STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0189-AOP-R7 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:

Christopher Riley, P.E.

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Sawmills
NAICS Code: 321113

5. ALL 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
5/1/2017	Administrative Amendment	N/A

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. Caddo submitted an application in April 2017 to add a Chip Transfer cyclone to the Insignificant Activities List. Overall, there are no changes to the permitted emissions.

7. COMPLIANCE STATUS:

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

This facility was last inspected June 7, 2017. There were no violations found at that time.

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? Y

- *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.

Project did not trigger PSD review (only change is to the IA List)

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01	PM, NO_x,SO_2	NSPS Db
01	CO, HAPs	NESHAP DDDDD
02, 03, 04, & 04A	HAPs	NESHAP DDDD

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Criteria Pollutants

VOC was the only pollutant which triggered PSD review. There is currently no recommended or regulatory approved model for evaluating the offsite impacts from VOC. A qualitative evaluation of the offsite impacts is included in the permit.

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 × TLV	Proposed lb/hr	Pass?
Acrolein	0.229284254	0.025221268	1.050E-01	N
Beryllium	5.00E-05	5.5E-06	3.690E-05	N
Manganese	0.2	2.20E-02	5.760E-02	N

*- all modeling is from permit R6, no changes to emissions in R7

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 ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Acrolein	2.29	0.63	Y
Beryllium	5.00E-04	2.4E-04	Y
Manganese	2.0	0.35	Y

*- all modeling is from permit R6, no changes to emissions in R7

c) H_2S Modeling:

The facility has not reported hydrogen sulfide emissions. Therefore, no evaluation was conducted.

12. CALCULATIONS:

SN	Emission Factor Source	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	NSPS Db AP-42, 1.6	0.1 lb_{PM}/MMBtu 0.057 lb_{PM10}/MMBtu 0.21 lb_{NOx}/MMBtu 0.21 lb_{CO}/MMBtu 0.017 lb_{VOC}/MMBtu 0.025 lb_{SO2}/MMBtu All other pollutants are from AP-42 Table 1.6-2 &3	ESP	90%	Control factor applied to PM/PM_{10} and all metal HAPs
02-04	ADEQ NESHAP DDDD	3.5 lb_{VOC}/MBF 0.07 $lb_{Acetone}$/MBF 0.078 lb_{Acetal}/MBF 0.006 lb_{Acro}/MBF 0.041 lb_{Form}/MBF 0.29 lb_{Meth}/MBF 0.0012 lb_{MIBK}/MBF 0.0003 lb_{xylene}/MBF 0.012 lb_{Phenol}/MBF 0.0021 lb_{Prop}/MBF 0.0002 $lb_{Toluene}$/MBF	None	N/A	20% safety factor applied to Formaldehyde, Acetaldehyde, and Phenol
04A	Wood Drying NCASI and NCDENR Wood Kiln Memo	0.143 lb_{PM}/MBF 3.8 lb_{VOC}/MBF 0.161 $lb_{Methanol}$/MBF 0.0075 $lb_{Acrolein}$/MBF 0.103 lb_{Form}/MBF	None	N/A	
	Combustion AP-42 Tables 1.6-3 and 1.6-4	0.025 lb_{SO2}/MMBtu 0.22 lb_{NOX}/MMBtu 0.17 lb_{CO}/MMBtu 1.1E-06 lb_{Be}/MMBtu 1.6E-03 lb_{Mn}/MMBtu 0.019 lb_{HCl}/MMBtu	None	N/A	
05	AP-42, 10.4	PM/PM_{10}: 0.03 gr/ft^3	None	N/A	
05A	ADEQ memo	0.0022 $lb_{PM/PM10}$/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	*Paved and gravel roads*

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	PM	5 w/Back Half	5-year	Department Guidance
	CO	10	5-year	Department Guidance
	VOC	25A	5-year	Department Guidance
	NO_x	7E	5-year	Department Guidance
	Stack Flow Rate	02	5-year	Department Guidance

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)
01	Opacity	COM	Continuous	N

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	Wood combusted	N/A	daily	N
	Avg. Steam Generation	3.72 MMlb/day	monthly	Y
	Rake out periods	no more than 3 per 24-hour period	daily	N
02, 03, 04	Lumber Dried	185 MMbdft/12mths	monthly	Y
04A	Lumber Dried	116 MMBFper rolling 12-month total	monthly	Y
05A	Wood waste loadout	50,000 tons/12mths	monthly	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	20%	NSPS	COM
05	20%	Dept. Guidance	Daily Observation

17. DELETED CONDITIONS:

None

18. GROUP A INSIGNIFICANT ACTIVITIES:

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 Bin	A-13	0.30						
Kiln Fuel Shed	A-13	0.06						
Kiln Fuel Bin	A-13	0.06						
Chip Transfer Cyclone	*A-13*	0.51						
Group Total	*A-13*	*1.16*						

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0189-AOP-R6

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Cado River LLC
Permit Number: 0189-AOP-R7
AFIN: 55-00017

$/ton factor	23.93	Annual Chargeable Emissions (tpy)	861.36
Permit Type	AA	Permit Fee $	0

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	☐
If Hold Active Permit, Amt of Last Annual Air Permit Invoice $	0
Total Permit Fee Chargeable Emissions (tpy)	0
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 condensible 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		171.7	171.7	0	0	171.7
PM_{10}		88.8	88.8	0		
$PM_{2.5}$		0	0	0		
SO_2		33.4	33.4	0	0	33.4
VOC		344	344	0	0	344
CO		271.3	271.3	0		
NO_X		279.2	279.2	0	0	279.2
Hydrogen Chloride	☑	25.1	25.1	0	0	25.1

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Methanol	☐	35.68	35.68	0		
Total chargeable NCAPs	☑	7.96	7.96	0	0	7.96
Total other NCAPs	☐	42.69	42.69	0		