

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY  
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT**

**Permitting and Compliance Division  
1520 E. Sixth Avenue  
P.O. Box 200901  
Helena, Montana 59620-0901**

**Plum Creek Manufacturing L.P. – Evergreen Division  
SW ¼ of Section 33, Township 29 North, Range 21 West, Flathead County, Montana  
75 Sunset Drive, P.O. Box 5257  
Kalispell, MT 59903**

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

<b>Facility Compliance Requirements</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Source Tests Required	X		Method 5 and 9 on various units.
Ambient Monitoring Required		X	
COMS Required		X	
CEMS Required		X	
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		Semi-annual
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
<b>Applicable Air Quality Programs</b>			
ARM Subchapter 7 – Montana Air Quality Permit (MAQP)	X		#2602-09
New Source Performance Standards (NSPS)		X	
National Emission Standards for Hazardous Air Pollutants (NESHAPS)	X		40 CFR 63, Subpart JJJJJJ, Industrial, Commercial, and Institutional Boilers at Area Sources
Maximum Achievable Control Technology (MACT)	X		40 CFR 63, Subpart DDDD, Plywood and Composite Wood Products
Major New Source Review (NSR) – includes Prevention of Significant Deterioration (PSD) and/or Non-Attainment Area (NAA) NSR	X		PSD review was triggered as a result of the 02/15/97 permit modification.
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV		X	
Compliance Assurance Monitoring (CAM) Plan – ARM 17.8, Subchapter 15	X		Appendix F #OP2602-03: Hog Fuel Boiler (Dry ESP – PM <sub>10</sub> )
State Implementation Plan (SIP)	X		Kalispell PM <sub>10</sub> nonattainment

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## SECTION 1. GENERAL INFORMATION

### A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emission units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the EPA and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted by Plum Creek Manufacturing L.P. – Evergreen Division (Plum Creek), on June 11, 1996; the operating permit renewal application submitted on June 15, 2004, additional information submitted on July 11 and September 19, 2005; the operating permit renewal application submitted on December 8, 2011; Montana Air Quality Permit #2602-09; and the operating permit application submitted on December 5, 2013.

### B. Facility Location

Plum Creek is located in the SW ¼ of Section 33, Township 29 North, Range 21 West, in Flathead County. This site is approximately 3 miles northeast of Kalispell at 75 Sunset Drive.

### C. Facility Background Information

Plum Creek is located approximately 3 miles northeast of Kalispell, Montana near the Evergreen subdivision. The plant is located in the SW ¼ Section 33, Township 29 North, Range 21 West, in Flathead County. The nearest PSD Class I area is Glacier National Park, approximately 16 miles northwest of Plum Creek's plant. Other nearby PSD Class I areas are the Flathead Indian Reservation, located approximately 25 miles south of the plant, and the Bob Marshall Wilderness, located approximately 43 miles southeast of the plant. Plum Creek's facility is located within the boundaries of the Kalispell PM<sub>10</sub> nonattainment area. A Stipulation was established for the facility on September 17, 1993.

Climatology of the area is considered semi-arid. Rainfall in the vicinity of the complex is less than 20 inches per year. Most of the precipitation occurs between April and September. Winds are light to moderate with predominate directions being from the north and south.

#### Montana Air Quality Permit History

Plum Creek has operated an existing plywood plant near the Evergreen subdivision in Kalispell, Montana since the late 1970s when Plum Creek purchased the facility from C & C Plywood Corp. The facility included an existing boiler, two veneer dryers, a plywood mill, a sawmill, and existing equipment not covered by an air quality permit. Montana Air Quality Permit (MAQP) #1752 was initially issued for operation of the Riley Stoker boiler on April 29, 1983.

**MAQP #2602** was issued October 13, 1989, for an increase of the Riley Stoker boiler capacity.

**MAQP #2602-01** was issued on September 25, 1992, for the following reasons:

1. To consolidate all of the source's existing permits into a single permit. This alteration placed all air quality permit requirements in a single document.
2. As the result of the settlement of enforcement actions (Consent decree, Stipulation, and Order – Cause No. DV 90-114B, and Cause No. DV 91-313B, Eleventh District Court, Flathead County, Montana) taken by the Department of Environmental Quality (Department), Plum Creek agreed to install new control systems on the Riley Stoker boiler and the veneer dryers. The alteration of MAQP #2602 is to document the installation of the new systems. Plum Creek was required to permanently derate the Riley Stoker boiler back to the 100,000 lbs steam/hr which was the level it was operating at prior to issuance of MAQP #2602.

