

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

**MEMORANDUM**

**August 26, 2003**

**TO:** Dawson Lasseter, P.E., Chief Engineer, Air Quality Division

**THROUGH:** Phillip Fielder, P.E., Engineer Manager, Engineering Section  
Eric Milligan, P.E., Engineering Section

**THROUGH:** Peer Review

**FROM:** Roya Sharifsoltani, E.I., New Source Permits Section

**SUBJECT:** Evaluation of Permit Application No. **97-057-C (PSD) (M-2)**  
Weyerhaeuser Company  
Valliant Paper Mill  
Valliant, McCurtain County, Oklahoma  
Secs. 26, 27, 28, 33 and 34-T6S-R21E  
UTM Zone 15,306.50 Km Easting by 3,763.50 Km Northing  
Located One Mile West of Valliant on US-70

**SECTION I. INTRODUCTION**

Weyerhaeuser Company (Weyerhaeuser) owns and operates a containerboard manufacturing facility (SIC 2631, NAIC 32213) in Southeast Oklahoma (Valliant Mill). The applicant proposes to construct a wood chipping operation on-site to ensure an adequate supply of wood chips and to control chip size uniformity for the Valliant Mill's current operation. This evaluation only covers the impact of the modifications.

Current active permits include Permit Nos. 75-011-O, 75-012-O, 86-019-O, 91-093-O, 95-224-O, 96-043-C (PSD), 96-043-C (M-1), 96-043-C (M-2)(PSD), 96-043-C (M-3)(PSD), 96-188-C and 99-134-C. The facility has applied for a Title V (Part 70) operating permit that will combine all the applicable requirements from existing permits for this facility under one permit. The facility Title V operating permit (Permit No. 97-057-TV) has not yet been issued.

**SECTION II. FACILITY DESCRIPTION**

Initial construction of the mill began in 1969 and was completed in 1971. The mill produces paper products through the use of chemical digesters, secondary fiber processing, and paper machines. The primary raw materials used in the production of paper products at the mill are fiber source materials such as, but not limited to, wood chips from both softwood and hardwood species and old corrugated containers (OCC). In addition to the pulping and paper-making

process units, other equipment at the mill are involved with recovering the chemicals used to produce virgin pulp. Spent cooking liquor is concentrated, burned to remove organics (and recover heat value), and reacted with lime to regenerate the cooking liquor. The spent lime used for regeneration is recovered, washed, and calcinated for reuse.

Steam requirements at the mill are supplied by four (4) boilers (three existing and one to be constructed) and by a recovery furnace. Steam is also used to drive a turbine electric generator that supplements the mill's electric energy needs.

Various points in the process produce gases that cannot be condensed to a liquid form for sale, reuse, or disposal. These non-condensable gases (NCGs) contain reduced sulfur compounds and VOCs (including methane). Most of the NCGs generated at the site are collected and burned in a dedicated NCG Thermal Oxidizer. There are two collection systems for NCGs, which are known as "high volume, low concentration" (HVLC) and "low volume, high concentration" (LVHC) systems. The mill's lime kiln currently serves as the backup combustion system for the NCG Thermal Oxidizer. The bark boiler is also permitted to serve as a backup combustion system for the NCG Thermal Oxidizer, but is currently not used as such.

### **SECTION III. PROJECT DESCRIPTION**

Weyerhaeuser is proposing to construct a wood chipping operation on-site to ensure an adequate supply of wood chips and to control chip size uniformity for the Valliant Mill's current operation. The proposed wood chipping operation will install equipment that is designed to remove the bark from logs and produce wood chips of a uniform size from the debarked logs for use in the Valliant Mill's existing pulping operation. Equipment to handle logs, chips, and bark will also be installed.

The proposed project will not result in any associated throughput or emissions increases from the existing Valliant Mill processes, since the facility currently has the capability to receive more wood chips and bark than the proposed operation will have the capability to produce. Additionally, all physical, operational, and permitted throughput limits for existing sources at the Valliant Mill will not change as a result of this project.

#### Log Delivery

Logs will be delivered to the Valliant Mill by truck using a portion of the existing access road, gate, and scale currently used for chip and bark deliveries. No modifications to these areas are required. An extension to the paved road system will be added to allow the log trucks to drive from the scale house to the log unloading crane system.

Log Crane System

A new log crane system will be installed to unload logs from incoming trucks and place them on a pile or on the system infeed conveyor.

Debarking Drum

A debarking drum will be installed to remove bark from the logs. The drum will be fed by a conveyor from the log crane system and will be designed to minimize fugitive dust emissions.

