STATEMENT OF BASIS

For the issuance of Air Permit # 0189-AOP-R5 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:

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
11/3/2009	Renewal	New owners- Facility didn't operate for several years prior to purchase. Several sources removed and new sources added as a minor mod (see next).
10/13/15	Minor Mod	Install two new natural gas fired boilers, both subject to NESHAP DDDDD (Boiler MACT)
01/07/2016	Minor Mod	Replaces October Minor Mod application : Install two new natural gas fired boilers (bigger than the ones originally proposed), both subject to NESHAP DDDDD (Boiler MACT)

6. REVIEWER'S NOTES:

Caddo River LLC (Caddo) purchased the lumber mill in October of 2015 from Caterpillar. This permit revision includes a renewal of the Title V permit and modifications to the permitted operations at the facility. Changes allowed under this permit include:

- Removal of all storage tanks listed in the Insignificant Activities list;
- Permitting SN-01 (Wood Waste Boiler) based on operating 8,760 hours per year;
- Removal of SN-12, Woodshop Bin Loadout from the permit;
- SN-06 emissions are released into an enclosed area and are vented through SN-05; therefore, SN-06 no longer has permitted emissions;
- Removal of SN-11, Woodshop Cyclone from the permit;
- Removal of SN-14, Staining Operations from the permit;
- Addition of SN-15 and SN-16, Natural Gas Boilers to the permit and applicable NSPS Dc and NESHAP DDDDD requirements;
- Addition of SN-17, Haul Road emissions to the permit;
- Addition of the chip bin, sawdust bin, and bark bin to the insignificant activities list.
- Provisions have been added to require the facility to submit a modification application six months prior to starting up SN-01, Wood Waste Boiler. The permittee must receive a final permit before beginning operation of SN-01.

The changes allowed with this modification result in overall annual permitted emission limits increases of 6.7 tons per year (tpy) PM, 2.1 tpy SO_2, 10.6 tpy VOC, 48 tpy CO, 45.4 tpy NOx, 22.1 tpy hydrogen chloride, 2.32 tpy methanol, 1.75 tpy total chargeable non-criteria air pollutants (NCAPs), and 17.11 tpy total other NCAPs. While the annual permitted emission limit decreases for PM_{10} by 50.3 tpy.

7. COMPLIANCE STATUS:

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

Fees previously owed by Bean Lumber/Caterpillar were settled in the third quarter of 2015. At this time, there are no active/pending air compliance or enforcement issues.

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.

The boilers that were added to the permit had a PTE that fell below the PSD significant emission rates.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01	PM, NO_x,SO_2	NSPS Db
01, 15, & 16	CO, NO_x	NESHAP DDDDD
15 &16	PM, SO_2	NSPS Dc
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) 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 × TLV	Proposed lb/hr	Pass?
Acenaphthene	0.02	0.0022	0.00024	Y
Acenaphthylene	0.02	0.0022	0.0013	Y
Acrolein	0.23	0.0253	1.222	N

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Anthracene	0.02	0.0022	0.0008	Y
Benzaldeyde	0.02	0.0022	0.0003	Y
Benzo(a)anthracene	0.02	0.0022	0.00002	Y
Benzo(a)pyrene	0.02	0.0022	0.00069	Y
Benzo(b)fluoranthene	0.02	0.0022	0.00003	Y
Benzo(e)pyrene	0.02	0.0022	6.91E-7	Y
Benzo(g,h,i)perylene	0.02	0.0022	0.00003	Y
Benzo(j,k)fluoranthene	0.02	0.0022	0.000043	Y
Benzoic acid	0.02	0.0022	0.000013	Y
Carbazole	0.02	0.0022	0.00048	Y
2-Chloronaphthalene	0.02	0.0022	6.37E-7	Y
Chrysene	0.02	0.0022	0.00001	Y
Decachlorobiphenyl	0.5	0.055	7.17E-8	Y
Dibenzo(a,h)anthracene	0.02	0.0022	2.42E-6	Y
Dichlorobiphenyl	0.5	0.055	1.97E-7	Y
Fluorene	0.02	0.0022	0.0009	Y
Heptachlorobiphenyl	0.5	0.055	1.75E-8	Y
Hexachlorobiphenyl	0.5	0.055	1.46E-7	Y
Heptachlorodibenzo-p-dioxins	0.02	0.0022	5.31E-7	Y
Heptachlorodibenzo-p-furans	0.02	0.0022	6.37E-8	Y
Hexachlorodibenzo-p-dioxins	0.02	0.0022	0.00043	Y
Hexachlorodibenzo-p-furans	0.02	0.0022	7.44E-8	Y
Hydrogen chloride	2.98	0.3278	5.05	N
Indeno(1,2,3,c,d)pyrene	0.02	0.0022	0.000023	Y
Methanol (*over 10tpy*)	262.1	28.83	7.888	Y
2-methylnaphthalene	0.02	0.0022	0.000043	Y
Monochlorobiphenyl	0.5	0.055	5.84E-8	Y

