

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1140-AOP-R8 AFIN: 30-00084

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

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

3. PERMIT WRITER:

Elliott Marshall

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
4/24/2020	Renewal	<ul style="list-style-type: none"><li>-Update Methanol emissions at Kilns SN-11, 12 and 16.</li><li>-Add acetone where applicable and Revise HAPs totals throughout permit.</li><li>-Revise calcs at SN-18, 19 and 24.</li><li>Change wood waste limit at boilers SN-18 and SN-19.</li><li>-Corrected rounding.</li><li>-Add total HAP limit of 24.04 at SN-02, 03, 11, 12, 16, 18, 19 and 24.</li><li>-Add Plantwide Single HAP limit of 9.66 tpy.</li></ul>

6. REVIEWER'S NOTES:

1. Move SN-21 to group A-13 Insignificant Activities (IA) and remove 40-gallon diesel tank from group A-3 IA.
2. Update Methanol emissions for Kilns (SN-11, 12 & 16). This results in methanol emissions less than 10 tpy, classifying the facility as an area source of HAPs.
3. Remove NESHAP Subpart DDDDD requirements and add NESHAP Subpart JJJJJ requirements at SN-18 and 19. SN-02 and 03 are not subject to NESHAP JJJJJ; they are gas-fired boilers and are exempt per 63.11195(e).
4. Revise calculations at SN-18, SN-19 and SN-24 and revise all HAPs totals to be Total Other HAPs.
5. Reduce wood waste throughput at SN-18 and SN-19 from 33,950 tons per year per boiler to 55,000 tons of wood-waste fuel per year combined.
6. Add permit shield.
7. Add NESHAP Subpart CCCCCC requirements to SN-15.
8. Add off-site opacity condition to SN-20.
9. Add Total HAP limit of 24.04 tpy (Plantwide Condition #12) at Sources SN-02, 03, 11, 12, 16, 18, 19 and 24.
10. Add Single HAP limit of 9.66 tpy (Methanol, Plantwide Condition #13).

Permitted emissions are increasing/decreasing by -0.9 tpy PM, -0.7 tpy PM<sub>10</sub>, -0.4 tpy VOC, 0.2 tpy NO<sub>x</sub>, 0.08 tpy Acetone, 0.004 tpy Lead, 0.50 tpy Hydrogen Chloride, 0.0182 tpy Mercury, -13.65 tpy Other HAPs and -2.94 tpy Methanol.

Acetone, Chlorine, Hydrogen Chloride and Tetrachloroethene are Chargeable HAPs and/or air contaminants and were denoted as such on the fee sheet.

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 recently fulfilled all requirements of Order and Agreement LIS: 19-123 and the CAO has been closed. This CAO was the result of an out of compliance inspection (December 11, 2018) where the facility failed to maintain monitoring data below thresholds established in the permit (SC#101 of the permit 1140-AOP-R7).

There are no active or pending enforcement actions.

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? N

- *Single pollutant  $\geq 100$  tpy and on the list of 28 or single pollutant  $\geq 250$  tpy and not on list*

If yes for 8(b), explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
18 and 19	PM	40 C.F.R. § 64, C.A.M.
18 and 19	HAPs	40 C.F.R. § 63, Subpart JJJJJ
23	HAPs	40 C.F.R. § 63, Subpart ZZZZ
24	Opacity limits only.	40 C.F.R. § 60, Subpart CCCC
24	CO, NO <sub>x</sub> , PM	40 C.F.R. § 60, Subpart IIII
15	HAPs	40 C.F.R. § 63, Subpart CCCCC

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? Y

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? Y

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
SN-11, 12 & 16	40 CFR Part 63, Subpart DDDD	This facility is no longer a Major Source of HAPs.
SN-02, 03, 18 & 19	40 CFR Part 63, Subpart DDDDD	This facility is no longer a Major Source of HAPs.
SN-02 & 03	40 CFR Part 60, Subpart Dc	SN-02 and 03 are exempt from NSPS Subpart Dc because they were installed in 1988; subpart Dc only applies to boilers which construction, modification, or reconstruction commenced after June 9, 1989.