- a. Veneer Dryers

Plum Creek installed the GeoEnergy E-Tube wet electrostatic precipitator as the control device for the veneer dryers. The E-Tube collects the dust particles from conditioned dirty gas by ionizing the gas with disc electrodes contained in a collection tube. The charged particles are collected on the walls of the tube, along with entrained water droplets. The water film helps to clean the collection tube, along with a periodic flush from top. The residue collected from the flushing of the system can be utilized by adding it to the hog fuel supply system.

- b. Riley Stoker Boiler

Plum Creek installed an electrostatic precipitator (ESP) as the control device for the boiler. The ESP was installed downstream of a mechanical collector and an induced draft fan. Design requirements for the ESP include a maximum gas flow of 139,000 ACFM, normal exit gas temperature of 500°F, and an emergency exit gas temperature of 750°F. Design pressure extremes require a  $\nabla$ 15" w.c. and the inlet dust loading design value, under extreme conditions, shall be 1.0 gr/dscf. Stack gas design velocity shall be 3,000 to 3,500 feet per minute.

3. The 1990 Clean Air Act Amendments require the application of Reasonably Available Control Measures (RACM) to sources located in or significantly impacting moderate particulate matter with an aerodynamic diameter of 10 microns or less ( $PM_{10}$ ) nonattainment areas. RACM has been defined as Reasonably Available Control Technology (RACT) for existing  $PM_{10}$  stack or point sources, process fugitives, and fugitive dust sources such as haul roads, open stockpiles, disturbed areas, or unpaved staging areas (see "Guidance on Reasonably Available Control Requirements in Moderate  $PM_{10}$  Nonattainment Areas"). The Department required that Plum Creek apply RACT to all applicable sources at the Evergreen plywood plant and required Plum Creek to modify the existing MAQP (#2602) to include RACT requirements as enforceable permit conditions.
4. The Department, as part of its control strategy development for the Kalispell  $PM_{10}$  State Implementation Plan (SIP), determined it was necessary to establish enforceable allowable emission limitations for all existing major sources located in the nonattainment area. The modifications made to MAQP #2602 established those allowable emission limitations.

**MAQP #2602-02** was issued to Plum Creek on September 20, 1993, to install and operate a Clarke log yard residue reclaim system at the Evergreen plywood plant.

The operation of the Clarke log yard residue reclaim system allows Plum Creek to recycle log yard debris that was previously trucked to an on-site landfill. Debris will be separated into wood waste, soil, and rock fractions. Reclaimed wood waste will be taken to the hog fuel pile and burned. The soil and wood fiber fines may be used for landscaping purposes. Rock and gravel separated from the waste material will be returned to the log yard. Overall environmental benefits from the project include reduction of material disposed of in the landfill, more rock in the log yard to reduce fugitive dust, and less haul traffic from the log yard to the landfill. MAQP #2602-02 replaced MAQP #2602-01.

**MAQP #2602-03** was issued to Plum Creek on June 6, 1994, for the construction and operation of a new sander-dust baghouse and a remanufacturing facility at the Evergreen facility. The new baghouse was necessary because the old sander at the plywood plant was replaced with a new sander. The new sander has more heads that create a smoother surface and improve the quality of the plywood. The new baghouse is larger and is capable of handling the increased airflow that results from the new sander. There results in an increase of particulate emissions from the new baghouse.

The remanufacturing plant processes low quality scrap lumber from the sawmill and manufacture moldings. The scrap lumber is sized in the remanufacturing plant with the larger pieces being remanufactured into moldings. The smaller pieces are sent to a chipper and sold as wood chips.

The larger scrap lumber is finger jointed and glued to extend the length of the scrap wood. The finger jointed scrap is then cut and molded into shape. Waste from the finger joiner, saw, and molder is used as fuel for the hog fuel boiler.