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Octachlorodibenzo-p-dioxins	0.02	0.0022	0.000018	Y
Octachlorodibenzo-p-furans	0.02	0.0022	2.34E-8	Y
Pentachlorodibenzo-p-dioxins	0.02	0.0022	3.98E-7	Y
Pentachlorodibenzo-p-furans	0.02	0.0022	1.12E-8	Y
Pentachlorobiphenyl	0.5	0.055	3.19E-7	Y
Pentachlorophenol	0.5	0.055	0.000014	Y
Perylene	0.02	0.0022	1.38E-7	Y
Phenanthrene	0.02	0.0022	0.00186	Y
Phosphorus	0.1	0.011	0.00072	Y
Pyrene	0.02	0.0022	0.00098	Y
2,3,7,8-Tetrachlorodibenzo-p-dioxins	0.02	0.0022	2.28E-9	Y
Tetrachlorodibenzo-p-dioxins	0.02	0.0022	1.25E-7	Y
2,3,7,8-Tetrachlorodibenzo-p-furans	0.02	0.0022	2.39E-8	Y
Tetrachlorodibenzo-p-furans	0.02	0.0022	1.99E-7	Y
Tetrachlorobiphenyl	0.5	0.055	6.64E-7	Y
Trichlorobyphenyl	0.5	0.055	6.91E-7	Y
2,4,6-Trichlorophenol	0.02	0.0022	5.84E-6	Y
Antimony	0.5	0.055	0.0003	Y
Arsenic	0.01	0.0011	0.0006	Y
Barium	0.5	0.055	0.0046	Y
Beryllium	0.00005	5.5E-6	0.0000292	N
Cadmium	0.01	0.0011	0.00011	Y
Chromium	0.5	0.055	0.0006	Y
Chromium VI	0.05	0.006	0.000093	Y
Cobalt	0.1	0.011	0.00017	Y
Lead	0.05	0.006	0.0013	Y

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Manganese	0.1	0.011	0.0425	N
Mercury	0.01	0.0011	9.3E-5	Y
Selenium	0.2	0.022	0.000074	Y
Silver	0.01	0.0011	0.198	N
Vanadium	0.05	0.006	0.000026	Y

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 TLV	Modeled Concentration ($\mu g/m^3$)	Pass?
Acrolein	2.3	1.61	Yes
Beryllium	0.0005	0.00004	Yes
Hydrogen chloride	29.8	7.65	Yes
Manganese	1.0	0.0644	Yes
Silver	0.1	0.0684	Yes

c) H_2S Modeling: N/A

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	ESP	90%	Control factor applied to PM/PM_{10} and all metal HAPs

SN	Emission Factor Source	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		from AP-42 Table 1.6-2 &3			
02-04A	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	NA	20% safety factor applied to Formaldehyde, Acetaldehyde, and Phenol
05	AP-42, 10.4	PM/PM_{10}: 0.03 gr/ft^3	None	NA	
05A	ADEQ memo	0.0022 $lb_{PM/PM10}$/ton	None	NA	
15 & 16	AP-42, 1.4	0.0169 $lb_{PM/PM10}$/MMBtu 0.079 lb_{NOx}/MMBtu 0.08 lb_{CO}/MMBtu 0.0081 lb_{VOC}/MMBtu 0.0014 lb_{SO2}/MMBtu All other pollutants are from AP-42, T 1.4-3 & 4	None	NA	
17	AP-42, 13.2	sL=2.98 g/m^3 W= 27.5 tons P=105 N=365	None	NA	*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

SN	Pollutants	Test Method	Test Interval	Justification
	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, 04A	Lumber Dried	185 MMbdft/12mths	monthly	Y
05A	Wood waste loadout	50,000 tons/12mths	monthly	Y
15 & 16	Amount of fuel used	NA	monthly	Y
	Tune-up for Gas 1 Units	See SC 46	annually	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	20%	NSPS	COM
05	20%	Dept. Guidance	Daily Observation
15 & 16	5%	§18.501	Burn only Nat. Gas

17. DELETED CONDITIONS:

Former SC	Justification for removal
27-32	Staining Operations are shutdown.

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						
Group Total	*A-13*	*0.53*						

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0189-AOP-R4

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Caddo River LLC
Permit Number: 189-AOP-R5
AFIN: 55-00017

$/ton factor	23.93	Annual Chargeable Emissions (tpy)	864.26
Permit Type	Modification	Permit Fee $	2121.3945

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)	88.65
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		165.6	172.3	6.7	6.7	172.3
PM_{10}		139.7	89.4	-50.3		
$PM_{2.5}$		0	0	0		
SO_2		28.3	30.4	2.1	2.1	30.4
VOC		337.8	348.4	10.6	10.6	348.4
CO		237.7	285.7	48		
NO_X		237.7	283.1	45.4	45.4	283.1
Hydrogen chloride	☑	0	22.1	22.1	22.1	22.1

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Methanol	☐	24.51	26.83	2.32		
Total Chargeable NCAPs	☑	6.21	7.96	1.75	1.75	7.96
Total Other NCAPs	☐	15.31	32.42	17.11		