

STATEMENT OF BASIS

for issuance of Draft Air Permit No. 189-AOP-R2.

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Bean Lumber Company, Inc.
Highway 8 North
Glenwood, AR 71943.

3. PERMIT WRITER:

David Triplett

4. PROCESS DESCRIPTION AND SIC CODE:

Lumber Mill
SIC Code: 2421

5. SUBMITTALS:

July 21, 2000
September 26, 2000
November 20, 2000
January 18, 2001
January 23, 2001

6. REVIEWER'S NOTES:

Bean Lumber Company, Inc. owns and operates a lumber sawmill located on Highway 8 North in Glenwood, Arkansas. This permit modification is being issued in order to allow for the inclusion of lower emission rates calculated from stack test data for the wood-waste boiler (SN-01) as well as to allow for changes in compliance mechanisms for various other permitted limits. Due to the new boiler emission limits, this permitting action will result in a decrease in emissions from the boiler of : 75.4 tpy PM₁₀, 84.1 tpy PM, 0.3 tpy SO₂, and 70.7 tpy VOC. Additionally, the allowable throughput of the lumber drying kilns was increased in this modification to 148,258 thousand board feet

(MBF) per year, which increases VOC emissions from the kilns by 28.0 tpy. This results in a net VOC emissions decrease of 42.7 tpy in this modification. As a result of the new, lower VOC emission limit, this facility is no longer considered a major source for the purposes of Prevention of Significant Deterioration (PSD) applicability at this time.

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

This facility is currently operating under a CAO issued by the Department for permit violations.

8. APPLICABLE REGULATIONS:

NSPS (Y/N) Y If yes, subpart Db
 NESHAP (Y/N) N If yes, subpart _____
 PSD applicability (Y/N) N
 Is facility on 28 list (100 tpy)? (Y/N) N
 Was netting performed to avoid PSD review (Y/N) N
 Subject to 112 (g) requirements (Y/N) N
 Subject to CAM requirements (Y/N) N
 Other applicable regulations: None

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD only]
SN-01	PM ₁₀	NSPS Subpart Db

9. EMISSION CHANGES:

The following table summarizes plantwide emission changes associated with this permitting

action.

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 189-AOP-R0	Air Permit 189-AOP-R1	Change
PM	138.0	60.7	-82.3
PM ₁₀	84.4	45.3	-39.1
SO ₂	8.0	7.7	-0.3
VOC	280.4	237.1	-43.3
CO	231.0	231.0	0
NO _x	212.5	212.5	0

10. MODELING:

A. Criteria Pollutants

ISC and Screen3 modeling was performed for the criteria pollutant emissions from the facility. The results of this modeling are presented in the following table.

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m³)	Averaging Time	Highest Concentration (µg/m³)	% of NAAQS
PM ₁₀	10.5	50	Annual	8.39	17%
		150	24-hour	60.03	40%
NO _x	48.6	100	Annual	5.01	5%
SO ₂	1.8	80	Annual	0.01599	0%
		355	24-hour	0.55415	0%
Ozone**	16.9	(0.12 ppm)	1-hour	(+0.017 ppm)	14%
CO	52.8	10,000	8-hour	38.07	0%

** The NAAQS standard for ozone is given as 0.12 ppm for a one hour period. The increase in ozone concentration was estimated based on the tables in R. Scheffe's EPA memo of

10/5/88.

B. Non-Criteria Pollutants

The only significant source of HAPs is the Wellons HGBoiler (SN-01), and the AP-42 estimates indicate total emission of HAPs at 1.7 tpy. Emissions of heavy metals from SN-01 are 0.7 tpy. Using percentages of total HAPs derived from AP-42 Table 1.6-7, we found that the lb/hr rates of the more concentrated HAPs to be below 50% of the PAER value ($0.11 * TLV$), so that modeling was not required.

