

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2348-AOP-R4 AFIN: 70-00032

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Anthony Forest Products Company, LLC
5482 Junction City Highway
El Dorado, Arkansas 71730

3. PERMIT WRITER:

Sterling Powers

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
12/29/2024	Minor Mod	Replace equipment at SN-06 Remove SN-08

6. REVIEWER'S NOTES:

Anthony Forest Products Company, LLC (AFP) owns and operates a sawmill located at 5428 Junction City Hwy, in Union County, Arkansas. This permit modification install a new dust collection system to control the shavings at the planer mill. The new system will replace the current equipment at SN-06 and SN-08, and will be renamed the Planer Mill HE Cyclone under SN-06. Permitted emissions will increase by 0.1 tpy PM.

7. COMPLIANCE STATUS:

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

Last inspection was August 20, 2024. No violations were reported or found during the inspection.

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.

A PSD analysis demonstrates that the emissions do not exceed the PSD significant emission rate (SER) for any NSR regulated pollutants.

Actual-to-Projected-Actual (ATPAT)	PM	PM10	PM2.5	SO2	VOC	CO	NOX
Total BAE	0	0	0	0	0	0	0
Total PAE	1.36	1.21	1.20	0.0	0.0	0.0	0.0
SER Threshold	25	15	10	40	40	100	40
Pass? Y/N	Y	Y	Y	Y	Y	Y	Y

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01, 02	Initial Notification is the only requirement.	NESHAP Subpart DDDD
17	HAPs	NESHAP Subpart ZZZZ NESHAP 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? N/A
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		

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:

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 ²	0.2292	0.0252	0.29	Fail
Formaldehyde	1.5	0.165	0.71	Fail
Methanol ¹	262.08	28.829	7.38	Pass
POM ²	0.200	0.022	1.41E-04	Pass
Selenium ²	0.200	0.022	3.18E-06	Pass

¹ Annual emission greater than 10 tpy

² Under 1 mg/m^3 TLV

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	2.292	2.28975	Yes
Formaldehyde	15.00	5.64144	Yes

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
01, 02	ADEQ Memo: <i>VOC emissions from Lumber Drying Kilns</i> from T Rheume dated 10/31/2014 AP-42 Tables 1.4-1, -2, -3 Natural Gas	BACT Limit: 3.8 lb VOC/MBF ¹ <u>EF lb/10⁶ scf</u> BACT PM: 7.6 SO ₂ : 0.6 CO: 84 NO _x : 50 Formaldehyde: 7.50E-02 Selenium: 2.40E-05 POM: 8.82E-05	None	N/A	3 kilns limited by throughput: 315 MMBF/yr Each Kiln 18.5 MBF/hr x 3.8 lb VOC/MBF = lb VOC/hr 45 MMBtu/hr Low NO _x Burners To convert from lb/10 ⁶ scf to lb/MMBtu divide by 1020. ¹ Includes natural gas VOC
01, 02,	Assume PM ₁₀ = PM NCDENR Wood Kiln Emission Calculation Factor Sheet for Softwood	<u>Lb/MBF</u> BACT Limit: PM/ PM ₁₀ : 0.022 Acrolein: 0.0075 Methanol: 0.199 Formaldehyde: 0.0183	None	N/A	Lumber Drying Kilns Max Annual Thruput = 315 MMBF/yr Max Hourly Thruput = 18.5 MBF/hr @ SN-01, 02, and 03
04	ADEQ Memo from CHurt to TRheume dated 08/22/2003 and NC-DENR ¹ TCEQ Wood Ind. EF, App A3	<u>lb/ton log Thruput</u> BACT Limit PM: 0.02 PM ₁₀ : 0.0004 (PM ₁₀ = 2% PM)	95% ¹	Enclosed Hood	1,417,500 tpy 405 tph max Log Thruput @ 4.5 tons/MBF
05	AP-42 Sec 10.3-1 ¹ TCEQ	lb/ton log Throughput BACT Limit PM: 0.35 PM ₁₀ : 0.007 (PM ₁₀ = 2% PM)	90% ¹	Sawmill located	1,455,300 tpy 378 tph max