The waste stream from the chipper is transported pneumatically from the chipper to a cyclone. The cyclone separates the chips from deposit in the truck bin. The chipper cyclone exhaust is sent to a new fabric filter baghouse. The exhaust from the finger joiner, saw, and molder is also transported pneumatically to a cyclone. The cyclone separates the wood particles for deposit in a truck bin for use as fuel in the hog fuel boiler. The cyclone exhaust from the finger joiner cyclone is vented to the same baghouse as the chipper cyclone exhaust.

To offset the increase in particulate emissions from the sander baghouse, remanufacturing baghouse, and chip bin, Plum Creek proposed to reduce the enforceable emission rate from the veneer dryers. As mentioned above, a consent decree required Plum Creek to install an ESP on the veneer dryers (MAQP #2602-01) to meet their opacity limit. With the installation of the ESP there was also a reduction of actual particulate emissions. This reduction of actual emissions was sufficient to offset this proposed increase in emissions.

In addition to the above-mentioned changes, Plum Creek officially requested that the conditions of MAQP #2602-02 for the Evergreen facility be modified to reflect the limitations and conditions contained in the 9/17/93 Stipulation.

**MAQP #2602-04** was issued to Plum Creek on February 25, 1995, for the construction and operation of a Medium Density Overlay (MDO) process line and a scarfing line at their Evergreen facility. The MDO process line produces a plywood panel that has kraft paper

glued onto one or both of its faces. The process equipment for the MDO process line includes a heat press and a trim saw. There was not an increase in production as a result of the MDO process, but rather panels from other reduced product lines will be used. An increase in particulate matter emissions was not expected because the panels to be used in the MDO process are normally trimmed at the facility as part of the plywood process. The MDO process resulted in an increase in VOC emissions of approximately 0.038 tons/year from the glue that is used in this process.

The scarfing line process glues plywood panels together to make long panels. The process equipment installed for the scarfing line process is the scarfing saw, the cutoff saw, and the small spot sander, which will be tied into the existing plywood sander baghouse system. The scarfing line will not result in an increase in production because the plywood panels that are used in the scarfing line are produced elsewhere in the plant. The scarfing line will not result in an increase in particulate matter emissions because the panels to be used in the scarfing line are normally sawed and sanded at the facility as part of the plywood process. In addition, the total air flow of the plywood sander baghouse will still be less than the current design air flow of 72,000 acfm at a permitted emission rate of 6.17 lb/hr. The scarfing line will result in an increase in Volatile Organic Compounds (VOC) emissions of 0.006 ton/yr from the glue that is used in this process.

**MAQP #2602-05** was issued to Plum Creek on June 4, 1995, to replace the existing Clarke log yard residue reclaim system with a new Rawlings log yard residue reclaim system. The new system includes a reclaimer, conveyors, classifiers, a trommel screen, and rock and metal separators (RMS). This system is powered by a 340-hp diesel engine. The Rawlings system is slightly larger than the Clarke System and will result in an increase in TSP of 0.29 tons/year and in PM<sub>10</sub> of 0.75 tons/year. Because Plum Creek's facility is located in a PM<sub>10</sub> nonattainment area and there would be an increase in PM<sub>10</sub> emissions, the operation of the Rawlings system is limited to 2,940 hours/year of operation during the months of April through November.

**MAQP #2602-06** was issued to Plum Creek for the removal of specific hourly emission limits from the following sources:

Sawmill Chip Bin Cyclone  
Plywood Fines Cyclone  
Remanufacturing Jointer Bin  
Remanufacturing Chipper Bin

As part of the Kalispell PM<sub>10</sub> State Implementation Plan (SIP), emission limits were placed on various sources of emissions at the facility. In many cases, these limits were equal to the Potential to Emit (PTE) of the source.

Plum Creek suggested, and the Department agreed that the limits on the above sources are meaningless because they equal the PTE of the units and, by definition, the sources are not capable of emission rates in excess of the limits. This permitting action did not increase either actual or allowable emissions from the facility.

**MAQP #2602-07** was issued to Plum Creek on February 15, 1997, for an increase in the hog fuel boiler steaming capacity and tons of logs debarked at the facility as well as the installation of an air knife separator in the log yard residue reclaimer. The permitting action was subject to

review requirements of the Prevention of Significant Deterioration (PSD) program for oxides of Nitrogen (NO<sub>x</sub>) and carbon monoxide (CO). Plum Creek "netted out" of PSD review for particulate matter (PM) and PM<sub>10</sub>.