Bark removed from the logs will be sent to the enclosed bark chutes under the drum by a conveyor. In areas where the bark conveyor is not in close proximity to equipment, it is covered to reduce fugitive emissions. The bark will then be conveyed to the existing bark handling and storage system.

Chipper

A chipper will be installed to produce wood chips with a uniform size from the debarked logs. The chipper will be driven by an electric motor, and will be housed in a structure that also contains the necessary electrical and control equipment to power and operate the log system. However, only the electrical and control portion of this structure will be completely enclosed. The end of this structure will be open to allow the debarked logs to be conveyed to the chipper.

A loader will be installed to allow the operator to straighten out any log jams. A conveyor similar to the conveyor designed for the debarking drum will transport chips to the Valliant Mill's existing chip outstacking and recovery systems.

**SECTION IV. EQUIPMENT**

The wood chipping operation will be designated as Emission Unit Group (EUG) F12. Fugitive emissions from the debarking drum and the chipper will be designated "E-F12,A" and "E-F12,B," respectively. Fugitive emissions from log truck traffic on paved roads will be included in EUG F2 (Road Emissions – Plant Traffic).

**SECTION V. EMISSIONS**

The proposed wood chipping operation will potentially result in fugitive emissions of PM, PM<sub>10</sub>, and VOC. Emissions of CO, NO<sub>x</sub>, and SO<sub>2</sub> will not increase as a result of this project. Therefore, these pollutants are not evaluated. The applicant has requested that all emission factors be kept confidential, however the emission factors have been reviewed and accepted.

Debarking Drum

Operation of the debarking drum is anticipated to result in fugitive emissions of PM, PM<sub>10</sub>, and VOC. The bark conveyor systems at the Valliant Mill are designed to minimize wind-blown emissions of fugitive dust. In general, bark consists of large fragments of materials that are relatively clean. This material is not prone to generate more fine particulate as it is handled, and usually is handled at a moisture content of approximately 50%. Thus, emissions from the bark conveyor systems at the Valliant Mill are considered too small to be quantifiable.

Chipper

Operation of the chipper is anticipated to result in fugitive emissions of PM, PM<sub>10</sub>, and VOC. The chipper will be designed to minimize the release of PM/PM<sub>10</sub> from the system and will not use air to transport chips.

The chip conveyor systems at the Valliant Mill are designed to minimize wind-blown emissions of fugitive dust. In general, chips consist of large fragments of materials that are relatively clean. This material is not prone to generate more fine particulate as it is handled, and usually is handled at a moisture content of approximately 50%. Thus, emissions from the chip conveyor systems at the Valliant Mill are considered too small to be quantifiable.

Truck Traffic on Paved Roads

Logs will be delivered to the Valliant Mill by truck. The loaded weight of each log truck will be determined using mill scales as it enters the facility. The empty weight of each truck will be determined by re-weighing each truck after the logs it contains have been unloaded. The net amount of logs unloaded from each truck will be calculated by subtracting the empty truck weight from the corresponding loaded truck weight. The log trucks will utilize a portion of the existing entrance, gate, and scale currently used for chip and bark deliveries. An extension of the paved road will be added to allow the log trucks to drive from the scale house to the log crane system.

The fugitive emission are based on factor used for paved roads in AP-42, Section 13.2.1, travel distance, and maximum number of trucks per year.

Potential emissions from each of the proposed emission points are presented in the table below. For the debarking drum and the chipper, all PM has been assumed to equal PM<sub>10</sub>.

**POTENTIAL EMISSIONS FROM THE PROPOSED PROJECT**

Emission Unit	VOC		PM		PM <sub>10</sub>	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Debarking Drum	2.7	10.1	0.5	1.7	0.5	1.7
Chipper	30.6	113.9	0.6	2.2	0.6	2.2
Log Truck Road Fugitives	--	--	6.4	37.5	1.3	7.3
On-Site Vehicles*	--	--	0.6	3.8	0.1	0.7

\* The increase in on-site vehicle emissions is conservatively set at 10% of the total emissions from log truck road fugitives.

**ADDED EMISSIONS COMPARED TO PSD SIGNIFICANCE LEVELS**

Pollutant	Project Emissions Increase (TPY)	PSD Significant Emission Rate (SER) (TPY)	Subject to PSD Review?
PM	45.2	25	Yes
PM <sub>10</sub>	11.9	15	No
VOC	124.0	40	Yes

Weyerhaeuser has elected to undergo PSD review for the two pollutants (PM and VOC) for which the PSD SER is exceeded without proceeding with a netting analysis. Emissions increases of PM<sub>10</sub> are less than the PSD SER, therefore, PSD review is not required for PM<sub>10</sub>.

