

## STATEMENT OF BASIS

*for the issuance of Draft Air Permit # 456-AOP-R1*

**1. PERMITTING AUTHORITY:**

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

**2. APPLICANT:**

Bearden Lumber Company, Inc.  
Second and Plum Streets  
Bearden, Arkansas 71720

**3. PERMIT WRITER:**

Nancy Spencer Rogers

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

SIC Description: softwood dressed lumber and chips  
SIC Code: 2421

**5. SUBMITTALS:** July 5, 2000; September 7, 2000

**6. REVIEWER'S NOTES:**

Bearden Lumber Company owns and operates a pine sawmill physically located at Second and Plum Streets in downtown Bearden (Ouachita County), Arkansas. The facility was established in 1945 and operates under Standard Industrial Classification (SIC) Code Number 2421 (i.e., softwood rough and dressed lumber and chips). In this permit, Permit #456-AOP-R1, the facility has permitted the installation of three new lumber drying kilns (SN's 14-16) to replace the three lumber drying kilns (old SN's 14-16) that burned down in April 2000. The increase from the installation of the kilns is 236.3 tpy VOC.

The Bearden facility was incorrectly classified as a major stationary source pursuant to 40 CFR 52.21, *Prevention of Significant Deterioration (PSD)* regulations, in Permit #456-AOP-R0. The facility actually should have been classified as a minor source for PSD because the VOC emissions were permitted at 248.1 tpy. It was determined that the installation of the three new kilns (SN's 14-16) did not subject the facility to PSD regulation because even after the installation the facility emissions would be permitted

below the 250 tpy emission limit. However, if in the future it is determined that the facility should have been permitted as a major source or certain limits such as the kiln throughputs are relaxed, the kilns may be subject to a retroactive PSD review. The facility was previously permitted as a major source for PSD in Permit #465-AR-1. It operated as a permitted minor source for less than a year. The facility may not be able to use the one time increase above the significance level to avoid PSD requirements.

**7. COMPLIANCE STATUS:**

The facility is in compliance at the time of the drafting of this permit.

**8. APPLICABLE REGULATIONS:**

**A. Applicability**

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera) (Y/N) Y  
 Has this facility underwent PSD review in the past (Y/N) Y Permit # 456-AOP-R0  
 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) Y

**B. PSD Netting**

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

**C. Source and Pollutant Specific Regulatory Applicability**

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only]
SN-01, SN-22		40 CFR 60, 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 456-AOP-R0	Air Permit 456-AOP-R1	Change
PM	149.3	149.3	---

Permit #: 456-AOP-R1

CSN #: 52-0035

Page 3 of 7

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 456-AOP-R0	Air Permit 456-AOP-R1	Change
PM <sub>10</sub>	149.3	149.3	---
SO <sub>2</sub>	2.6	2.6	---
VOC	248.1	247.9	-0.2
CO	177.8	177.8	---
NO <sub>x</sub>	13.0	13.0	---
Cumene	0.04	0.04	---
Xylene	0.08	0.08	---

**10. MODELING:**

**A. Criteria Pollutants**

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m <sup>3</sup> )	Averaging Time	Highest Concentration (µg/m <sup>3</sup> )	% of NAAQS
PM <sub>10</sub>	59.4	50	Annual	2.5016	5%
		150	24-hour	25.01924	17%
CO	69.2	10,000	8-hour	319.5826	3%
		40,000	1-hour	1113.573	3%

**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<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Cumene	246.0	27.06	0.04	Yes
Xylene	434.0	47.74	0.08	Yes

**12. CALCULATIONS:**

Permit #: 456-AOP-R1

CSN #: 52-0035

Page 4 of 7

SN	Pollutant	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)
01 02 03	PM <sub>10</sub>	Hurst Boiler Info (SN-01&SN-22)	0.2 lb/MMBtu	Zurn Multi- cyclone	95%	Facility limited to 135 MMBF of lumber per any 12 consecutive months. This in turn limits the amount of steam that must be produced to dry that amount of lumber.
		AP-42	6.0 lb/ton			
	SO <sub>2</sub>	AP-42	0.075 lb/ton	None	N/A	
	VOC	AP-42	0.18 lb/ton			
	CO	Hurst Boiler Info	0.3 lb/MMBtu			
NO <sub>x</sub>	AP-42	0.38 lb/ton				
04	PM <sub>10</sub>	Sieve Testing	0.02 lb/ton	Cyclone	80%	Sieve testing conducted at a competitor's softwood lumber mill.
05	PM <sub>10</sub>	Sieve Testing	0.04 lb/ton	Cyclone	80%	Sieve testing conducted at a competitor's softwood lumber mill.
06	PM <sub>10</sub>	AP-42	1.0 lb/ton	Cyclone	80%	Stack test performed on similar cyclone at the pine sawmill in Malvern, concluded that the sawdust bin cyclone captures 99.99% of the PM generated from the sawing operations. The 80% capture efficiency is a conservative estimate.
07	PM <sub>10</sub>	AP-42	0.35 lb/ton	Cyclone	80%	Stack test performed on similar cyclone at the pine sawmill in Malvern, concluded that the sawdust bin cyclone captures 99.99% of the PM generated from the sawing operations. The 80% capture efficiency is a conservative estimate.

