

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1681-AOP-R10 AFIN: 70-00473

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Anthony Forest Products Company
1236 Urbana Road
Urbana, Arkansas 71768

3. PERMIT WRITER:

Charles Hurt, P.E.

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Sawmills
NAICS Code: 321113

5. SUBMITTALS:

6/14/2010

6. REVIEWER'S NOTES:

Anthony Forest Products Company (AFIN: 70-00473) operates a sawmill and ancillary operations in Urbana, Arkansas. Anthony submitted an application to replace two existing planer cyclones (SN-03 and SN-04) with a higher capacity cyclone in series with a baghouse (SN-21). Permitted PM and PM₁₀ limits decreased by 29.8 tpy and 11.9 tpy, respectively.

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 March 19, 2010 and determined to be operating in accordance with the existing permit, 1681-AOP-R9.

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? N
Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list?

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only]
12, 13, 16	N/A*	40 CFR Part 60, Subpart Dc
Facility	N/A**	40 CFR Part 63, Subpart DDDD

* The facility is subject to 40 CFR Part 60, Subpart Dc since each boiler's designed input heat capacity exceeds 10 MMBTU/hr. However, each boiler is less than 30 MMBTU/hr. Therefore, no pollutant standard or record keeping for this subpart is applicable.

** The facility is subject to 40 CFR Part 63, Subpart DDDD. Other than initial notification there are no applicable requirements for the existing operations.

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time for VOC and SO₂.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m ³)	Averaging Time	Highest Concentration (µg/m ³)	% of NAAQS
PM ₁₀	19.2	50	Annual	42.0*	84.0
		150	24-Hour	123.6*	82.4
CO	45.0	10,000	8-Hour	356	3.4
		40,000	1-Hour	616	1.5
NO _x	25.6	100	Annual	14.7	14.7

* Includes Little 2008 PM₁₀ background concentrations of 43 µg/m³ (24-hour) and 23 µg/m³ (Annual).

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*TLV	Proposed lb/hr	Pass?
Acrolein	0.2293	0.0252	0.73	N
Benzene	1.597	0.175	0.60	N
Formaldehyde	0.368	0.04048	1.2	N
Methanol	262.085	28.82935	4.10	Y
Styrene	85.562	9.41182	0.3	Y
HCl	7.458	0.82038	1.27	N
Mercury	0.01	0.0011	0.000128	Y
Cadmium	0.01	0.0011	0.00202	N
Chromium	0.01	0.0011	0.00185	N
Lead	0.012	0.00132	0.00199	N
Manganese	0.2	0.022	0.84	N

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	2.29	2.23	Y
Benzene	15.97	0.75	Y
Formaldehyde	15.0	3.64	Y
HCl	74.58	1.49	Y
Cadmium	0.1	0.0024	Y
Chromium	0.1	0.0022	Y
Lead	0.12	0.0027	Y
Manganese	2.0	0.23	Y
Nickel	1.0	0.0053	Y
Mercury	0.10	0.00015	Y

Other Modeling:

This facility is not a significant source of hydrogen sulfide or styrene. Therefore, odor modeling was not performed.

12. CALCULATIONS:

SN	Emission 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)
06	AP-42	0.024 lb PM/ton (debarking) 0.00048 lb PM ₁₀ /ton (debarking) 0.35 lb PM/ton (sawing) 0.007 lb PM ₁₀ /ton (sawing)	none	N/A	uncontrolled, non-fugitive PM emissions
02, 14	Industry Average NCASI	3.5 lb VOC/MBF 0.205 lb MeOH/MBF 0.016 lb Formaldehyde/MBF 0.006 lb Acrolein/MBF 0.039 lb Acetaldehyde/MBF	none	N/A	uncontrolled VOC and HAP emissions
12, 13, 16	AP-42, Test, Vendor	4,350 Btu/lb fuel 0.144 lb PM ₁₀ /MMBTU 0.5 lb SO ₂ /hr 0.286 lb NO _x /MMBTU 0.50 lb CO/MMBTU 0.017 lbVOC/hr	cyclones	99% for PM only	Boiler #3 March 2008 stack test for PM ₁₀ with 14% safety factor
20	AP-42	650,000 ton logs/yr 9750 VMT 0.6 mi of road	Wet Suppression	50%	
21	Vendor	0.01 gr/scf 42,800 cfm	Cyclone and Baghouse		Control efficiency included in emission factor

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

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

14. MONITORING OR CEMS

The facility is not required to maintain monitoring devices or CEMS.