Hazardous Air Pollutant Emissions

Facility-wide emissions of hazardous air pollutants (HAPs) for the Valliant Mill are greater than 10 TPY for several single HAPs and 25 TPY of total HAPs. Weyerhaeuser is unaware of any emission factors for calculating HAP emissions from debarking or chipping operations. Therefore, emissions of HAPs have not been quantified for this project.

**SECTION VI. SCOPE OF REVIEW**

Since the proposed project will result in net emissions which exceed the significance level for PM and VOC, the project is subject to full PSD review for PM and VOC, including Tier II public review, best available control technology (BACT), and an ambient impacts analysis.

Full PSD review is required for each pollutant which exceeds a significance level and consists of the following:

- determination of BACT
- analysis of compliance with National Ambient Air Quality Standards (NAAQS)
- evaluation of existing air quality and determination of monitoring requirements
- evaluation of PSD increment consumption
- evaluation of source-related impacts on growth, soils, vegetation, visibility
- evaluation of Class I area impact

## **SECTION VII. BEST AVAILABLE CONTROL TECHNOLOGY**

Based on the project emissions increases, PM and VOC are the only pollutants for which the project will result in a significant emissions increase. Therefore, a BACT analysis was conducted for PM and VOC emissions from the new emission units.

BACT was analyzed using the “Top-Down” approach. In those cases where a control strategy was deemed technologically infeasible or sufficient justification was provided for rejection by energy or environmental impacts, economic costs were not calculated. U.S. EPA’s RACT/BACT/LAER Clearinghouse (RBLC) was accessed to determine PSD BACT required for similar operations. When no controls were stated in the RBLC, the BACT analysis was approached from a generic basis in accordance with Top-Down:

1. Identify all potential technologies
2. Eliminate technologically infeasible controls
3. Rank the controls by effectiveness
4. Evaluate those technologies based on energy, economic, and environmental effects

A search of the RBLC database was performed to identify the emission control technologies and emission levels that have been determined by permitting authorities as BACT for chipping operations in the wood products industry (Process Code 30.000 in the RBLC system). The search included the current database containing all RBLC entries since January 1992, as well as transient/early notification permits.

### **BACT Review for VOC**

#### Debarking Drum and Chipper

A search of the U.S. EPA’s RBLC database was conducted to identify BACT determinations for VOC emissions from debarking drums and chippers in recent permitting actions. The RBLC database did not indicate any recent or historical BACT or LAER to control VOC from debarking drums or chippers.

Debarking and chipping operations generally occur in environments that are not conducive to applying an add-on control technology. In fact, these operations usually occur outdoors or in open structures such that the fugitive VOC emissions are not easily collected and controlled, such as in the proposed project. The fugitive VOC emitted from these sources is not produced in the debarking and chipping equipment, but, rather, the naturally occurring VOCs are released from the logs as they are processed.

Additionally, the use of other traditional add-on VOC controls for other types of sources, such as regenerative thermal oxidation (RTO) and regenerative catalytic oxidation (RCO) are infeasible since the relatively small amount of VOC emissions are not constant and are insufficient to maintain continuous combustion in these devices without the use of an auxiliary fuel, such as natural gas. The use of auxiliary fuel would result in greater operational and fuel demands, as well as increasing emissions of combustion pollutants, including NO<sub>x</sub>. The creation of NO<sub>x</sub> emissions simply to reduce VOC emissions is debatable, as both pollutants may contribute to ambient ozone formation.

Since the Valliant Mill is currently NO<sub>x</sub>-dominated, the additional VOC emissions from the project are not conducive to ozone formation, and no significant increase in ozone can be expected. As such, the implementation of additional VOC control will not result in any appreciable environmental benefit. Therefore, proper design and operation of the debarking drum and chipper is considered BACT for VOC emissions from the debarking drum and the chipper.

### **BACT Review for PM**

#### Debarking Drum and Chipper

A search of the U.S. EPA's RBLC database was conducted to identify BACT determinations for PM emissions from debarking drums and chippers in recent permitting actions. The RBLC database did not indicate any recent or historical BACT to control PM emissions from chippers. The RBLC database indicated a BACT determination for a debarker drum of using wet logs. Weyerhaeuser has estimated the moisture content of the bark at 50%.

Based on the type of material handled in the debarking drum (logs and bark) and the chipper (logs and chips), as well as the design of the debarking drum and chipper to prevent entrainment of fugitive PM emissions, proper design and operation of these units is considered BACT for PM emissions from the debarking drum and the chipper.

