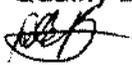


July 12, 2002

MEMORANDUM

TO: Dave Sande, Accountant Supervisor
Support Services

FROM: Robert E. Baldwin, Air Quality Engineer EIT
Boise Regional Office 

THROUGH: Mike Simon, Facility Operations Coordinator

SUBJECT: Permit Application Fees for Tier II Permit

The following facility has been reviewed for compliance with IDAPA 58.01.01.470 Permit Application Fees for Tier II Permits:

Plum Creek Northwest Lumber Incorporated – Meridian, Idaho

Plum Creek Northwest Lumber Incorporated in Meridian, Idaho has applied for a Tier II Operating Permit (No.001-00091) for the sources that exist at the facility. DEQ will not release the facility's Tier II operating permit until receipt of permit application fees. According to IDAPA 58.01.01.470, the facility is subject to permit application fees for Tier II Permits in the following amount:

Five Hundred Dollars and No Cents (\$500.00)

The contact and mailing address for the above facility is:

PERSON CONTACT: Mitchell Leu
COMPANY ADDRESS: 240 Taylor
Meridian, Idaho 83642

REB:cm G:\BALDWIMOPTIER2\PLUMCREEK\FINAL\T2-STD.FEE

cc: DEQ State Office
Boise Regional Office

MEMORANDUM:

TO: Stephen E. West
Regional Administrator
Boise Regional Office

FROM: Robert E. Baldwin, Air Quality Engineer EIT 
Boise Regional Office

SUBJECT: T2-000039, Plum Creek Northwest Lumber, Inc., Meridian, Idaho
Technical Analysis, Tier II Operating Permit No. 001-00091
A permit for all the emissions units located at Plum Creek Northwest Lumber, Inc.

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01 Sections 400 through 406 (*Rules for the Control of Air Pollution in Idaho*) (*Rules*) for Tier II (OP).

PROJECT DESCRIPTION

This project is for the issuance of a Tier II OP for Plum Creek Northwest Lumber Inc., (Plum Creek), located in Meridian, Idaho. The emissions sources of the facility are:

- Cyclones
- Storage bins
- Vehicle traffic

The cyclones emissions sources are located on the top of the storage bins.

FACILITY DESCRIPTION

Plum Creek bought Canfor USA Corp of Meridian. Plum Creek's facility is a secondary re-manufacturing facility that brings in raw product from sawmills. Raw product in the form of finished mill grade lumber is purchased in 4/4 or 5/4 commons. The raw material is held in inventory until it is in demand and production commences. The mill grade lumber is transported into the cut plant where it is cut to desired lengths or ripped to specified widths. It is then graded to the requirements of each customer, packaged, and inventoried as a finished product ready for shipment.

The grade cuts, which are pieces of lumber that do not meet product specifications, are sent to the edge glue production facility and inventoried as a raw/low grade product. This material is ripped and chopped for a value-added product that can be sent to the gluer and/or finger jointer to be made in to pre-finished strips. The strips are then sent to the molder to be fresh edged for gluing into raw panels. The raw panels are then ripped into finished sizes that are planed and sanded. After this process, the planed pieces are shrink-wrapped as finished panels. Some pieces are sent to the shaper to be processed into rounds and then shrink-wrapped. The shrink-wrapped products are stored under cover for shipping.

Both the key processes mentioned above are performed in covered buildings. Therefore, fugitive emissions vented to the atmosphere are minimal. The sawdust and sander dust are ducted by a fan and routed to medium efficiency cyclones and subsequently vented to the atmosphere. The sawdust and the sander dust are then transported to storage bins where they are stored and also later transported out of the site in trucks as product. The storage bins unload through underbelly clamshell doors.

For Northern Ada County, the Department of Environmental Quality (DEQ) is currently developing a PM₁₀ Maintenance Plan to protect air quality and public health. Modeling analysis of Northern Ada County demonstrates potential noncompliance with the ambient air quality standards for PM₁₀ (particulate matter with an aerodynamic diameter of 10 microns or less). The DEQ Boise Regional Office has identified Plum Creek as a facility that can assist DEQ in developing a PM₁₀ Maintenance Plan by cooperating with DEQ to develop a Tier II OP. Plum Creek was identified as a facility, which did not have or require an OP, but which has a large quantity of allowable PM₁₀ emissions that are not subject to permit limitations.

According to the DEQ 1995 air emission inventory, the facility's estimated allowable emissions are 100 tons per year. Plum Creek's estimated actual emissions of 22 tons per year are considerably less. In this situation, limiting the facility to a level closer to actual emissions with a Tier II OP will assist DEQ in developing a PM₁₀ Maintenance Plan for Northern Ada County. For consistency with other permitted facilities in Northern Ada County the fugitive emissions had to be limited in the Tier II OP.

SUMMARY OF EVENTS

DEQ issued a certified letter on February 18, 2000, informing Plum Creek that DEQ will be issuing a Tier II OP that will limit the facility's potential to emit. In addition, this letter stated the Tier II operating permitted limited emissions would be used in the modeling analysis to demonstrate compliance with the Northern Ada County PM₁₀ Maintenance Plan. The emissions inventory used in the Tier II analysis was received by DEQ on June 18, 2001. A Tier II application was received on December 14, 2000.