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
12, 14	Wet Lumber Throughput	195 MMBF/yr	Monthly	Y
06	Logs Debarked and Sawed	650,000 tons/yr	Monthly	Y
12	Steam Produced	489,600 lb steam/day 178.7 MM lb steam/yr	Daily	Y
13	Steam Produced	489,600 lb steam/day 178.7 MM lb steam/yr	Daily	Y
16	Steam Produced	489,600 lb steam/day 178.7 MM lb steam/yr	Daily	Y
20	Wet Suppression Application	As needed to control visible emissions from traffic	As needed but no less than once a month	N

16. OPACITY:

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
03, 04	20	Regulation 19	Weekly observation
12,13,16	20	Regulation 19	Weekly observation
21	5	Regulation 18	Monthly observation

17. DELETED CONDITIONS:

Former SC	Justification for removal
5, 6, 7, 8	Source removed.

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18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)	
		PM ₁₀	VOC
Bark Storage Piles	A-13	0.41	
Sawdust Storage Piles	A-13	0.57	
Boiler Ash Storage Piles	A-13	0.75	
Planer Mill Storage Piles	A-13	0.006	
1000 gallon AST (gasoline)	A-13		0.67
500 gallon AST (diesel fuel)	A-3		<0.01
600 gallon AST (diesel fuel)	A-3		<0.01
1000 gallon AST (diesel fuel)	A-3		<0.01
1000 gallon AST (diesel fuel)	A-3		<0.01
A-13 Total		1.74	0.67
A-3 Total			<0.01

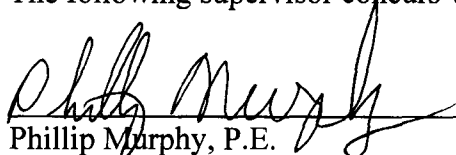
19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
1681-AOP-R9

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.


Phillip Murphy, P.E.
Engineering Supervisor, Air Division

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-01-10

Facility Name:
Permit Number:
AFIN:

\$/ton factor	22.07	Annual Chargeable Emissions (tpy)	537.36
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	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	-29.8
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	<input checked="" type="checkbox"/>	198.4	168.6	-29.8	-29.8	168.6
PM ₁₀	<input type="checkbox"/>	83	71.1	-11.9		
SO ₂	<input checked="" type="checkbox"/>	6.6	6.6	0	0	6.6
VOC	<input checked="" type="checkbox"/>	244.4	244.4	0	0	244.4
CO	<input type="checkbox"/>	197.1	197.1	0		
NO _x	<input checked="" type="checkbox"/>	112.3	112.3	0	0	112.3
Acetaldehyde	<input type="checkbox"/>	2.64	2.64	0		
Acrolein	<input type="checkbox"/>	2.21	2.21	0		
Benzene	<input type="checkbox"/>	1.8	1.8	0		
Cadmium	<input type="checkbox"/>	0.00884	0.00884	0		
Chromium	<input type="checkbox"/>	0.00815	0.00815	0		
Formaldehyde	<input type="checkbox"/>	2.9	2.9	0		
HCl	<input checked="" type="checkbox"/>	5.46	5.46	0	0	5.46
Lead	<input type="checkbox"/>	0.01	0.01	0		
Manganese	<input type="checkbox"/>	0.88	0.88	0		
Mercury	<input type="checkbox"/>	0.000562	0.000562	0		
Methanol	<input type="checkbox"/>	13.9	13.9	0		
Nickel	<input type="checkbox"/>	0.01945	0.01945	0		
Styrene	<input type="checkbox"/>	0.9	0.9	0		