#### Truck Traffic on Paved Roads

A search of the U.S. EPA's RBLC database was conducted to identify BACT determinations for PM emissions from paved roads in recent permitting actions. The RBLC database indicated that

paving and maintenance has been accepted as BACT for paved roads. The new road will be paved and maintained on a periodic basis. Therefore, proper maintenance of the paved roads is considered BACT for PM emissions from truck traffic on paved roads.

## SECTION VIII. AIR QUALITY IMPACTS

For an area which is affected by emissions from a new major source or modification, an analysis of the existing air quality is required for those pollutants which are emitted in significant quantities. The project will result in significant emissions of PM and VOC. This analysis must demonstrate that the proposed change will not cause or contribute to a violation of any national ambient air quality standard (NAAQS) or any applicable maximum allowable increase over the baseline concentration. There are currently no NAAQS or baseline concentrations for PM. Therefore, a source impact analysis for PM cannot be conducted.

VOC is not limited directly by NAAQS. Rather, VOC is regulated by the U.S. EPA as a precursor to tropospheric ozone formation. Ozone is unique because the U.S. EPA has not established a PSD modeling significance level (an ambient concentration expressed in either micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ] or parts per million by volume [ $\text{ppm}_v$ ]) for ozone. U.S. EPA has also established an ambient monitoring *de minimis* level, which is different from other criteria pollutants because it is based on a mass emission rate (100 TPY) instead of an ambient concentration (in units of  $\mu\text{g}/\text{m}^3$  or  $\text{ppm}_v$ ). Since the project VOC emissions increase exceeds the 40 TPY significant mass emission rate, an air quality analysis was performed using the Scheffe method to demonstrate compliance with the currently enforced 1-hour NAAQS standard for ozone.

### PSD Ozone Modeling

The Scheffe method is a screening procedure used to calculate the ambient ozone concentration resulting from a VOC-dominated point source. A series of lookup tables, based on the Reactive Plume Model-II, are used to conservatively estimate the ozone concentration increase. Use of the Scheffe method requires knowledge of the ratio of maximum annual non-methane volatile organic compounds (NMVOC) to  $\text{NO}_x$  emissions from the facility. The lookup tables have been validated for NMVOC/ $\text{NO}_x$  values ranging from 1 to 30. The user is cautioned against interpolating from the tables for values outside this range. In addition, it is generally accepted that NMVOC/ $\text{NO}_x$  ratios less than 2:1 result in no significant increase in ozone.

The post-project facility-wide NMVOC/ $\text{NO}_x$  ratio is 0.41. Since the NMVOC/ $\text{NO}_x$  ratio is less than 1, the source is considered  $\text{NO}_x$ -dominated, and a Scheffe method analysis is infeasible to run. Additionally, the NMVOC/ $\text{NO}_x$  ratio is not conducive to ozone formation and no significant increase in ozone can be expected.



Pre-Construction Monitoring

U.S. EPA has established an ambient monitoring *de minimis* level for ozone, which is also unique in comparison with the other criteria pollutants because it is based on a mass emission rate (i.e., 100 TPY of VOC) instead of an ambient concentration (i.e.,  $\mu\text{g}/\text{m}^3$  or  $\text{ppm}_v$ ). The estimated VOC emissions increases from the proposed project are greater than 100 TPY. Therefore, ozone pre-construction monitoring is required. Since the type of sources proposed in the construction permit are not conducive to add-on controls, the listed BACT is equivalent to LAER. Therefore, post-construction monitoring is allowed in lieu of pre-construction.

<b>2002 Monitoring Data Summary</b>	
<b>Monitor 40-121-0415 (1-hr average)</b>	
<b>Ranking</b>	<b>Concentration (ppm)</b>
First High	0.086
Second High	0.086
Third High	0.081
Fourth High	0.080

Post-Construction Monitoring

Post-construction monitoring of ozone shall be conducted per OAC 252:100-8-35(d)(4). Monitoring shall be conducted for a minimum of a four month period from May to September. Weyerhaeuser shall obtain the data and submit a final report.

**SECTION IX. ADDITIONAL IMPACTS ANALYSIS**

Growth Impacts

A growth analysis is intended to quantify the amount of new growth that is likely to occur in support of the project and to estimate emissions resulting from that associated growth. Associated growth includes residential and commercial/industrial growth resulting from the project. Residential growth depends on the number of new employees and the availability of housing in the area, while associated commercial and industrial growth consists of new sources providing services to the new employees and the facility. Negligible new growth is anticipated as a result of the project.