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
	Wood Ind. EF, App A3			in Building	log Thruput @4.2 tons/MBF
06	Cyclone Air flow rates and outlet grain loading based on January 2020 Renewal permit application. Retesting is being required because of age of test and equipment (20 years).	Planer Mill - EF based on air flow = 77,280 dscfm outlet = 0.00004 gr/scf BACT PM: 0.004 gr/dscf PM ₁₀ : 0.0274 lb/hr, 1.198 tpy PM: 0.278 lb/hr, 1.219 tpy	Cyclone	99.99%	1.2x safety factor built in
09	AP-42 13.2.2.2. Eq. 1a ¹ (11/06) and AP-42 13.2.2.1 Eq. 1 ² (1/11)	'Haul Roads' Unpaved ¹ s: 8.4 W: varies k: 4.9 (PM) k: 1.5 (PM ₁₀) k: 0.15 (PM _{2.5}) a: 0.70 (PM) a: 0.90 (PM ₁₀ & 2.5) b: 0.45and Paved Roads ² k: 0.011 (PM) k: 0.0022 (PM ₁₀) k: 0.00054 (PM _{2.5}) sL: 8.2 W: varies	Road Watering Plan	90%	$E = k (s/12)^a \times (W/3)^b$ Eq 1a UNPAVED where E = size-specific EF (lb/VMT) s = surface material silt content (%) W = mean vehicle wt. (tons) M = surface mat 'l moisture content (%) S = mean vehicle speed (mph) C = EF for 1980's vehicle fleet exhaust, brake and tire wear. $E = k (sL)0.91 \times (W)^{1.02}$ Equation (1)PAVED where: E = PM emission factor (lb/VMT), k = particle size multiplier

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
					sL = road surface silt loading (g/m ²), and W = ave wt. (tons) of vehicles traveling road.
17	AP-42, Table 3.3-1	BACT PM: 0.2 g/kw-hr PM ₁₀ : 0.2 g/kw-hr <u>lb/hp-hr</u> SO ₂ : 0.00205 BACT VOC: 4.0 CO: 3.5 g/kw-hr NO _x : 4.0 g/kw-hr Acrolein: 9.25E-05 Formaldehyde: 1.18E-03	None	N/A	'Emergency Fire Pump' – CI RICE 200 bhp (from engine plate) VOC = TOC 500 hrs/yr 7,000 Btu/hp-hr 1.40 MMBTU/hr 0.0015% sulfur Diesel Fuel
11	AP-42 10.3-1	<u>Lb/ton</u> BACT PM: 0.02 PM ₁₀ : 0.00044 (incl 10% safety factor)	None	N/A	'Material Processing' Fugitive emissions from Debarking and Chipping
12	Pile handling – AP-42 13.2.4 Wind erosion - AP-42 13.2.5	<u>Bark Pile PM (lb/hr)</u> Handling: 0.00015 <u>Sawdust Pile (lb/hr)</u> Handling: 0.00012 Wind Erosion: 1.89 Sawdust Total: 1.90 <u>Chip Pile PM (lb/hr)</u> Handling: 0.0015 Wind Erosion: 2.43	None	N/A	'Storage Piles' By-product sold as dry material
13	ADEQ Emission Factors outlined in 8/22/2003 memo from	<u>Dried Shavings Lb/ton Storage</u> BACT PM: 0.0011 PM ₁₀ : 0.00009 <u>Loadout</u> BACT PM: 0.0022 PM ₁₀ : 0.00018	None	N/A	'Storage Bin' Based on permitted annual throughput Conservative

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equip.	Control Equip. Eff.	Comments
	CHurt to TRheume				estimate 75,000 tpy woodwaste generated
14	TANKS 4.0.9d	Oil	None	None	11 light color Tanks
15	TANKS 4.0.9d	Diesel fuel	None	None	2 light color Tanks
16	TANKS 4.0.9d HAP speciation factors from EPA document " <i>Gasoline Distribution Industry..</i> "	Gasoline <u>HAPs to VOC ratio by wt.</u> Total HAPs: 23%	None	None	1 light color Tank

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
06	PM	Method 5	One Time	§19.702

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)
Facility	Annual Lumber Throughput	Maximum 315 MMBF / rolling 12 months	Monthly	Yes
01, 02	Combust only pipeline quality natural gas in burners	Maintain valid gas tariff, purchase contract, fuel analysis or other appropriate documentation, or perform periodic testing	On-going	No
01, 02	Develop, maintain, and follow a routine and repair maintenance and housekeeping Plan BACT: Proper Maintenance and Operation	Record 1. Facility name and location. 2. Record the activity SN or description. 3. Date and time of maintenance or observation. 4. Maintenance activity performed, including replacement parts. 5. Name of person conducting the maintenance.	As performed	No
01, 02	NESHAP Subpart DDDD	Initial Notification §63.9(b)	One-time	Yes
04	Annual Log Throughput BACT: Hood Enclosure	Maximum 1,417,500 tons / rolling 12 months	Monthly	Yes
05	Annual Log Throughput	Maximum 1,455,300 tons	Monthly	Yes