Permit #: 456-AOP-R1

CSN #: 52-0035

Page 5 of 7

SN	Pollutant	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)
09	PM <sub>10</sub>	Sieve Testing	0.3 lb/ton	Cyclone	80%	Sieve testing conducted at a competitor's softwood lumber mill. Stack test performed on similar cyclone at the pine sawmill in Malvern, concluded that the sawdust bin cyclone captures 99.99% of the PM generated from the sawing operations. The 80% capture efficiency is a conservative estimate.
11	PM <sub>10</sub>	Sieve Testing	0.3 lb/ton	Cyclone	80%	Sieve testing conducted at a competitor's softwood lumber mill. Stack test performed on similar cyclone at the pine sawmill in Malvern, concluded that the sawdust bin cyclone captures 99.99% of the PM generated from the sawing operations. The 80% capture efficiency is a conservative estimate.
12 13 14 15 16	VOC	ADEQ Softwood Drying Factor	3.5 lb/1000 BF	None	N/A	Facility limited to 135 MMBF of lumber per any 12 consecutive months.
17	VOC	Chemical Throughput & VOC Content	6000 gal/yr & 1.44 lb VOC/gal	None	N/A	Facility limited to 6000 gallons per year and VOC and HAP contents as listed in the Emission Factor units. Max lb/hr emissions are based on 2000 hr/yr and are considered very conservative.
	HAPs	Chemical Throughput & HAP Content	6000 gal/yr & 0.012 lb cumene/gal 0.027 lb xylene/gal			
18 19 20 21	VOC	Tanks	lb/hr	None	N/A	No tank large enough to be subject to Kb.

**13. TESTING REQUIREMENTS:**

This permit requires stack testing of the following sources.

Not Applicable

**14. MONITORING OR CEMS**

The following are parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

Not Applicable

**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)**
01	Fuel combusted each day.	N/A (NSPS Dc)	Daily	Yes
22	Fuel combusted each day.	N/A (NSPS Dc)	Daily	Yes
15	Board feet of Lumber dried	31.05 million	Monthly	Yes
12,13,14,15,16	Board feet of Lumber dried	135 million	Monthly	Yes
17	Dipping chemical usage & VOC content	6000 gallons & 1.44 lb/gal VOC	Monthly	Yes
	Max HAP percent content in dipping chemicals (Allows for substitution)	0.15% Cumene 0.35% Xylene	Monthly	Yes
18	Gasoline throughput	120,000 gallons	Monthly	Yes
19	Diesel throughput	240,000 gallons	Monthly	Yes
20	Diesel throughput	240,000 gallons	Monthly	Yes
21	Kerosene throughput	1,500 gallons	Monthly	Yes

\* 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)
01	20	NSPS Dc (Zurn Multi-cyclone)	Daily Observation
02	20	Dept. Guidance (Zurn Multi-cyclone)	Daily Observation
03	20	Dept. Guidance (Zurn Multi-cyclone)	Daily Observation
22	20	NSPS Dc (Zurn Multi-cyclone)	Daily Observation
04	20	Dept. Guidance (Cyclone)	Daily Observation
05	20	Dept. Guidance (Cyclone)	Daily Observation
06	20	Dept. Guidance (Cyclone)	Daily Observation
07	20	Dept. Guidance (Cyclone)	Daily Observation
09	20	Dept. Guidance (Cyclone)	Daily Observation
11	20	Dept. Guidance (Cyclone)	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
41, 42	Kilns are all bubbled

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

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

Permit #
456-AOP-R0

**19. CONCURRENCE BY:**

The following supervisor concurs with the permitting decision:

\_\_\_\_\_  
 Thomas Rheume, P.E.