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

## 12. 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 ADEQ Air Permit Screening Modeling Instructions.

### b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Department procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

#### 1<sup>st</sup> 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 ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV ( $\text{mg}/\text{m}^3$ )	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acrolein	0.2	0.022	1.03	No
Antimony	0.5	0.055	2.04E-03	Yes
Arsenic	0.01	0.0011	5.70E-03	No
Beryllium	0.00005	0.0000055	2.85E-04	No
Cadmium	0.01	0.0011	1.11E-03	No
Chlorine	0.5	0.055	2.04E-01	No
Chromium 6	0.0002	0.000022	9.70E-04	No
Chromium	0.5	0.055	5.43E-03	Yes
Cobalt	0.02	0.0022	1.68E-03	Yes

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Formaldehyde	1.5	0.165	1.77	No
Hydrogen Chloride	2.98	0.3278	5.11	No
Lead	0.05	0.0055	1.24E-02	No
Manganese	0.02	0.0022	4.14E-01	No
Mercury	0.025	0.00275	1.06E-03	Yes
Selenium	0.2	0.022	7.25E-04	Yes

## 2<sup>nd</sup> 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.

All modeling was performed using 2016 Little Rock Met data and 1<sup>st</sup> high concentrations.

Pollutant	PAIL (µg/m <sup>3</sup> ) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m <sup>3</sup> )	Pass?
Acrolein	2.0	0.267	Yes
Arsenic	0.1	1.47E-03	Yes
Beryllium	0.0005	7.0E-05	Yes
Cadmium	0.1	4.8E-04	Yes
Chlorine	5.0	0.053	Yes
Chromium 6	0.002	5.3E-04	Yes
Formaldehyde	15	5.423	Yes
Hydrogen Chloride	29.8	1.27	Yes
Lead	0.5	5.7E-04	Yes
Manganese	0.2	0.107	Yes

## 13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Stack testing	<u>lb/ton</u> PM = 0.02 PM <sub>10</sub> = 0.2% of PM	Cyclone	80%	
02, 03	AP-42 Chapter 1 Section 1.4	<u>lb/MMsf</u> PM/PM <sub>10</sub> = 7.6 SO <sub>2</sub> = 0.6 VOC = 5.5 CO = 84 NO <sub>x</sub> = 100			
09	AP-42	<u>lb/ton</u> PM = 0.35 PM <sub>10</sub> = 0.35	Cyclone	80%	
10	ADEQ memo	<u>lb/ton</u> PM = 0.5 PM <sub>10</sub> = 0.2% of PM			
11,12,16	NCASI for drying kilns	<u>lb/MBF</u> VOC = 3.5 Formaldehyde = 0.016 Methanol = 0.161			
13	ADEQ memo	<u>lb/ton</u> PM = 0.16 PM <sub>10</sub> = 0.2% of PM			
14	ADEQ memo	<u>lb/ton</u> PM = 0.04 PM <sub>10</sub> = 0.2% of PM			
15	EPA's Tank 4.0.9d				
18, 19	AP-42 Section 1.6 And MACT limits	<u>lb/MMBtu</u> PM = 0.28 PM <sub>10</sub> = 0.297 SO <sub>2</sub> = 0.025 VOC = 0.017 NO <sub>x</sub> = 0.22 CO = 466 ppmvd	Multiclone		1,000 HP each  HAPs based on Boilers Bubbled at 489,949.30 MMBtu/yr and 55,000 tons of wood waste per year combined

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
20	AP-42 Section 13.2.1	Equation: $E = k(sL/2)^{0.65} * (W/3)^{1.5} - C$			
23	AP-42 Chapter 3 Table 3.3-1	<u>lb/MMBTU</u> PM/PM <sub>10</sub> = 0.31 NO <sub>x</sub> = 4.41 SO <sub>2</sub> = 0.29 CO = 0.95 VOC = 0.36			190 HP
24	Testing AP-42 or MACT limits for engine	<u>ACD: lb/ton</u> PM/PM <sub>10</sub> = 0.11 NO <sub>x</sub> = 1.1 SO <sub>2</sub> = 0.1 CO = 0.94 VOC = 1.1  <u>Engine: lb/hp-hr</u> PM/PM <sub>10</sub> = 2.20E-03 NO <sub>x</sub> = 3.10E-02 SO <sub>2</sub> = 2.05E-03 VOC = 2.51E-03  CO = 5 g/kW-hr	None	N/A	20,000 tons/yr wood waste

