

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 1681-AOP-R4

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Anthony Forest Products Company
1236 Urbana Road
El Dorado, Arkansas 71730

3. PERMIT WRITER:

Charles Hurt

4. PROCESS DESCRIPTION AND SIC CODE:

SIC Description: Saw Mill (Pine)
SIC Code: 2421

5. SUBMITTALS: November 20, 2001, January 23, 2002

6. REVIEWER'S NOTES:

Anthony Forest Products Company operates a sawmill and ancillary operations in Urbana, Arkansas. This permit modification will be considered a significant modification due to the nature of the changes requested by the facility. The facility is requesting to add a 29.8 MMBtu/hr wood fired boiler(SN-16), a lumber drying kiln (SN-17), and to increase the permitted production capacity to 650,000 tons per year for the planer mill and the lumber kilns to 135,000,000 board feet per year to account for the increased production from the installation of a new kiln. The facility also requests Planer Cyclone #3 (SN-15) to be removed because it was never installed. The Planer Cyclone #1 does not collect the emissions from the re-cut saw in the Planer Mill. These emissions are included in the Planer Mill Fugitive Emissions (SN-07). Therefore, the source descriptions for the Planer Cyclone #1 and the Planer Mill Fugitive Emissions will be revised. The emissions from the sawmill are declared as an insignificant activity in the previous permit; however, these emissions from the sawmill do not classify as an insignificant activity and will be included in this revision as a permitted emission source. Emissions generated from the bark and saw dust storage piles (SN-18) will also be included in the permit as a permitted emission source.

Upon review of the application it was determined modeling with background concentrations included in the proposed PM₁₀ emissions to be necessary. The requested modeling was completed and submitted on January 23, 2002 along with changes to the permit application. These changes included reduced PM and PM₁₀ emissions from each of the boilers based on testing of a similar wood fired boiler. The original submittal of the application requested a plantwide VOC emission limit of 247.3 ton per year. The majority of VOCs are produced during the wood drying process at the kilns, and some from each of the boilers. Since the initial request was close to the PSD threshold, the facility was asked to demonstrate the accuracy of its estimates to within 0.5%, reduce proposed production rate, or revise its estimate with an emission factor that would bring the plantwide VOC emissions to less than 237.5 tons per year. The facility chose to find an updated emission rate of 2.26 lb VOC/MBF (plus 20% safety factor) from a 1996 NCASI technical bulletin for Arkansas Southern Yellow Pine. The new emission factor for the dry kilns resulted in the plantwide VOC emissions of 193.9 ton per year or less.

7. COMPLIANCE STATUS:

There are currently no enforcement issues or actions against the facility.

8. APPLICABLE REGULATIONS:

A. Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera) (Y/N) N

Has this facility underwent PSD review in the past (Y / N) N Permit #

Is this facility categorized as a major source for PSD? (Y/N) N

\$ 100 tpy and on the list of 28 (100 tpy)? (Y/N) N

\$ 250 tpy all other (Y/N) N

B. PSD Netting

Was netting performed to avoid PSD review in this permit? (Y/N) N

C. Source and Pollutant Specific Regulatory Applicability

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Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only]
SN-12, SN-13, SN-16	PM ₁₀ VOC SO ₂ CO NO _x	NSPS, Subpart Dc

9. EMISSION CHANGES:

The following table summarizes plantwide emission changes associated with this permitting action.

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 1681-AOP-R3	Air Permit 1681-AOP-R4	Change
PM	142.0	166.5	24.5
PM ₁₀	133.4	160.2	26.8
SO ₂	4.4	6.6	2.2
VOC	173.45	193.9	20.45
CO	131.4	197.1	65.7
NO _x	74.6	112.3	37.7
HAPs	0.6	1.5	0.9
Heavy Metals	4.0	4.2	0.2

10. MODELING:

A. Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ($\mu\text{g}/\text{m}^3$)	Averaging Time	Highest Concentration ($\mu\text{g}/\text{m}^3$)	% of NAAQS
PM ₁₀	51.1	50	Annual	46.36	93%
		150	24-hour	144.47	96%
NO _x	25.5	100	Annual	11.9	12%
VOC**	108.7	0.12	1-hour (ppm)	0.0162	14%
CO	45.0	10,000	8-hour	386.6	4%
		40,000	1-hour	924.0	2%

**Ozone standard. Used Scheffe equation to calculate increase in ozone.

11. 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 PAER was deemed by the Department 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?
Benzene	1.6	0.176	0.018	Yes
Formaldehyde	0.37	0.041	0.035	Yes
Napthalene	52	0.572	0.012	Yes

12. CALCULATIONS:

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SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
SN-02 SN-14 SN-17	industry average*	VOC: 2.8/1000BF	none		
SN-03 SN-04	AP-42 Table 10.4-1	0.03 gr/scf	Cyclones	80%	
SN-07	AP-42 Table 10.4-2	Vent: 1.0 lb/ton Loadout: 2.0 lb/ton	none		
SN-12 SN-13 SN-16	Testing* *	PM ₁₀ 0.16 lb/ MMBtu CO 0.5 lb/MMBtu SO ₂ 0.5 lb/hr NO _x 0.26 lb/MMBtu	Cyclones	N/A	Each boiler has cyclone control for PM and PM ₁₀ emissions. The boilers do not operate without these cyclones.
SN-12 SN-13 SN-16	AP-42	VOC 0.026 lb/MMBtu Organic HAPs 0.0264 lb/MMBtu Heavy Metals 0.0072 lb/MMBtu	Cyclones	N/A	Each boiler has cyclone control for PM and PM ₁₀ emissions. The boilers do not operate without these cyclones.

* Based on NCASI Technical Bulletin (1996) for Arkansas Southern Yellow Pine with a 20% safety factor added.

** Testing from similar equipment with a 20% safety factor added.

13. TESTING REQUIREMENTS:

This permit requires stack testing of the following source.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
16	CO	10	Pass- Once every five years Fail- every other year	Department Guidance
16	PM ₁₀	201A or 202	Pass- Once every five years Fail- every other year	Department Guidance

14. MONITORING OR CEMS

There are no parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc).

15. RECORD KEEPING REQUIREMENTS

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit (as established in permit)	Frequency *	Report (Y/N)**
02, 14, and 17	Throughput of lumber	135 MMBF/year	monthly	N
12, 13, and 16	Production of steam	489,600 lbs/24 hrs/boiler 178.7 MM lb/year/boiler	monthly	N
03, 04	Throughput of lumber	135 MMBY/year	monthly	N

* Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)

** Indicates whether the item needs to be included in reports

16. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
03, 04	20%	Dept. Guidance	daily observation
12, 13, and 16	20%	Dept. Guidance	daily observation

17. DELETED CONDITIONS:

The following Specific Conditions were included in the previous permit, but deleted for the current permitting action.

Former SC	Justification for removal
	No specific conditions have been deleted in this revision of the permit.

18. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

List all active permits for this facility which are voided/superseded/subsumed by issuance of this permit.

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19. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Phillip Murphy, P.E.
Engineering Supervisor, Air