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	BACT: Building	/ rolling 12 months		
06	Manufacturers' Operating Manuals and Maintenance Logs BACT: Proper Maintenance and Operation	Must be operated and maintained in accordance with manufacturers' specs and good air pollution control and op practices for minimizing emissions. Must up-date maintenance logs on an as performed basis. Must operate at all times contiguous equipment is in operation.	Keep Manual for Life of Unit(s) On- going	No
09	Road Watering Plan	Maintain Road Watering Plan Records	On-going	No
09	Road Dust (PM/PM ₁₀)	Keep dust from extending beyond property boundary	On-going	No
09	If Dust Suppression Agent used, Maintain MSDS	Shall contain no VOC, no HAP, no air contaminants	Current, legible MSDS	No
17	Total Operating Hours (emergency and non- emergency combined)	500 Total Hours per calendar year	Monthly	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
17	During Extended Emergency Use <i>in excess of</i> 500 hours	No limit during Emergency	If occurs	Yes
17	NESHAP Subpart ZZZZ	Must be in compliance upon startup	Monthly	No
17	Diesel Fuel	Only ULSD fuel with the sulfur content no greater than 0.0015% sulfur by weight.	Keep legible MSDS	No
17	Good Combustion Practices	Follow OEM manual	As occurs	No
Facility	Permit Renewal Submit at least 6 months before expiration	Permit is valid for 5 years, beginning on date permit issued and ends five (5) years later, GP #3, unless renewal submitted 6 months prior to expiration date	Every 5 years	Yes
11	BACT: Wind barrier	Keep barrier to prevent wind erosion	On going	No
12	Storage Piles	Keep dust down by wet suppression	Daily, as needed	No
13	Storage Bin	Enclosed Bin for Transport	On going	No
14	Oil Tanks	Nte 14,788 gallons in 24- hours and nte 175,056 gallons of oil per rolling 12 months	On going	No
15	Diesel Tanks	Nte 1,000 gallons in 24-	On going	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		hours and nte 52,000 gallons of diesel per rolling 12 months		
16	Diesel Tank	Nte 9,000 gallons in 24-hours and nte 468,000 gallons of gasoline per rolling 12 months	On going	No

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02	5%	§18.501 and A.C.A. §8-4-203 as referenced by §8-4- 304 and §8-4-311	Use natural gas fuel only
04, 05, 06, 11, 12, 13	5%	§18.501 and A.C.A. §8-4-203 as referenced by §8-4- 304 and §8-4-311	Weekly Observation
09 offsite	0%	§18.501 and A.C.A. §8-4-203 as referenced by §8-4- 304 and §8-4-311	Annual ADEQ Observation
17	20%	§19.503 and A.C.A. §8-4-203 as referenced by §8-4- 304 and §8-4-311	Observation <i>if</i> fire pump runs 3 consecutive hours, otherwise none required

20. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

21. GROUP A INSIGNIFICANT ACTIVITIES:

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

Source Name	Group A Cat.	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
500 Gallon Gasoline Tank	A-13			0.13				
Fire Pump Engine Diesel Tank – 260 Gallon	A-3			0.000135				
Hydraulic Oil – 350 Gallon	A-3			0.000135				
Hydraulic Oil – 275 Gallon	A-3			0.000135				
Hydraulic Oil – 340 Gallon	A-3			0.000135				
Hydraulic Oil – 370 Gallon	A-3			0.000135				
Compressor Oil – 130 Gallon	A-3			0.000135				
Hydraulic Oil – 60 Gallon	A-3			0.000135				
Hydraulic Oil – 100 Gallon	A-3			0.000135				
Hydraulic Oil – 160 Gallon	A-3			0.000135				
Hydraulic Oil – 130 Gallon	A-3			0.000135				
Lubricating Oil – 300 Gallon	A-3			0.000135				
Hydraulic Oil – 50 Gallon	A-3			0.00001				
Total				0.14				

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 #
2348-AOP-R3

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Anthony Forest Products
 Permit Number: 2348-AOP-R4
 AFIN: 70-00032

\$/ton factor	28.14	Annual Chargeable Emissions (tpy)	685.8
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 ☐

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		56.6	56.6	0	0	56.6
PM ₁₀		12.8	12.9	0.1		
PM _{2.5}		0	0	0		
SO ₂		0.6	0.6	0	0	0.6
VOC		599.2	599.2	0	0	599.2
CO		48.9	48.9	0		
NO _x		29.4	29.4	0	0	29.4
Total HAPs	<input type="checkbox"/>	46.31	46.31	0		