

## STATEMENT OF BASIS

for the issuance of Draft Air Permit # : 1681-AOP-R7

**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, AR 71768

**3. PERMIT WRITER: Charles Hurt**

**4. PROCESS DESCRIPTION AND NAICS CODE:**

NAICS Description: All Other Miscellaneous Wood Product Manufacturing  
NAICS Code: 321999

**5. SUBMITTALS: 9/13/2006**

**6. REVIEWER'S NOTES:**

Anthony Forest Products Company (Anthony) operates a sawmill and ancillary operations in Urbana, Arkansas. Anthony submitted an application to incorporate the applicable requirements of 40 CFR Part 63, Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*. No physical changes or changes to method of operation were requested.

There are three boilers (SN-12, SN-13, and SN-16) at the facility which are subject to the requirements of Subpart DDDDD. All three boilers are classified as Existing Large Solid Fuel Boilers because each boiler exceeds 10 MMBTU/hr heat input capacity and combust wood waste. Anthony proposed demonstrating compliance for these boilers through fuel analysis for hydrogen chloride, mercury, and total selected metals (TSM) limits, excluding manganese. Anthony proposed compliance with the TSM standard by excluding manganese and complying with the health based compliance alternative (HBCA) for manganese separately.

Pollutant	Existing Large Boiler Burning Solid Fuel (lb/MMBtu)	Fuel Analysis Results (lb/MMBtu)	Stack Test Results (lb/hr)
HCl	0.09	0.014	N/A
Hg	$9 \times 10^{-6}$	1.44E-06	N/A
TSM	0.001	9.42E-03	N/A

Pollutant	Existing Large Boiler Burning Solid Fuel (lb/MMBtu)	Fuel Analysis Results (lb/MMBtu)	Stack Test Results (lb/hr)
TSM (excluding Mn)	0.001	1.16E-04	N/A
As	Included in TSM	ND	N/A
Be	Included in TSM	ND	N/A
Cd	Included in TSM	2.27E-05	N/A
Cr	Included in TSM	2.09E-05	N/A
Pb	Included in TSM	2.57E-05	N/A
Mn	Included in TSM	9.31E-03	SN-12: 0.066 SN-13: 0.062 SN-16: 0.049
Ni	Included in TSM	4.99E-05	N/A
Se	Included in TSM	ND	N/A

Based on the fuel analysis, Anthony complies with emission standards in Subpart DDDDD for HCl, Hg, and TSM (excluding Mn). Included in the application is a Manganese Health Based Compliance Alternative (HBCA) demonstration. The HBCA utilized the results of the manganese testing and the table look-up method for the HBCA eligibility demonstration.

**7. COMPLIANCE STATUS:**

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

**8. APPLICABLE REGULATIONS:**

**PSD Applicability**

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera)?	N	
Has this facility undergone PSD review in the past?	N	Permit#
Is this facility categorized as a major source for PSD?	N	
≥ 100 tpy and on the list of 28 (100 tpy)?	N	
≥ 250 tpy all other	N	

**PSD Netting**

Was netting performed to avoid PSD review in this permit? N

**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
12, 13, 16	HCl, Hg, TSM, Opacity	40 CFR Part 63, Subpart DDDDD

\* 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.

**9. EMISSION CHANGES:**

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

<b>Plant Wide Permitted Emissions (ton/yr)</b>			
<b>Pollutant</b>	<b>Air Permit #1681-AOP-R6</b>	<b>Air Permit #1681-AOP-R7</b>	<b>Change</b>
PM	189.6	189.6	0
PM <sub>10</sub>	139.1	139.1	0
SO <sub>2</sub>	6.6	6.6	0
VOC	244.4	244.4	0
CO	197.1	197.1	0
NO <sub>x</sub>	112.3	112.3	0
Acrolein	1.80	1.80	0
Benzene	1.80	1.80	0
Formaldehyde	2.90	2.90	0
HCl	5.49	5.46	0.03
Methanol	13.90	13.90	0
Mercury	1.88E-04	1.88E-04	0
Styrene	0.90	0.90	0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #1681-AOP-R6	Air Permit #1681-AOP-R7	Change
TSM	3.65	3.65	0
TSM (excluding Mn)	0.0451	4.66E-02	1.5E-03
Arsenic	0.00	0.00	0
Beryllium	0.00	0.00	0
Cadmium	8.84E-03	8.84E-03	0
Chromium	8.11E-03	8.15E-03	4.0E-05
Lead	8.69E-03	1.00E-02	1.30E-03
Manganese	3.65	0.86	-2.79
Nickel	1.95E-02	1.95E-02	0
Selenium	0.00	0.00	0