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^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?
Acetaldehyde	45	4.95	0.0473	Y
Benzene	1.6	0.176	0.0568	Y
Chromium	0.5	0.05	0.0021	Y
Formaldehyde	15.0	1.65	0.104	Y
Naphthalene	52.0	5.72	0.0363	Y
Phenol	190	20.9	0.0062	Y

11. CALCULATIONS:

SN	Emission Factor Source	Emission Factor and units	Control Equipment Type	Control Equipment Efficiency	Comments
01	Testing	PM: 0.006 lb/ton VOC: 0.00171 lb/ton NO _x : 0.206 lb/ton CO: 0.074 lb/ton	Electrostatic precipitator	Unknown	Annual rate *8760 hrs PM ₁₀ @90% of PM
02, 03, 04, 04A	ADEQ Approved Factor	3.1 lb VOC/MBF	None	N/A	See below
05, 05A, 06, 12	AP-42 Tables 10.4 - 1, 2, 3	0.5 lb/ton PM 0.00018 lb/ton PM10 0.03 grains/CF (for cyclones)	Cyclone	Unknown	S. Byrum memo of Jan. 7, 1998
11	AP-42	0.03 grains/CF	Cyclone	N/A	

***Submittal of March 4, 1997, report by Roy F. Weston, Inc. on emissions of VOCs and Formaldehyde from MacMillan Bloedel, Inc.*

The application did not supply estimates for emissions of HAPs and heavy metals from the combustion of wood waste in SN-01. AP-42 Table 1.6-5 lists speciated organic compounds from wood waste combustion that would be included in VOC emissions. Those specifically listed as Section 112(b) HAPs add up to an average factor of 0.16 lb/ton.

Table 1.6-7 lists average emission factors for speciated metals, and this adds up to 0.863 lb/ton. However, sodium and potassium compounds account for 92.5% of metal emissions, so that the total emission factor is multiplied by 0.075 to obtain heavy metal particulates emitted.

HAPs	Heavy Metals
$(211,116 \text{ tpy})(0.016 \text{ lb/ton}) = 1.69 \text{ tpy}$ 2,000 lb/ton	$(211,116 \text{ tpy})(0.0863)(.075) = 0.683 \text{ tpy}$ 2,000 lb/ton

12. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification for Test Requirement
01	PM, VOC, CO, NO _x	5, 25A, 10, 7E	2 successive 1 year tests, then a 5 year schedule	NSPS/Department Guidance
01	PM/PM ₁₀	CEMS	Daily zero-span check	Rosemount opacity monitor was included in the Boiler package and eliminates the need for visual monitoring.

13. 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.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring	Frequency	Report (Y/N)
01	PM	Rosemount Opacity Monitor	Continuously	Y

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)
01	reading of stack opacities	Opacity = 20 max.	Continuous	Y
01	steam production rates	3.0 MMlbs/24 hrs calculated as a daily average over a 1-month period	Monthly	Y
02, 03, 04,04A,	lumber production rates	148,258 MBF/12 months	Monthly	N
05A and 12	woodwaste loadout	60,000 tons /12 months	Monthly	N
14	throughput of stains	11,507 gal/12 months	Monthly	N

15. OPACITY:

SN	Opacity %	Justification	Compliance Mechanism
01	20	NSPS Subpart Db	COM
05, 06, 11	20	Previous permit (Cyclones)	Throughput limits
05A and 12	20	Previous permit (Uncontrolled)	Throughput limits

16. DELETED CONDITIONS:

Record keeping requirements for several sources were removed in this modification because they were unnecessary to demonstrate compliance with permitted limits. All three of the fuel tanks were moved to the insignificant activities list, and thus the associated fuel throughput limits for these tanks were deleted from this permit. Additionally, the previous permit limited the lumber throughput in the woodshop. This condition was also unnecessary because the woodshop emissions were based on a grains loading factor and the maximum capacity of the cyclone. Woodshop lumber throughput was not a factor in the determination of source emissions. This limit was also removed in this modification.

17. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Thomas Rheaume, P.E.