STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0189-AOP-R4 AFIN: 55-00017

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Bean Lumber Company
229 South Spur 8
Glenwood, Arkansas 71943

3. PERMIT WRITER:

David Triplett

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Sawmills
NAICS Code: 321113

5. SUBMITTALS:

December 10, 2003
April 27, 2004
Nov. 22, 2004

6. REVIEWER'S NOTES:

Bean Lumber Company, Inc. owns and operates a lumber sawmill and treating plant located in Glenwood, Pike County, Arkansas. This will be the fourth modification, and the first renewal of the Title V Operating Air Permit for this facility. Changes to the facility permitted with this modification include an increase in the allowable lumber drying throughput from 148,258,000 board feet per year to 185,000,000 board feet per year, and a change in the lumber treatment chemicals from CCA to Copper Azole. All of the lumber treatment sources are insignificant activities.

There have also been changes to emission factors used to permit the wood-waste boiler (SN-01) and the drying kilns (SN-02 through SN-04A), as well as a change to the method of calculation of the short-term (lb/hr) emission rates from the drying kilns. The drying kiln lb/hr limits were re-calculated based on the maximum amount of lumber dried in each kiln (per batch), the typical

drying time for each kiln, and the updated emission factors for lumber drying kilns. The new lb/hr limits are substantially higher as a result.

As a result of the increase in annual dried lumber throughput, this facility is now classified as a major source with respect to federal Prevention of Significant Deterioration (PSD) regulations. The changes with this modification result in the following emission increases: 18.9 tons per year (tpy) of SO_2, 99.9 tpy of VOC, 24.51 tpy methanol, 3.51 tpy benzene, 5.71 tpy formaldehyde, 3.42 tpy acetone, as well as small increases in various other hazardous air pollutants (HAPs).

7. COMPLIANCE STATUS:

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

8. APPLICABLE REGULATIONS:

PSD Applicability

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

PSD Netting

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

If so, indicate increases and decreases used in netting for PSD purposes only.

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-01	NOx, PM	NSPS Subpart Db
SN-10	VOC	NSPS Subpart Kb

9. EMISSION CHANGES:

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

Plantwide Permitted Emissions (tpy)			
Pollutant	Permit # 0189-AOP-R3	Permit #0189-AOP-R4	Change
PM	165.5	165.6	0.1
PM_{10}	139.3	139.7	0.4
SO_2	9.4	28.3	18.9
VOC	237.9	337.8	99.9
CO	237.7	237.7	0
NO_x	237.7	237.7	0
Benzene	1.24	4.75	3.51
Formaldehyde	1.03	6.74	5.71
Phenol	0.02	0.06	0.04
Chromium VI	0.01	0.01	0
Chlorine	0.98	0.98	0
Cobalt	0.02	0.01	-0.01
Arsenic	0.02	0.03	0.01
Cadmium	0.01	0.01	0
Lead Compounds	0.06	0.04	-0.02
2,3,7,8-Tetrachlorodibenzo-p-dioxin	4.48E-9	0	**
POM	0.05	0.05	0
Manganese	1.57	1.81	0.24
Acetone*	0	3.42	3.42
Methanol*	0	24.51	24.51
Acetaldehyde*	0	3.61	6.61

* Previously unpermitted pollutants emitted from drying kilns. These emission rates were determined from the most recently available factors developed by NCASI. These factors were not used in previous permits for this facility.
** 2,3,7,8-Tetrachlorodibenzo-p-dioxin was permitted in the previous permit due to an AP-42 emission factor for this pollutant from wood-fired boilers. This HAP has been removed from this permit due to extremely low (10^{-9}) projected emission levels.

10. MODELING:

Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ($\mu g/m^3$)	Averaging Time	Highest Concentration ($\mu g/m^3$)	% of NAAQS
PM_{10}	32.7	50	Annual	15.28[1]	30.6
		150	24-Hour	74.63[1]	49.8
SO_2	6.7	80	Annual	0.06	0.08
		1300	3-Hour	2.39	0.19
		365	24-Hour	0.64	0.18
VOC	205.0	0.12	1-Hour (ppm)	0.091[1]	76.9
CO	55.8	10,000	8-Hour	5972.5[1]	59.8
		40,000	1-Hour	7016.6[1]	17.6
NO_x	55.8	100	Annual	28.7[1]	28.7

1 – Includes 2002 background concentration data from nearest monitoring station.

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 has deemed the PAER 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?
Formaldehyde	0.37	0.041	2.27	N
Benzene	1.59	0.175	1.12	N

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Phenol	19.25	2.118	0.02	Y
Methanol	262.09	28.830	15.18	Y
Acetaldehyde	45.79	5.037	2.24	Y
Chromium VI	0.01	0.0011	0.00093	Y
Chlorine	1.45	0.160	0.23	N
Cobalt	0.02	0.0022	0.01	N
Arsenic	0.01	0.0011	0.01	N
Cadmium	0.01	0.0011	0.01	N
Lead Compounds	0.05	0.0055	0.01	N
POM	52.5	5.775	0.02	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 has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Formaldehyde	15	9.79	Y
Benzene	15.9	4.83	Y
Chlorine	14.5	0.99	Y
Cobalt	0.2	0.05	Y
Arsenic	0.1	0.05	Y
Cadmium	0.1	0.05	Y
Lead Compounds	0.5	0.05	Y

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 has

been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

11. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	AP-42/Testing/Vendor Data	PM: 0.1 lb/MMBtu PM_{10}: 90% of PM SO_2: 0.025 lb/MMBtu VOC: 0.00342 lb/MMBtu CO: 0.21 lb/MMBtu NO_x: 0.21 lb/MMBtu	ESP	N/A	
02 03 04 04A	NCASI	VOC: 3.5 lb/MBF	None	N/A	Factors from NCASI Technical Bulletin No. 845
05	Department Factor	0.03 gr/dscf	Cyclone	N/A	
05A 12	Department Factor	0.5 lb/ton of loadout	None	N/A	
06	Department Factor	0.03 gr/dscf	Cyclone	N/A	
11	Department Factor	0.03 gr/dscf	Cyclone	N/A	
14	Mass Balance				Mass Balance for VOC and Ethylene Glycol

12. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	PM	5 w/Back Half	5-year	Department Guidance
01	CO	10	5-year	Department Guidance
01	VOC	25A	5-year	Department Guidance

SN	Pollutants	Test Method	Test Interval	Justification
01	NOx	7E	5-year	Department Guidance
01	Stack Flow Rate	02	5-year	Department Guidance

13. 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)
01	Opacity	COM	Continuous	N

14. RECORD KEEPING 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)
01	Wood combusted	N/A	daily	N
01	Avg. Steam Generation	3.72 mm lb/day	monthly	Y
01	Rake out periods	no more than 3 per 24-hour period	daily	N
02 03 04 04A	Lumber Dried	185,000,000 board feet/12-month period	monthly	Y
05A 12	Wood waste loadout	60,000 tons/12-months	monthly	Y
14	Stain usage	11,500 gallons/12-months	monthly	Y

15. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01	20	NSPS	COM
05, 06, 11	20	Dept. Guidance	Daily Observation

16. DELETED CONDITIONS:

Former SC	Justification for removal
	No former SC have been deleted

17. VOIDED, SUPERCEDED, OR SUBSUMED PERMITS:

List all active permits voided/superceded/subsumed by the issuance of this permit.

Permit #
0189-AOP-R3

18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

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Lyndon Poole, P.E.