DISCUSSION

1. Emission Estimates

Plum Creek's emissions, which are estimated to be less than 13 tons per year are emitted primarily by three cyclones and associated storage bins, as stated within the Tier II OP. Plum Creek (formerly Canfor) Plum Creek reported an estimated 22 tons of actual PM₁₀ emissions in the 1995 emission inventory of Ada County.

The following is an indication of the emissions from the cyclones and storage bins:

Unit Source	Emissions (tons per year)
• Cyclones	10.8
• Storage Bins	1.0
• Vehicle Traffic	1.2
• Total for Combined Sources	13.0

The traffic area is paved and trucks move at less than 15 miles per hour. The PM₁₀ emissions from this source are considered negligible. Modeled results are located in the the Appendix.

2. Modeling

DEQ staff performed modeling on this facility with the emissions quoted by Plum Creek in the 1995 emission inventory for Ada County. At that time Plum Creek stated that their actual emissions for the operational year of 1995 were 22 tons of PM₁₀. Guidance issued by Boise Regional Office indicates that certain facilities (of which Plum Creek is one) could be permitted if their future emissions were less than a 20% increase over their 1995 actual PM₁₀ emissions. Plum Creek's permitted hours would have been reduced to 11 hours per 24 consecutive hours for each cyclone. This reduction from the potential of 24 hours per day in operation would have allowed Plum Creek to meet the 24-hour standard of NAAQS. This limit also meets the guidance and the modeling requirement of the Northern Ada County PM₁₀ Maintenance Plan.

Additional modeling was performed after the public comment period using the ISC3ST model. This model considers more physical and atmospheric conditions. The results of this modeling indicates the second highest 24 hour concentration for PM₁₀ to be 32.6 ug/m³. When 32.6 ug/m³ is added to the background concentration of 123 ug/m³, the total of 156.6 ug/m³ exceeds the 150 ug/m³ limit established as the NAAQS 24-hour standard. If the facility were permitted to operate only 20 hours a day, the impact of the cyclones when added to the PM₁₀ background concentration results in a concentration that meets the NAAQS standard. Therefore, the permit allows the cyclones to operate for a period not to exceed 20 hours per any 24-hour day.

3. Area Classification

Plum Creek of Ada County, Idaho, is located in AQCR 64 and Zone 11. The area is classified as non-attainment for carbon monoxide and attainment or unclassifiable for all other federal and state criteria air pollutants (PM₁₀, nitrogen oxides, volatile organic compounds, and sulfur oxides).

4. Facility Classification

Plum Creek is not a designated facility as defined in IDAPA 58.01.01.006.25. Plum Creek is classified as a synthetic minor source because the potential emissions of any criteria pollutant could exceed 100 tons per year.

5. Regulatory Review

This OP is subject to the following permitting requirements:

- | | | |
|----|---------------------------------|--|
| a. | <u>IDAPA 58.01.01.401</u> | Tier II Operating Permit |
| b. | <u>IDAPA 58.01.01.403</u> | Permit Requirements for Tier II Sources |
| c. | <u>IDAPA 58.01.01.404.01(c)</u> | Opportunity for Public Comment |
| d. | <u>IDAPA 58.01.01.404.04</u> | Authority to Revise or Renew Operating Permits |
| e. | <u>IDAPA 58.01.01.406</u> | Obligation to Comply |
| f. | <u>IDAPA 58.01.01.470</u> | Permit Application Fees for Tier II Permits |
| g. | <u>IDAPA 58.01.01.625</u> | Visible Emission Limitation |
| h. | <u>IDAPA 58.01.01.650</u> | General Rules for the Control of Fugitive Dust |

6. AIRS

AIRS/AFS¹ FACILITY-WIDE CLASSIFICATION² DATA ENTRY FORM

Air Program Description	SIP ³	PSD ⁴	NESHAP ⁵	NSPS ⁶	MACT ⁷	TITLE V	AREA CLASSIFICATION
							A – Attainment U – Unclassifiable N – Non-attainment
SO ₂ ⁸	B						U-Unclassifiable
NO _x ⁹	B						U-Unclassifiable
CO ¹⁰	B						N-Non-attainment
PM ₁₀ ¹¹	SM						U – Unclassifiable
PM ¹²	SM						U-Unclassifiable
VOC ¹³	B						U-Unclassifiable
Total HAPs ¹⁴							
(Add additional lines if necessary.)							
VE/FE/FD ¹⁵	ND	ND	ND	ND	ND	ND	

- 1 AIRS Aerometric Information Retrieval System
- 2 AIRS/AFS CLASSIFICATION CODES:
 - A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant, which is below the 10 ton-per-year (T/yr) threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.
 - SM = Potential emissions fall below applicable major source thresholds if, and only if, the source complies with federally enforceable regulations or limitations.
 - B = Actual and potential emissions below all applicable major source thresholds.
 - C = Class is unknown.
 - ND = Major source thresholds are not defined (e.g., radionuclides).
- 3 State Implementation Plan
- 4 Prevention of Significant Deterioration
- 5 National Emission Standards for Hazardous Air Pollutants
- 6 New Source Performance Standards
- 7 Maximum Achievable Control Technology
- 8 Sulfur Dioxide
- 9 Nitrogen Oxides
- 10 Carbon Monoxide
- 11 Particulate Matter with an aerodynamic diameter less than or equal to nominal ten micrometers
- 12 Particulate matter
- 13 Volatile Organic Compounds
- 14 Hazardous Air Pollutants
- 15 VE/FE/FD (visible emissions, fugitive emissions, and fugitive dust) are entered for compliance purposes only and do not require evaluation by the permit engineer.