The increase in steaming capacity of the boiler is needed during the winter months to provide heat for new building space as well as steam for recently installed processes such as the MDO facility. Plum Creek had been limited to 100,000 lbs of steam/hour from the hog fuel boiler and has requested that this limit be increased to 140,000 lbs/hour. Along with this change, Plum Creek requested a decrease in allowable particulate emissions from the hog fuel boiler.

The increase in the log tonnage is needed to offset increasingly heavier wood. A decrease in the amount of salvage timber has caused the average density of the logs received at the facility to increase. The previous limit on the tons of logs debarked was proposed by Plum Creek during the development of the Kalispell PM<sub>10</sub> SIP and was meant to allow the mill to operate at full capacity. Plum Creek has determined that because of the increased log density, the production allowed by the previous debarking limit is inadequate. Plum Creek requested that the limit be increased from 734,400 tons of logs/year to 850,000 tons/year.

The changes in allowable emissions from the facility associated with this permitting action were:

- PM - 18.0 tons/year decrease
- PM<sub>10</sub> - 22.9 tons/year decrease
- NO<sub>x</sub> - 128.4 tons/year increase
- CO - 628.2 tons/year increase
- SO<sub>2</sub> - 2.0 tons/year increase
- VOC - 6.3 tons/year increase

These changes in allowable emissions were different from the net emissions increase used to determine if the Major New Source Review (NSR) or PSD programs were applicable. The net emissions increases for PSD and NSR applicability were based on the difference between past actual emissions and future potential emissions and not the change in allowable emissions. Net emissions increases (comparing past actual emissions with future potential emissions) associated with this permitting action were as follows:

Pollutant	Net Emission Increase (ton/yr)	Significant Levels (ton/yr)
PM	16.2	25
PM <sub>10</sub>	4.8 (decrease)	15
NO <sub>x</sub>	220	40
SO <sub>2</sub>	3.4	40
CO	1075	100
VOC	10	40

Plum Creek performed an ambient air impact analysis for the surrounding Class II area as well as the Glacier National Park Class I area. The analysis demonstrated the ambient air impacts were less than the available PSD increment. The following table lists the ambient impacts from the alteration and the allowable increment consumption:

Pollutant	Area	Averaging Period	Maximum Allowable ( $\mu\text{g}/\text{m}^3$ )	Consumption ( $\mu\text{g}/\text{m}^3$ )
NOx	Glacier National Park (Class I)	Annual	2.5	0.17
NOx	Surrounding Area (Class II)	Annual	25	1.71

**MAQP #2602-08** was issued to Plum Creek on August 10, 2002, for the Small Log Sawmill (SLS) project.

On May 30, 2002, the Department received a complete NSR/PSD permit application for the historical 1989 SLS project at the Plum Creek facility. The Plum Creek facility was a major source of emissions as defined under the NSR program at the time of the SLS project. Further, at the time of the SLS project, the Evergreen area was designated attainment/unclassified for all pollutants. The area was later re-designated as a  $\text{PM}_{10}$  nonattainment area on November 15, 1990, and the Department was required to develop a SIP to bring the area back into compliance with the National Ambient Air Quality Standards (NAAQS) for  $\text{PM}_{10}$ . Because the Evergreen area was considered attainment or unclassified for all pollutants at the time of the SLS project an NSR/PSD permit review was required rather than an NSR Nonattainment Area (NAA) permit review.

Under this permit action, emissions of all regulated pollutants were compared to NSR/PSD significant emission rate (SER) thresholds to determine if NSR/PSD review was required. Under the NSR/PSD program, a change to an existing major source is considered to be a major modification requiring NSR/PSD review if the emissions increase resulting from the modification is greater than the SER for any pollutant. Total potential SLS emissions increases and the NSR/PSD SERs for the 1989 SLS project are contained in the table below.

