

STATEMENT OF BASIS

For the issuance of Air Permit # 0189-AOP-R9 AFIN: 55-00017

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Caddo River LLC
229 South Spur 8
Glenwood, Arkansas 71943

3. PERMIT WRITER:

Kyle Crane

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Sawmills
NAICS Code: 321113

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
11/1/2018	Minor Mod	Update emission factors at SN-05A

6. REVIEWER'S NOTES:

Caddo River LLC (AFIN: 55-0017) owns and operates a lumber sawmill located in Glenwood, Pike County, Arkansas (formerly owned by Bean Lumber Company, Inc.). Caddo purchased the lumber mill in December of 2015. This minor modification is to update both emission calculations and visual emission compliance methods for the planer mill shavings bin loadout (SN-05A). Annual permitted emissions decrease by 0.1 tons per year (tpy) of PM and 0.1 tpy of PM₁₀ with this modification.

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 on May 31, 2018 and was found to be in compliance. EPA ECHO shows no information for air compliance data.

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? N

b) Is the facility categorized as a major source for PSD? Y

- *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)
04 & 04A	VOC	40 C.F.R. § 52.21 (PSD)
	HAPs	40 C.F.R. § 63, Subpart DDDD*

* Initial notification only.

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

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:

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?
Beryllium	5.00E-05	5.5E-06	9.93E-05	N
Manganese	0.2	2.2E-02	1.44E-01	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?
Beryllium	5.0E-04	3.8E-04	YES
Manganese	2.0	0.54675	YES

*Modeling data is from permit #0189-AOP-R8. Non-criteria pollutant emissions did not change for permit #0189-AOP-R9

c) 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 Y/N

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

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
04 & 04A	Wood Drying NCASI and NCDENR Wood Kiln Memo	0.14 lb _{PM} /MBF 3.8 lb _{VOC} /MBF	None	N/A	
	EPA memo, "Development of a Provisional Emissions Calculations Tool for Inclusion in the PCWP ICR" dated June 30, 2017	0.18 lb _{Methanol} /MBF 0.01 lb _{Phenol} /MBF 0.065 lb _{Formaldehyde} /MBF			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		0.04 lb _{Acetaldehyde} /MBF 0.004 lb _{Acrolein} /MBF			
	Combustion AP-42 Tables 1.6-3 and 1.6-4	0.03 lb _{SO2} /MMBtu 0.22 lb _{NOX} /MMBtu 0.255 lb _{CO} /MMBtu	None	N/A	
05	AP-42, 10.4	PM/PM ₁₀ : 0.03 gr/ft ³	Baghouse	99%	
05A	ADEQ memo	0.0033 lb _{PM/PM10} /ton	None	N/A	
17	AP-42, 13.2	sL=2.98 g/m ³ W= 27.5 tons P=105 N=365	None	N/A	<i>Paved and gravel roads</i>
18 & 19	AP-42, Section 1.6 (biomass) AP-42, Table 1.3-1 (diesel)	lb/MMBtu: 0.33 PM 0.29 PM ₁₀ 0.03 SO ₂ 0.22 NO _x 0.17 CO 0.017 VOC lb/1000 gal: 3.3 PM 1.0 PM ₁₀ 7.1 SO ₂ 20 NO _x 5 CO 0.252 VOC	None	N/A	Each abort stack: 240 hours of operation annually 1,200 gallons of diesel annual 2,000 lb of wood per hour

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
04	PM	5 with 202	Initial Test	Department

SN	Pollutants	Test Method	Test Interval	Justification
	CO	10	Initial Test	Guidance

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)
N/A				

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)
04, 04A, 18, & 19	Lumber Dried	185,000,000 board feet per rolling 12-months	Monthly	Y
18	Diesel usage	1,200 gallons per rolling 12-months	Monthly	Y
	Wood usage	2000 lb of wood per hour	Monthly	Y
	Hours of operation	240 hours per rolling 12-months	Monthly	Y
19	Diesel usage	1,200 gallons per rolling 12-months	Monthly	Y
	Wood usage	2000 lb of wood per hour	Monthly	Y
	Hours of operation	240 hours per rolling 12-months	Monthly	Y
05A	Wood residue loadout	50,000 tons per rolling 12-months	Monthly	Y

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
04 & 04A	20%	Reg.19.503	Weekly observations
05	5%	Reg.18.501	Weekly observations
05A	20%	Reg.19.503	Weekly observations
18 & 19	20%	Reg.19.503	Observations during startup

18. DELETED CONDITIONS:

Former SC	Justification for removal
#18	Opacity for SN-05A combined with specific condition #15

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 ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Chip Bin	A-13	0.18	-	-	-	-	-	-
Sawdust Bin	A-13	0.05	-	-	-	-	-	-
Bark Pile	A-13	0.39	-	-	-	-	-	-
Kiln Fuel Shed	A-13	0.12	-	-	-	-	-	-
Kiln # 3 Fuel Bin	A-13	0.06	-	-	-	-	-	-
Kiln # 4 Fuel Bin	A-13	0.06	-	-	-	-	-	-
Chip Conveyance	A-13	0.054	-	-	-	-	-	-
Bark Conveyance	A-13	0.134	-	-	-	-	-	-
Sawdust Conveyance	A-13	0.011	-	-	-	-	-	-
Shavings Conveyance	A-13	0.054	-	-	-	-	-	-
A-13 Total		1.113	-	-	-	-	-	-

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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 #
0189-AOP-R8

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Caddo River LLC
 Permit Number: 0189-AOP-R9
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\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	450.82
Permit Type	Minor Mod	Permit Fee \$	500

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)	-0.1
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		55.7	55.6	-0.1	-0.1	55.6
PM ₁₀		19.5	19.4	-0.1		
PM _{2.5}		0	0	0		
SO ₂		8.1	8.1	0	0	8.1
VOC		351.7	351.7	0	0	351.7
CO		80.9	80.9	0		
NO _x		26.5	26.5	0	0	26.5
Lead	<input type="checkbox"/>	0.0153	0.0153	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Methanol	<input type="checkbox"/>	16.65	16.65	0		
Total Chargeable NCAPs	<input checked="" type="checkbox"/>	8.92	8.92	0	0	8.92
Total Other NCAPs	<input type="checkbox"/>	28.03	28.03	0		