## 14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
24	Opacity	Method 9	Initial and Annual	40. C.F.R. § 60 Subpart CCCC

## 15. 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)
----	--	------------------------------------	-----------	--------------

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
18, 19	Opacity	COMS	Continuously	N

## 16. 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)
15	Fuel Usage	180,000 gallons diesel and 50,000 gallon gasoline per 12 month	Monthly	Y
18, 19	Opacity Observations	N/A	Daily	N
	Wood waste	55,000 tons per year combined	Monthly	Y
	Records required by NESHAP JJJJJ §63.11225	N/A	As required	N
23	Hours of Operation	500 hours per 12 month	Monthly	Y
	Records required by NESHAP ZZZZ §63.6655	N/A	As Required	N
24	Wood Combusted	20,000 tons	Monthly	Y
	Initial Opacity Test results	N/A	N/A	N
Plantwide	Throughput	120,000,000 BF per consecutive 12-month period	Monthly	Y
Plantwide	Plantwide CO Emissions	254.4 tpy CO	Monthly	Y
02, 03, 11, 12, 16, 18, 19, and 24	Total HAP emissions	24.04 tons per rolling 12-month period (PW #12)	Monthly	Y
Plantwide	Single HAP	9.66 tpy	Monthly	Y

## 17. OPACITY:



SN	Opacity	Justification for limit	Compliance Mechanism
01, 09, 10, 13, 14, 18, 19	20%	Reg.19.503	Daily Observation
23	20%	Reg.19.503	Weekly Observation
02, 03, 20	5%	Reg.18.501	Daily Observation
24	10% 35% startup 20%	NSPS NSPS Reg 19	Daily Observation

## 18. DELETED CONDITIONS:

Former SC	Justification for removal
#10 - #18	These were NESHAP DDDDD conditions. SN-02 and SN-03 are no longer subject to any subpart.
#51 - #120	These were NESHAP DDDDD conditions. NESHAP JJJJJ requirements have taken place of the previous specific conditions.
#123 and #124	This source, previously SN-21, has been moved to A-13 Insignificant Activity.

## 19. GROUP A INSIGNIFICANT ACTIVITIES:

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

Source Name	Group A Category	Emissions (tpy)						
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
Logo painting operations	A-13	-	-	0.11	-	-	-	-

## 20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1140-AOP-R7

## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Anthony Timberlands, Inc.  
 Permit Number: 1140-AOP-R8  
 AFIN: 30-00084

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	<u>473.59725</u>
Permit Type	Modification	Permit Fee \$	<u>1000</u>

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) -0.202747

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		128.5	127.6	-0.9	-0.9	127.6
PM <sub>10</sub>		96	95.3	-0.7		
PM <sub>2.5</sub>		0	0	0		
SO <sub>2</sub>		8.9	8.9	0	0	8.9
VOC		228.9	228.5	-0.4	-0.4	228.5
CO		245.4	245.4	0		
NO <sub>x</sub>		100.9	101.1	0.2	0.2	101.1
Lead	<input type="checkbox"/>	0.046	0.05	0.004		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
HCl	<input checked="" type="checkbox"/>	6.6	7.1	0.5	0.5	7.1
Mercury	<input type="checkbox"/>	0.0018	0.02	0.0182		
Methanol	<input type="checkbox"/>	12.6	9.66	-2.94		
Other HAPs	<input type="checkbox"/>	22.11	8.46	-13.65		
Acetone	<input checked="" type="checkbox"/>	0	0.08	0.08	0.08	0.08
Chlorine	<input checked="" type="checkbox"/>	0	0.302653	0.302653	0.302653	0.302653
Tetrachloroethene	<input checked="" type="checkbox"/>	0	0.0146	0.0146	0.0146	0.0146