel rate = 200 tons/hr, 620,500 tons/yr 0.0037 lb _{PM} /ton 0.0018 lb _{PM10} /ton	None	NA	
14	TANKS	1,000 gal tank 24 turnovers/yr 8.45 lb _{VOC} /hr* 0.2 ton _{VOC} /yr			*Assumed 1 turnover per hour

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
06	Performance Tune-up	According to 40 CFR §63.11223(b) Specific Condition 20	Every 25 months	NSPS Subpart JJJJJ

14. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

There are no monitoring or CEMS requirements in this permit.

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	Amount of Hardwood debarked	130,050 tons/yr	Monthly	N
06	Amount of sawdust and wood chips combusted	4,393 tons/yr	Monthly	N
06	Amount of fuel combusted	NA	Daily	N
06	Inspect/clean/fix burner	NA	Biennially (no more than 25 months from previous)	N*
	Inspect/correct burner flame pattern	NA		N
	Inspect/optimize Air to Fuel Ratio	NA		N
	Optimize CO emissions	NA		N
	Measure CO ppm	NA		N
	Energy assessment results	NA		N
07 -12	Lumber dried	22 million board feet/yr	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
15	Gasoline Thru-put	24,000 gal/yr	Monthly	N
		9,999 gal/month	Upon Request	N

*The facility is required to submit biennial reports to certify that they are in compliance under 40 CFR Part 63, Subpart JJJJJ (Specific Condition 22).

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02, 03, 04, and 13	20%	Department Guidance	Annual Inspection
05 and 06	10%	Department Guidance	Annual Inspection

17. DELETED CONDITIONS:

Former SC	Justification for removal
12	Boiler Stack Testing condition removed – Facility is a minor source and has passed previously conducted stack tests. The facility has reduced boiler throughput limit with this modification to match 10% more than the amount that was burned in the last stack test.

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Diesel Tank (2,000 gal)	A-3			0.0019			0.0019	0.0019

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
2055-AR-1

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 08-25-14

Facility Name: Watson Sawmill, Inc.

Permit Number: 2055-AR-2

AFIN: 70-00004

			Old Permit	New Permit
\$/ton factor	23.89	Permit Predominant Air Contaminant	52.6	54.1
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	1.5	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	400	
		Annual Chargeable Emissions (tpy)	54.1	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	52.6	54.1	1.5
PM ₁₀	38.1	39	0.9
SO ₂	1.3	1.3	0
VOC	8.1	46.1	38
CO	31.5	31.5	0
NO _x	11.6	11.6	0
Lead	0.01	0.01	0
Chlorine	0.04	0.04	0
Hydrogen chloride	1	1	0
Total other HAPs	0.85	4.02	3.17