**10. MODELING:**

**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 <sub>10</sub>	31.9	50	Annual	49.4	98.8%
		150	24-hour	142.7	95.4%
NO <sub>x</sub>	25.6	100	Annual	1.2	1.0%
VOC	244.4	0.12	1-hour (ppm)	0.0162	14%
CO	45.0	10,000	8-hour	24.6	<1.00%
		40,000	1-hour	58.9	<1.0%

**Odor Modeling**

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.

**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 deemed PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV ( $\text{mg}/\text{m}^3$ )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Acrolein	0.2293	0.0252	0.6	N

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Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Benzene	1.597	0.175	0.6	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 was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Pollutant	(PAIL, µg/m <sup>3</sup> ) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m <sup>3</sup> )	Pass?
Acrolein	2.29	1.42	Y
Benzene	15.97	1.42	Y
Formaldehyde	3.68	1.42	Y
HCl	74.58	3.01	Y
Cadmium	0.1	0.00478	Y
Chromium	0.1	0.00438	Y
Lead	0.12	0.00471	Y
Manganese	2.0	1.96	Y
Nickel	1.0	0.0106	Y

**11. CALCULATIONS:**

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/unc ontrolled, etc)
03	AP-42	0.03 gr/scf 27,000 cfm	none	N/A	planer mill cyclone #1

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/unc controlled, etc)
04	AP-42	0.03 gr/scf 13,000 cfm	none	N/A	planer mill cyclone #2
06	AP-42	0.02 lb PM/ton (debarking) 0.011 lb PM <sub>10</sub> /ton (debarking) 0.35 lb PM/ton (sawing) 0.2 lb PM <sub>10</sub> /ton (sawing)	none	N/A	uncontrolled, non-fugitive PM emissions
07	AP-42	1.0 lb PM/ton (vent) 0.58 lb PM <sub>10</sub> /ton (vent) 2.0 lb/ton (loadout) 1.2 lb PM <sub>10</sub> /ton (loadout)	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	none	N/A	uncontrolled VOC and HAP emissions
12, 13, 16	AP-42	4,350 Btu/lb fuel	cyclones	99%	Heating Value for Fuel (wood waste)
18	AP-42	1 lb PM/ton wood 0.36 lb PM <sub>10</sub> /ton wood	none	N/A	uncontrolled PM emissions

**12. TESTING REQUIREMENTS:**

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
16	PM <sub>10</sub>	201A or 202	Pass- Once every five years Fail- Once every other year	Dept. Guidance
12 13 16	Mn	29	Once every five years	Mn HBCA Compliance Demonstration
12 13 16	HCl, Hg, and TSM (excluding Mn)	Fuel Analysis*	Once every five years	40 CFR Part 63, Subpart DDDDD

\* Anthony Forest Products received authorization to perform alternate tests methods from the EPA following review of the site-specific plan for fuel analysis sampling.

**13. MONITORING OR CEMS**

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

**14. 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)**
12, 14	Wet Lumber Throughput	195 MMBF/yr	Monthly	Y
06	Logs Debarked and Sawed	650,000 tons/yr	Monthly	Y
07	Dry Lumber Throughput	195 MMBF/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

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

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

**15. OPACITY**

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
03, 04	20	Regulation 19	Daily observation
12,13,16	20	40 CFR Part 63, Subpart DDDDD	Daily observation

**16. DELETED CONDITIONS:**

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
25	Mn testing requirement in SC #24 has been satisfied and HBCA demonstration appears to be complete.

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**17. VOIDED, SUPERSEDED OR SUBSUMED PERMITS**

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

<b>Permit #</b>
1681-AOP-R6

**18. CONCURRENCE BY:**

The following supervisor concurs with the permitting decision:

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