### Soils and Vegetation

McCurtain County has an area of 1,825 square miles. According to the Soil Conservation Service, most of the soils are fine sandy loams with a pH in the acidic range (4.5 to 6.5). The vegetation is primarily forest and pasture. The Oklahoma Department of Agriculture reported that less than 6% of the county land area is cropland. The surrounding counties in Oklahoma, Texas, and Arkansas have similar conditions, but the proportion of cropland increases upon crossing the Red River into Texas, 7 miles south of the Valliant Mill. The majority of the land surrounding the Valliant Mill is commercial timber production, most of it owned or managed by Weyerhaeuser.

The effects of gaseous air pollutants on vegetation may be classified into three rather broad categories: acute, chronic, and long-term. Acute effects are those that result from relatively short (less than 1 month) exposures to high concentrations of pollutants. Chronic effects occur when organisms are exposed for months or even years to certain threshold levels of pollutants. Long-term effects include abnormal changes in ecosystems and subtle physiological alterations in organisms. Acute and chronic effects are caused by the gaseous pollutant acting directly on the organism, whereas long-term effects may be indirectly caused by secondary agents such as changes in soil pH.

VOC is regulated by the U.S. EPA as a precursor to tropospheric ozone formation. Elevated ground-level ozone concentrations can damage plant life and reduce crop production. Ozone interferes with the ability of plants to produce and store food, making them more susceptible to disease, insects, other pollutants, and harsh weather. VOC emissions from the proposed project are not sufficient to increase ozone formation, and the project is not expected to result in ozone levels greater than the NAAQS standard. Therefore, no significant impact on soil and vegetation from VOC emissions is anticipated as a result of the project.

The effects of PM emissions are also expected to be negligible compared to natural processes. Most of the inorganic elements in the particulate matter will be similar in nature to those from areas surrounding the Valliant Mill. Therefore, no significant impact on soil and vegetation from PM emissions is anticipated as a result of the project.

### Visibility Impairment

The project is not expected to produce any perceptible visibility impacts in the immediate vicinity of the Valliant Mill. OAC 252:100-29 requires that fugitive dust emissions originating from the Valliant Mill cannot damage or interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. No immediate visibility impairment is anticipated.

**SECTION X. IMPACT ON CLASS I AREAS**

The nearest mandatory Class I area is the 14,460 acre Caney Creek National Wilderness Area (CCNWA). The CCNWA is located approximately 98 km (60.9 miles) northeast of the Valliant Mill. The United States Department of Agriculture (USDA) Forest Service serves as Federal Land Manager (FLM) for CCNWA. This mandatory Class I Federal Area is located on the southern edge of the Ouachita National Forest in Arkansas.

Visibility Impact

PSD review for the proposed project is limited to PM and VOC. The pollutants evaluated in a visibility analysis (typically conducted using VISCREEN modeling) are NO<sub>2</sub>, PM<sub>10</sub>, soot, and sulfate (SO<sub>4</sub><sup>2-</sup>). The VISCREEN model does not include VOC emissions as an input for the model.

PM emissions from the project mainly result from fugitive road emissions and are considered relatively low (<60 tpy). PM impacts on the Class I area are not expected, since fugitive road emissions have limited mechanical turbulence and no plume rise; therefore, the particulates are not expected to travel to the CCNWA based on the lack of dispersion mechanics. Therefore, no adverse visibility impacts on the CCNWA are expected as a result of this project.

Ozone Impact

Current FLM guidance suggests that Class I areas are considered NO<sub>x</sub>-limited. There will be no increase in NO<sub>x</sub> emissions resulting from the proposed project. In addition, VOC emissions from the proposed project are not sufficient to increase ozone formation, and the project is not expected to result in ozone levels greater than the NAAQS.

**SECTION XI. OKLAHOMA AIR POLLUTION CONTROL RULES**

OAC 252:100-1 (General Provisions) [Applicable]  
 Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]  
 Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. The primary standards are enumerated in Appendix E and the secondary standards are enumerated in Appendix F of the Air Pollution Control Rules (OAC 252:100). NAAQS are established by the U.S. EPA. The actual ambient air concentrations of criteria pollutants are monitored within the State of Oklahoma by the Air Quality Division. At this time, all of Oklahoma is in "attainment" of these standards.

OAC 252:100-4 (New Source Performance Standards) [Not Applicable to this Project]  
Federal regulations in 40 CFR Part 60 are incorporated by reference as they exist on July 1, 2002, except for the following: Subpart A (Sections 60.4, 60.9, 60.10, and 60.16), Subpart B, Subpart C, Subpart Ca, Subpart Cb, Subpart Cc, Subpart Cd, Subpart Ce, Subpart AAA, and Appendix G. These requirements are addressed in Section XII.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]  
Subchapter 5 requires sources of air contaminants to register with the Air Quality Division, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Required annual emission information (Turn Around Document) and emission fees shall be provided to Air Quality.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]  
Part 3 summarizes permit application fees for Part 70 source permits. The required construction permit fee of \$1,500 has been submitted.

Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the “Insignificant Activities” or “Trivial Activities” thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule
- 0.6 TPY of any one Category A toxic substance
- 1.2 TPY of any one Category B toxic substance
- 6.0 TPY of any one Category C toxic substance

The Valliant Mill’s Title V permit (Permit No. 97-057-TV) is currently under review by the DEQ. Any changes to the facility as part of this permit will be included in a modification to the issued Title V permit.

Part 7 covers the PSD requirements for attainment areas. Section XII covers requirements for this facility.

OAC 252:100-9 (Excess Emission Reporting Requirements) [Applicable]  
In the event of any release which results in excess emissions, the owner or operator of such facility shall notify the Air Quality Division as soon as the owner or operator of the facility has knowledge of such emissions, but no later than 4:30 p.m. the next working day. Within ten (10) working days after the immediate notice is given, the owner operator shall submit a written report

describing the extent of the excess emissions and response actions taken by the facility. Part 70/Title V sources must report any exceedance that poses an imminent and substantial danger to public health, safety, or the environment as soon as is practicable. Under no circumstances shall notification be more than 24 hours after the exceedance.

OAC 252:100-13 (Prohibition of Open Burning) [Applicable]  
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Control of Emission of Particulate Matter) [Applicable]  
This subchapter specifies a PM emission limitation from fuel-burning equipment and industrial processes. No fuel-burning equipment will be installed as part of this project. Particulate matter emission limitations for the debarking drum and the chipper were determined based on the process weight rates of the respective systems. Weyerhaeuser has provided a demonstration in the permit application that PM emissions from the proposed new equipment will be in compliance with Subchapter 19.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]  
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. Particulate matter emissions from the debarking drum and chipper are expected to be minimal and will comply with the opacity limitations of Subchapter 25.

OAC 252:100-29 (Fugitive Dust) [Applicable]  
Subchapter 29 prohibits the handling, transportation, or disposition of any substance likely to become airborne or windborne without taking “reasonable precautions” to minimize emissions of fugitive dust. No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or to interfere with the maintenance of air quality standards. Most of the materials handled are wood/wood waste; therefore, non-brittle and are not very susceptible to becoming fugitive dust. Haul roads and the landfill are watered to minimize emissions of fugitive dust. The existing and new paved roads at the Valliant Mill will be maintained on a periodic basis to minimize fugitive dust.

OAC 252:100-31 (Sulfur Compounds) [Not Applicable to this Project]  
The proposed project will not result in any increases in emissions of sulfur compounds. Therefore, this subchapter is not applicable to the wood chipping operation.

OAC 252:100-33 (Nitrogen Oxides)

[Not Applicable to this Project]

The proposed project will not result in any increases in emissions of nitrogen oxides compounds. Therefore, this subchapter is not applicable to the wood chipping operation.

OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

None of the following affected processes are located at this facility: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds)

[Not Applicable to this Project]

Part 3 affects new (constructed after December 28, 1974) storage tanks with a capacity between 400 and 40,000 gallons holding an organic liquid with a true vapor pressure greater than 1.5 psia. No new storage tanks are proposed for this project.

Part 5 limits the VOC content of paints and coatings. The Valliant Mill does not normally conduct coating or painting operations except for routine maintenance, which is exempt.

OAC 252:100-41 (Hazardous Air Pollutants and Toxic Air Contaminants)

[Applicable]

Part 3 addresses hazardous air contaminants. NESHAP, as found in 40 CFR Part 61, are adopted by reference as they exist on July 31, 2002, with the exception of Subparts B, H, I, K, Q, R, T, W and Appendices D and E, all of which address radionuclides. In addition, General Provisions as found in 40 CFR Part 63, Subpart A, and the Maximum Achievable Control Technology (MACT) standards as found in 40 CFR Part 63, Subparts F, G, H, I, J, L, M, N, O, Q, R, S, T, U, W, X, Y, AA, BB, CC, DD, EE, GG, HH, II, JJ, LL, KK, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, QQQ, RRR, TTT, UUU, VVV, XXX, CCCC, GGGG, HHHH, NNNN, SSSS, TTTT, UUUU, VVVV, and XXXX are hereby adopted by reference as they exist on July 31, 2002. These standards apply to both existing and new sources of HAPs. These requirements are covered in the "Federal Regulations" section.