Plumb Creek Northwest Lumber, Inc – Tech Memo
July 12, 2002
Page 4 of 4

FEES

Fees apply to this facility in accordance with IDAPA 58.01.01.470. The facility is subject to permit application fees for this Tier II OP of \$500.

RECOMMENDATIONS

Based on the review of the application materials, and all applicable state and federal regulations, staff recommends that DEQ issue the Tier II OP to Plum Creek Northwestern Lumber, Incorporated. An opportunity for public comment on the air quality aspects of the draft OP was provided in accordance with IDAPA 58.01.01.404.01.c. Staff members have notified the facility in writing of the required Tier II application fee of \$500. The permit will be issued upon receipt of the fee.

REB/DPS:cm MASP TVMB 4005 480g:\baldwin\TierII\Plum Creek\Plum Creek I2 tech memo

cc: Fay Weber, DEQ Air Quality Division
Boise RO Source File (0001-00091) / Reading File

APPENDIX - A

MEMORANDUM

TO: Robert Baldwin, , Boise Regional Office, Department of Environmental Quality
FROM: Yayi Dong, Air Quality Meteorologist, State Office of Technical Services
SUBJECT: Modeling results for the Plumb Creek Northwest Lumber, Inc., Meridian, Idaho

DATE: February 14, 2002

1. SUMMARY:

ISCST3 dispersion modeling has been performed to assess the impact of particulate matter with an aerodynamic diameter less than 10 micrometers (PM₁₀) for facility at Meridian, Idaho, of Plumb Creek Northwest Lumber, Inc. The modeling was requested by Boise Regional office. The modeling analysis indicated that operating hours have to be reduced to demonstrate the compliance.

2. DISCUSSION:

2.1 Project Description

The facility is located in Meridian, Idaho. The main activity of the facility is cutting wood lumber into higher grade pieces. This analysis is for PM₁₀ maintenance plan, therefore the only criteria pollutants of concern for this project is PM₁₀.

Ada County is designated as a nonattainment area for Carbon Monoxide (CO) and an attainment and unclassifiable area for all other criteria pollutants. The modeled CO ambient concentration increment cannot exceed the significant contribution, and if the increment(s) of any other regulated pollutant(s) in the list: sulfur dioxide, PM₁₀, nitrogen dioxide or lead is (are) higher than the significant contributions, the appropriate background concentration is added to those ambient concentration increments to determine compliance to the National Ambient Air Quality Standards (NAAQS).

There are three point emission units in the facility. The another unit is a fugitive emission source which is not included in the modeling. Table 1 is the summary of stack parameters and emission rates.

Table 1. Stack parameters

Source	Stack Height (feet)	Temp (°F) ¹	Exit Velocity (ft/s) ²	Stack Diameter (feet)	Emission Rate (lb/hour)
Cyclone 1	40	70	58	3.2	2.4
Cyclone 2	40	70	58	3.2	2.4
Cyclone 3	40	70	58	3.2	2.8

¹ Degrees in Fahrenheit

² Feet per second

2.2 Background Concentrations

24 hour average PM₁₀ background for Ada County is 123 Microgram per cubic meter (*g/m³), the annual is 31.6*g/m³.

3. RESULTS:

3.1 Modeled concentrations

DEQ used dispersion model ISCST3 to analyze the pollutant impact at the potential emission rates. Five year Boise airport meteorological data (1987 to 1991) were used in the analysis, along with all regulatory defaults, the building downwash, and the rural land use option. A rural option was chosen because the majority of the land surrounding the facility within three-kilometer (approximately 1.8-mile) radius is classified as rural and/or residential. Grid size is designed following the DEQ's modeling guidance. It was assumed the facility operates continuously 24 hours a day.

Table 2. is the summary of the modeling results.

Table 1: Ambient Impact Analysis

Pollutant	Averaging Period	Modeled Impact ($\mu\text{g}/\text{m}^3$) ^d	Background Concentration ($\mu\text{g}/\text{m}^3$)	Overall Predicted Concentration ^a ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$) Or AAC	Compliant Y or N?
PM ₁₀ ^e	Annual	6.4 ^b	31.6	38.0	50	Y
	24-Hour	32.6 ^c	123	155.6	150	N

^a Overall predicted concentrations = Modeled Impact + Background.

^b Highest high

^c Highest 2nd high

^d Microgram per cubic meter

^e Particulate matter with an aerodynamic diameter less than 10 micrometers

APPENDIX - B