Small Log Sawmill Total Emission Increase		
Pollutant	Increase (tons/year)	NSR/PSD SERs (tons/year)
PM	125.00	25
$\text{PM}_{10}$	83.70	15
CO	170.00	100
NOx	18.70	40
SO <sub>2</sub>	1.50	40
VOC	22.70	40
Lead	0.00	0.6

As indicated in the table above, the SLS project results in net emissions increases exceeding the applicable SER for PM,  $\text{PM}_{10}$ , and CO; therefore, NSR/PSD review applies to these pollutants under the current permit action. NSR/PSD review was conducted for CO emissions, including Riley Stoker Boiler emissions, under permit action #2602-07; therefore, NSR/PSD review for CO was not required for the current permit action, because it has already been satisfied. However, the appropriate review for PM and  $\text{PM}_{10}$  was not done at that time.

As part of NSR/PSD review a source is required to demonstrate compliance with the NAAQS and Montana Ambient Air Quality Standards (MAAQS) and all applicable Class I and Class II increments through air dispersion modeling for all applicable pollutants. However, because the Evergreen area has, since construction and initial operation of the SLS project, been covered under a SIP incorporating a control plan and limits for PM/PM<sub>10</sub> emission sources in the area (including the Plum Creek facility) the Department determined that air dispersion modeling for the SLS project is not required.

The NSR/PSD rules also require that each major source and/or major modification must employ Best Available Control Technology (BACT) for each pollutant for which a new source or modification is considered major. BACT is applied on a pollutant-by-pollutant basis to each physically modified emission unit that experiences an emission increase of the pollutant of concern as a result of the project. The affected emitting units for the current permit action include 5 saws, the planer, chip bins, chippers, and the sawmill lumber dry kilns. A particulate matter BACT analysis for the SLS project is contained in Section IV of the permit analysis. A CO BACT analysis was not required for the current permit action because CO emissions result from Riley Stoker Boiler operations. The Riley Stoker Boiler was not modified as part of the SLS project; therefore, emissions from the Riley Stoker Boiler are considered secondary or associated emissions and BACT review is not required.

Further, the current retroactive NSR/PSD action also accounts for the increase in CO emissions associated with the historical 1995 Veneer Dryer Control Project (Veneer Dryer Project). Although CO emissions are directly associated with the Riley Stoker Boiler and do not result from operation of the Veneer Dryers themselves, the Veneer Dryer Project debottlenecked the plywood process and increased steam production from the Riley Stoker Boiler. Therefore, CO emissions from the Riley Stoker Boiler are considered in the analysis for the Veneer Dryer Project.

#### Title V Operating Permit History

On January 14, 2000, Title V **Operating Permit #OP2602-00** was issued to Plum Creek as final and effective.

As required under ARM 17.8.1205(d), on June 15, 2004, Plum Creek submitted to the Department an application for Title V Operating Permit Renewal #OP2602-01. The application was deemed technically complete on July 11, 2005, with the submittal of a complete Compliance Assurance Monitoring (CAM) plan for applicable units in operation at the facility.

Since issuance of Operating Permit #OP2602-00, there had not been any significant modifications to permitted operations at the Plum Creek facility. As applicable, the Veneer Driers are subject to the Standards of Performance for New Stationary Sources (NSPS) requirements contained in 40 CFR 63, Subpart DDDD, Standards of Performance for Plywood and Composite Wood Products; and the Maximum Achievable Control Technology (MACT) requirements contained in 40 CFR 63, Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters. In addition, this permit action updated Section I, General Information, to reflect a change in the facility Responsible Official. In accordance with the requirements contained in ARM 17.8, Subchapter 15, the Operating Permit renewal incorporated a CAM plan (Appendix E to Operating Permit #OP2602-01) for PM<sub>10</sub> emissions from the existing Riley Stoker hog fuel-fired boiler controlled by a dry electrostatic precipitator (DESP) system. Also, during the Operating Permit renewal application process, Plum Creek

requested the Department to remove the Rawlings Log Yard Residue Reclaim System (emitting unit 016) from the permit as the unit has been removed and will never be used. This permit action updated various sections of the Operating Permit with current Title V Operating Permit language and established requirements. **Operating Permit #OP2602-01** replaced Operating Permit #OP2602-00.

Plum Creek notified the Department in a September 19, 2005, letter about a de minimis change to move the Combustion Engineering natural gas-fired boiler rated at 22,500 pound per hour of steam from the Columbia Falls plant to the Evergreen mill as an emergency backup unit. Maximum potential emissions fell below the de minimis threshold levels in place at that time. Based on its status as emergency backup equipment, maximum potential emissions are less than 5 tons per year of any pollutant when operated for up to 500 hours per year. Therefore, the unit was added to the table of insignificant emission units in the operating permit.