Part 5 is a state-only requirement governing toxic air contaminants. New sources (constructed after March 9, 1987) emitting any category "A" pollutant above de minimis levels must perform a BACT analysis, and if necessary, install BACT. All sources are required to demonstrate that emissions of any toxic air contaminant which exceed the de minimis level do not cause or contribute to a violation of the MAAC. Toxic emissions for this project have not been quantified because of the unavailability of toxic emission factors for debarking and chipping operations.

The speciation of the VOCs is not available at this time for the chipping process. When the speciation becomes available, Air Quality reserves the right to reopen the permit if any de minimis level is exceeded.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]  
 This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

**The following Oklahoma Air Pollution Control Rules are not applicable to this facility:**

OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Grain Elevators	not in source category
OAC 252:100-39	Nonattainment Areas	not in area category
OAC 252:100-47	Landfills	not in source category

**SECTION XII. FEDERAL REGULATIONS**

PSD, 40 CFR Part 52 [Applicable]  
 Since the net emissions increase from the project will exceed the PSD significant emission threshold for VOC and PM, PSD review applies for these pollutants.

NSPS, 40 CFR Part 60 [Not Applicable to this Project]  
 Several emission sources at the Valliant Mill are subject to various NSPS. However, the proposed project does not include the construction or modification of any NSPS-affected units under this subpart.

NESHAP, 40 CFR Part 61 [Not Applicable to this Project]  
 Oklahoma has adopted by reference the majority of the National Emission Standards for Hazardous Air Pollutants (NESHAP) set forth in 40 CFR 61, et seq. Additionally, Oklahoma has

“state only” (i.e., not federally enforceable) air toxic provisions (OAC 252:100–41 [Subchapter 41]). The proposed project will not be subject to any NESHAP requirements and will not change any current NESHAP applicability determination for the Valliant Mill.

NESHAP, 40 CFR Part 63 [Not Applicable to this Project]  
Standards for individual source categories are being developed separately for stationary sources that emit (or have the potential to emit) one or more of the 188 compounds listed as HAPs pursuant to Section 112 of the Clean Air Act as amended in 1990. This regulation requires both new and existing major sources, as well as minor (area) sources in the affected categories and subcategories to institute, over a specified time period, stringent Maximum Achievable Control Technology (MACT) standards to reduce HAP emissions.

Several MACT standards for control of HAPs from pulp and paper production have been finalized. MACT I and III were published in the Federal Register on April 15, 1998. MACT II was published in the Federal Register on January 12, 2001. The proposed project is not subject to any MACT standards and will not change any current MACT applicability determination for the Valliant Mill.

Compliance Assurance Monitoring, 40 CFR Part 64 [Not Applicable to this Project]  
Compliance Assurance Monitoring, as published in the Federal Register on October 22, 1997, applies to any pollutant-specific emission unit at a major source that is required to obtain a Title V permit, if it meets all the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It uses a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant equal to or greater than major source thresholds.

The proposed project does not include any units that meet all of the above criteria. Therefore, CAM is not applicable to this project.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]  
This facility does not store any regulated substance above the applicable threshold limits. More information on this federal program is available at the web site: <http://www.epa.gov/ceppo/>.

Stratospheric Ozone Protection, 40 CFR Part 82 [Not Applicable to this Project]  
The Valliant Mill does not produce, consume, recycle, import, or export any controlled substances or controlled products as defined in this Part, nor does the facility perform service on motor (fleet) vehicles which involves ozone-depleting substances. Therefore, as currently operated, the Valliant Mill is not subject to these requirements. To the extent that the facility has air-conditioning units that apply, the permit requires compliance with Part 82.



### SECTION XIII. COMPLIANCE

#### Tier Classification and Public Review

This application has been classified as **Tier II** based on the request for a construction permit for a significant modification of a Part 70 source. The applicant published the "Notice of Filing a Tier II Application" in the *McCurtain Gazette* on December 4, 2002, a newspaper of general circulation in McCurtain County. The notice said that the application was available for public review at the Public Library, Two SE Avenue "D", Idabel, Oklahoma, or at the AQD office. The applicant has published the "Notice of Draft Tier II Permit " on January 4, 2003, in the *McCurtain Gazette*, a newspaper of general circulation in McCurtain County. The notice stated that the permit was available for public review at the Public Library, Two SE Avenue "D", Idabel, Oklahoma. Information on all permit actions is available for review by the public on the Air Quality section of the DEQ web page at: <http://www.deq.state.ok.us>. The facility is located within 50 miles of the borders with the states of Texas and Arkansas. The state of Texas and the state of Arkansas have been notified of the draft permit. No comments were received from the public, the state of Texas, or the state of Arkansas during the public comment period for the draft permit. The proposed permit was sent to EPA for review. EPA commented that post-construction ozone monitoring was required and Weyerhaeuser agreed to do the monitoring.

