

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0551-AOP-R12 AFIN: 20-00017

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Carthage Forest Products, LLC
322 North Oak Street
Carthage, Arkansas 71725

3. PERMIT WRITER:

Derrick Brown

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
3/3/2025	Modification	Permitted operation of an Emergency Fire Pump Engine and Diesel Tank.

6. REVIEWER'S NOTES:

Carthage Forest Products, LLC operates a lumbermill located in Carthage, AR. This modification permits operation of an emergency fire pump engine (SN-18) that has already been installed. The source, SN-18, is a 315-Hp Certified Emergency Fire Pump Engine. This modification increases permitted emissions by 0.7 tpy of PM, 0.1 tpy of PM₁₀, 0.2 tpy of SO₂, 0.1 tpy of VOC, 0.5 tpy of CO, and 0.6 tpy of NO_x.

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 February 15, 2023. There were no concerns noted.

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? N

- *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)
09	HAPs	40 C.F.R. Part 60, Subpart IIII
17	VOCs	40 C.F.R. Part 63, Subpart CCCCCC
18	HAPs	40 C.F.R. Part 60, Subpart IIII

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
N/A				

11. 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 Rule 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit?

If not, explain why. N/A

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source

level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
N/A		

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. 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:

Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of non-criteria pollutants (for this revision) are below thresholds of concern.

c) H₂S Modeling: N/A (No H₂S emissions)

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
06 & 10	EPA Region 10 Emission Factors for Activities at Sawmills, Sawing	0.35 lb _{PM} /ton logs 0.175 lb _{PM10} /ton logs			
07	AP-42 13.2.1.3 Equations 1 and 2	<u>Hourly:</u> 1.058301 lb _{PM} /VMT 0.206119 lb _{PM10} /VMT			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		<u>Annually:</u> 0.98219 lbPM/VMT 0.191296 lbPM10/VMT			
08	AP-42 13.2.2.2 Equations 1a and 2	<u>Hourly:</u> 3.521804 lbPM/VMT 1.003876 lbPM10/VMT <u>Annually:</u> 2.508683 lbPM/VMT 0.71509 lbPM10/VMT			
09	AP-42 Table 3.3-1 & 3.3-2	0.0022 lbPM/PM10/hp-hr 0.00247 lbVOC/hp-hr 0.00668 lbCO/hp-hr 9.2 gNOx/KW-hr 2.05E-3 lbSO2/hp-hr 9.25E-5 lbAcrolein/MMBtu 9.33E-4 lbBenzene/MMBtu 1.18E-3 lbFormald/MMBtu 4.10E-4 lbToluene/MMBtu <u>Crankcase EF</u> 4.41E-5 lbVOC/hp-hr			
11	EPA Region 10 Emission Factors for Activities at Sawmills, Debarking	0.024 lbPM/ton 0.0012 lbPM10/ton			
12	ADEQ Memorandum	<u>Chip Production Storage</u> 0.0004 lbPM/ton 0.00004 lbPM10/ton <u>Loadout</u> 0.0008 lbPM/ton 0.00008 lbPM10/ton <u>Bark Production Storage</u> 0.0022 lbPM/ton 0.00017 lbPM10/ton			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		<u>Loadout</u> 0.0044 lb _{PM} /ton 0.00034 lb _{PM10} /ton <u>Shavings Production</u> <u>Storage</u> 0.0011 lb _{PM} /ton 0.0022 lb _{PM10} /ton <u>Loadout</u> 0.00009 lb _{PM} /ton 0.00018 lb _{PM10} /ton			
14	Georgia EPD for Lumber Kilns	<u>Lb/MBf lumber</u> 0.14 PM 0.104 PM ₁₀ 3.8 VOC 0.025 SO ₂ 0.73 CO 0.28 NO _x			
	AP-42 Table 1.6-4	<u>Lb/MMBtu Biomass</u> 4.80E-05 Lead 209.56 CO _{2e}			
	PCWP Memo	<u>Lb/MBf lumber</u> 0.04 Acetaldehyde 0.004 Acrolein 0.065 Formaldehyde 0.18 Methanol 0.01 Phenol 0.004 Propionaldehyde			
15	EPA Region 10 Emission Factors for Activities at Sawmills, pneumatic conveyance with high efficiency cyclone	<u>Lb/ODT</u> 0.2 PM 0.19 PM ₁₀			
16	Baghouse vendor data	<u>Gr/dscf</u> 0.01 PM 0.004 PM ₁₀			
17	AP-42 Chapter 7 Minnesota Pollution Control Agency Spreadsheet	0.470 potential ton/yr			Gasoline aboveground 26,000 gal/yr

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
18	AP-42 Rable 3.3-1	3.31E-4 lb PM/PM ₁₀ /hphr; 6.61E-3 lb NO _x /hp-hr; 5.73E-3 lb CO/hp-hr; 6.61E-3 lb VOC/hp-hr; 2.05 lbs SO ₂ /hp-hr; HAPs Varies	None	N/A	

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
N/A				

17. 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				

18. 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)
09	Hours of Operation	500 hours/cal. yr	Monthly	Y
14	Dried Lumber	68.5 MMBF dried lumber/rolling 12 month	Monthly	Y
17	Gasoline	26,000 Gallons/year 10,000 gallons/month	Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
18	Hours of Operation	500 hours/cal. yr	Monthly	Y
18	Opacity	20%	Annually	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
06	5%	Rule 18.501	Weekly Observations
09	20%	8 CAR § 41-403 and 40 C.F.R. § 52 Subpart E	Annual Observation
10 & 11	No VEs	Rule 18.501	Weekly Observations
12 & 14	20%	8 CAR § 41-403 and 40 C.F.R. § 52 Subpart E	Daily Observations
15	20%	8 CAR § 41-403 and 40 C.F.R. § 52 Subpart E	Daily Observations
16	5%	Rule 19.503	Daily Observations
18	20%	8 CAR § 41-403 and 40 C.F.R. § 52 Subpart E	None

20. DELETED CONDITIONS:

Former SC	Justification for removal
	No conditions deleted.

21. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

Source Name	Group A Category	Emissions (tpy)						HAPs	
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	Single	Total	
1,000 Gallon Diesel Storage Tank	A-3			0.002					
Ash Storage Pile	A-13	0.092							
Bark Hog & Horizontal Hog	A-13	0.5							

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22. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0551-AOP-R11

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Carthage Forest Products, LLC
 Permit Number: 0551-AOP-R11
 AFIN: 20-00017

\$/ton factor	28.14	Annual Chargeable Emissions (tpy)	213
Permit Type	Modification	Permit Fee \$	1000

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)	1.6
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		36	36.7	0.7	0.7	36.7
PM ₁₀		13.6	13.7	0.1		
PM _{2.5}			0	0		
SO ₂		1	1.2	0.2	0.2	1.2
VOC		164.5	164.6	0.1	0.1	164.6
CO		25.4	25.9	0.5		
NO _x		9.9	10.5	0.6	0.6	10.5
Total HAP	<input type="checkbox"/>	10.4	10.4	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Lead	<input type="checkbox"/>	0.00589	0.00589	0		