

## STATEMENT OF BASIS

for the issuance of Air Permit # 1140-AOP-R3

**1. PERMITTING AUTHORITY:**

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

**2. APPLICANT:**

Anthony Timberlands, Inc.  
930 Cabe Street  
Malvern, Arkansas 72104

**3. PERMIT WRITER:** Bryan Leamons

**4. NAICS:**

NAICS Description: Sawmills  
NAICS Code: 321113

**5. SUBMITTALS:** 10/25/03

**6. REVIEWER'S NOTES:**

Anthony Timberlands, Inc. currently operates a pine sawmill located at 930 Cabe Street in Malvern, Hot Spring County, Arkansas. This permitting action is a renewal of the previous version of the permit and contains no modifications. This permit incorporates the necessary requirements of 40 CFR Part 64, *Compliance Assurance Monitoring* (CAM), including the approved CAM Plan at sources SN-18 and SN-19, Wood-fired Boilers.

**7. COMPLIANCE STATUS:**

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

The CAO tracking Database returned no records for this facility as of 10/29/03.

**8. APPLICABLE REGULATIONS:**

**PSD Applicability**

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

cetera?

Has this facility undergone PSD review in the past?	Y/N	Permit#	N/A
Is this facility categorized as a major source for PSD? ≥ 100 tpy and on the list of 28 (100 tpy)?	Y/N	N	
≥ 250 tpy all other	Y/N	N	

**PSD Netting**

Was netting performed to avoid PSD review in this permit?	Y/N	N
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Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation
NONE		

**9. EMISSION CHANGES:**

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

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 1140-AOP-R2	Air Permit 1140-AOP-R3	Change
PM	172.3	172.3	0
PM <sub>10</sub>	117.0	117.0	0
SO <sub>2</sub>	7.6	7.6	0
VOC	220.2	220.2	0
CO	193.4	193.4	0
NO <sub>x</sub>	85.6	85.6	0
Acrolein	0.59	0.59	0
Arsenic	0.01	0.01	0
Benzene	0.62	0.62	0
Cumene	0.40	0.40	0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 1140-AOP-R2	Air Permit 1140-AOP-R3	Change
Diethylene glycol monomethyl ether	3.70	3.70	0
Formaldehyde	0.65	13.25	0
Hydrogen Chloride	2.78	2.78	0
Methanol	0.10	12.7	0
POM	0.01	0.01	0
Phenol	0.01	0.01	0
Styrene	0.28	0.28	0
Xylene	0.40	0.40	0
Chromium Hex	0.01	0.01	0
Manganese	0.24	0.24	0
Lead	0.01	0.01	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>	29.1	50	Annual	7.64	15.3%
		150	24-hour	72.28	48.2%
CO	64.1	10,000	8-hour	106.2	1.2%
		40,000	1-hour	54.59	0.14%

## 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 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	2.29	0.252	0.268	N
Arsenic	0.009	0.00099	0.001472	N
Benzene	1.60	0.176	0.28	N
Chromium Hex	0.05	0.0055	0.00234	Y
Cumene	245.7	27.03	0.40	Y
DEME	96.66	10.63	3.70	Y
Formaldehyde	1.5	0.165	0.294	N
Hydrogen Chloride	7.5	0.825	1.27	N
Manganese	0.2	0.022	0.107	N
Methanol	262.0	28.82	8.29	Y
POM	5.25	0.578	0.000468	Y
Phenol	19.25	2.12	0.00342	Y
Styrene	82.5	9.08	0.127	Y
Xylene	434.1	47.751	0.4	Y

### 2nd Tier Screening (PAIL)

ISCST3 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, $\mu\text{g}/\text{m}^3$ ) = 1/100 of Threshold Limit Value	Modeled Concentration ( $\mu\text{g}/\text{m}^3$ )	Pass?
Acrolein	22.93	0.1021	Y
Arsenic	0.09	0.0005600	Y
Benzene	15.97	0.1067	Y
Chromium Hex	0.5	0.0008915	Y
Formaldehyde	15.0	6.4	Y
Hydrogen Chloride	75.0	0.4839	Y
Manganese	2.0	0.04077	Y

## 12. CALCULATIONS:

SN	Emission Factor Source	Emission Factor and units	Control Equipment	Control Equipment Efficiency	Comments
01	Memo Dated 1-7-1998 in Permit Guidance Manual	0.02 lb/ton	Cyclone	80%	Green Chips Storage Factor
02,03	AP-42	Natural Gas Combustion Factors	---	---	Uncontrolled factors
09	AP-42	0.35 lb/ton	Cyclone	80%	Old AP-42 Emission Factor for Log Sawing
10	Memo Dated 1-7-1998 in Permit Guidance Manual	0.5 lb/ton for PM 0.00018 lb/ton PM <sub>10</sub>	---	---	Kiln Dried Shavings Loading Factor
11,12,16	ADEQ Softwood Factor	VOC 3.5 lb/1,000 BF MeOH 0.210 lb/MBF Formaldehy 0.016 lb/MBF	---	---	---
13	Sieve Testing of Competitor's Lumber Mill	0.6 lb/ton for PM 0.00018 lb/ton PM <sub>10</sub>	---	---	Factor accepted since greater than the Kiln Dried Shavings Loading Factor

SN	Emission Factor Source	Emission Factor and units	Control Equipment	Control Equipment Efficiency	Comments
14	Memo Dated 1-7-1998 in Permit Guidance Manual	0.04 lb/ton	---	---	Green Chips Loading Factor
15	TANKS3	—	—	—	Previous permit. Emissions are based upon TANKS3 program to get the lb/hr.
17	MSDS	---	---	---	Worst case emissions calculated by multiplying maximum pollutant content times the rate of usage (1,334 gal/yr). Hourly emissions based on 2,000 hrs/yr.
18 and 19	AP-42	Wood-Waste combustion factors	---	---	Each boiler is approximately 33.446 MMBTU/hr

### 13. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
18 and 19	CO	10	Initial	Recent Departmental protocol indicates CO testing for wood-fired boilers

### 14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and the need for records included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
NONE				

### 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	Frequency	Report
Plantwide	Lumber Production	120,000,000 board feet per 12 months	Monthly	Y
15	Diesel Fuel Usage	150,000 gallons of diesel fuel per 12 months	Monthly	Y
15	Gasoline Usage	50,000 gallons of gasoline per 12 months	Monthly	Y
17	Dip Chemical Usage	1,334 gallons of dip chemicals per 12 months	Monthly	Y
17	Dip Chemical VOC Content (MSDS)	6.72 lb/gal	As Needed	N
17	Dip Chemical HAP Content (MSDS)	Methanol = 0.10 lb/gal    Diethylene glycol monomethyl ether = 5.41 lb/gal Cumene = 0.46 lb/gal    Xylene = 0.46 lb/gal	As Needed	N
17	HAP Content Substitutions	See Permit	Monthly	N
01,09,10 13,14	Records of Visible Emissions in Excess of Permitted Opacity	Opacity limits are varied - see following section.	As Needed	N

## 16. OPACITY

SN	Opacity %	Justification	Compliance Mechanism
01,09,18,19	20%	Departmental Guidance	Daily Observation
02,03	5%	Departmental Guidance	Inspector's Observation
10,13,14	20%	Departmental Guidance	Weekly Observation

**17. DELETED CONDITIONS:**

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
NONE	

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

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

Permit #
1140-A, AR-1; 1140-AOP-R0, R1, R2

**19. CONCURRENCE BY:**

The following supervisor concurs with the permitting decision:

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*Phillip Murphy, P.E.*