The applicant has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant either owns the property or has made the appropriate landowner notification.

Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web page:<http://www.deq.state.ok.us/>.

#### Fees Paid

Construction permit fee of \$1,500 for an existing Part 70 source.

### SECTION XIII. SUMMARY

The applicant has demonstrated the ability to comply with applicable state and federal ambient air quality standards and air pollution control rules and regulations. There are no active Air Quality compliance or enforcement issues that would affect the issuance of this permit. Issuance is recommended.

**PERMIT TO CONSTRUCT  
AIR POLLUTION CONTROL FACILITY  
SPECIFIC CONDITIONS**

**Weyerhaeuser Company  
Valliant Mill**

**Permit No. 97-057-C (M-2) PSD**

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on November 13, 2002. The Evaluation Memorandum dated August 26, 2003, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction or operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Points of emissions and emissions limitations for each point: [OAC 252:100-8-6(a)(1)]

EU	VOC (as terpenes)		PM		PM <sub>10</sub>	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Debarking Drum	2.7	10.1	0.5	1.7	0.5	1.7
Chipper	30.6	113.9	0.6	2.2	0.6	2.2

- a. Operating records of process rates (Green tons of logs/fiscal month) and emission factors shall be used to determine compliance with VOC, PM, and PM<sub>10</sub> emission limitations listed above.
  - b. The lb/hr emission limitations listed above represent a Weyerhaeuser fiscal month average.
  - c. The TPY emission limitations listed above represent a rolling 12-month total, on a Weyerhaeuser fiscal month basis.
2. The permittee shall be authorized to operate the listed equipment continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)]
3. The permittee shall keep records of process rates and applicable emission factors as specified in Specific Condition 1. These records shall be made available to regulatory personnel upon request. Required records shall be retained on location for a period of at least five years following dates of recording. [OAC 252:100-8-6(a)(3)(B)]
4. The log truck road extension and the portions of the log yard subject to regular vehicular traffic both which are authorized for construction under this permit shall be paved. [OAC 252:100-8-6(a)]

5. This permit may be reopened to require emissions limitations, implementation of BACT, additional testing, and/or other appropriate actions to address the emissions of toxic air contaminants if further information becomes available which indicates that emission limits authorized by this permit have the potential to exceed de minimis levels of category A, B, or C toxic or cause or contribute to a violation of a MAAC. [OAC 252:100-41]
6. The debarking drum and chipper shall be designed and operated to minimize emissions of total suspended particulate (TSP). With the operating permit application, the applicant shall submit design information for the chipper and debarker indicating that they are designed to minimize emissions of TSP. [OAC 252:100-8-6(a)]
7. Post-construction monitoring of ozone shall be conducted per OAC 252:100-8-35(d)(4). Monitoring shall be conducted for a minimum of a four month period from May to September. Weyerhaeuser shall obtain the data and submit a final report. [OAC 252:100-8-35(d)(4)]



**PART 70 PERMIT**  
**AIR QUALITY DIVISION**  
**STATE OF OKLAHOMA**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**707 N. ROBINSON STREET, SUITE 4100**  
**P.O. BOX 1677**  
**OKLAHOMA CITY, OKLAHOMA 73101-1677**

Date \_\_\_\_\_

Permit No. 97-057-C (M-2) PSD

Weyerhaeuser Company , having complied with the requirements of the law, is hereby granted permission to construct a wood chipping operation at a containerboard manufacturing facility at Valliant, McCurtain County, Oklahoma.

subject to the following conditions, attached:

Standard Conditions dated October 17, 2001

Specific Conditions

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.

\_\_\_\_\_  
Director, Air Quality Division

Weyerhaeuser Company  
Attn: Kelly Folsom  
P. O. Box 890  
Valliant, OK 74764

SUBJECT: Permit Application No. 97-057-C (M-2) PSD  
Facility: Valliant Paper Mill  
Location: McCurtain County, Oklahoma

Dear Mr. Folsom:

Enclosed is the permit authorizing construction of the referenced operation. Please note that this permit is issued subject to certain standards and specific conditions, which are attached.

Thank you for your cooperation in this matter. If we may be of further service, please contact our office at (405) 702-4100.

Sincerely,

Roya Sharifsoltani  
New Source Permits Section  
**AIR QUALITY DIVISION**