On December 8, 2011, the Department received the Title V Renewal application from Plum Creek for the Evergreen facility. All emission sources remained the same as in the previous Title V permit. This iteration of the operating permit reflected Plum Creek's selection of a biofilter pollution control device on the plywood veneer dryer exhaust to reduce formaldehyde emissions as compliance with the Add-on Control System Compliance Option for 40 CFR 63, Subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products. This permit action also updated various sections of the Operating Permit with current Title V Operating Permit language used by the Department and established requirements. **Operating Permit #OP2602-02** replaced Operating Permit #OP2602-01.

#### **D. Current Permit Action**

On December 5, 2013, the Department received a request from Plum Creek to modify Operating Permit #OP2602-02 to include federally enforceable limits to reduce the maximum production capacities of both the plywood production process and the sawmill kiln. Accepting these new limits would reduce Plum Creek's HAP emissions to below the major source threshold and the Evergreen Complex would become a minor (area) source of HAPs. As such, Plum Creek would be subject to the recently promulgated National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart JJJJJ rather than Subpart DDDDD (Boiler MACT) for boilers and process heaters at major sources of HAP.

In order to become an area source of HAPs, Plum Creek is specifically requesting that the permitted capacity of two production processes be lowered. The plywood production will be changed from 227,760 thousand ft<sup>2</sup> 3/8" per year of product to 180,000 thousand ft<sup>2</sup> 3/8" per year. The Sawmill Kiln will be reduced from 105,000 thousand board feet per year of product to 80,000 thousand board feet per year. The boiler capacity and plywood production will remain unchanged as part of this modification. Plum Creek is currently subject to NESHAP Subpart DDDD (Standards for Plywood and Composite Wood Products at Major Sources) and will continue to be subject based on EPA's "once in, always in" policy regarding maximum achievable control technology (MACT) standards. Plum Creek will continue to comply with NESHAP Subpart DDDD even after becoming an area source of HAP. Plum Creek will continue to be categorized as a major source of emissions based on criteria pollutants.

Finally, the permit format was updated to reflect current Department air quality permit format. **Operating Permit #OP2602-03** replaces Operating Permit #OP2602-02.

**E. Takings and Damaging Checklist**

HB 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

**F. Compliance Designation**

On September 3, 2013, the Department completed a full compliance evaluation (FCE) of the Evergreen facility for the period from July 27, 2011, to September 2, 2013. In addition to a review of the files and compliance reports, the FCE also included an on-site inspection that occurred on August 20, 2013. The veneer dryers are subject to 40 CFR 63, Subpart DDDD – National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products. Plum Creek elected to install a biofilter for controlling hazardous air pollutants

(HAP). The biofilter was installed downstream from the ESP and was put into operation before the compliance deadline of October 1, 2008. Initial and subsequent performance tests have demonstrated compliance with the requirement to reduce formaldehyde emissions by 90 percent or greater. The FCE summarized the other emissions tests that were performed at the facility as required by the MAQP and Operating Permit during the reporting period. These emissions tests demonstrated compliance with the corresponding permit limits. The inspection and material reviewed in the Department's files indicated that the facility was in compliance with the limits and conditions of MAQP #2602-08 and Title V Operating Permit #OP2602-02, as well as with the applicable requirements of 40 CFR 63, Subpart DDDD, during the time period of the inspection.

## SECTION II. SUMMARY OF EMISSION UNITS

### A. Facility Process Description

#### Sawmill and Planing Mill

Part of the operations at the Plum Creek Evergreen facility is dedicated to the production of stud grade lumber from raw logs. The sawmill has kilns for drying lumber, a planer, and a hog fuel fired boiler to supply steam for the kilns. The facility installed the new equipment to allow the production of value added products. A remanufacturing plant was added which converts low grade lumber into higher quality material by cutting and joining to remove flaws. The remanufacturing process is very labor intensive and is housed in a separate building.

Logs from the log storage area are fed into the debarker where bark is removed. The debarked logs are cut to length by block saws located outside the sawmill building. The blocked logs enter the sawmill where they are cut to dimension. Green dimension lumber from the sawmill is conveyed to the sorter/stacker area. Stacked green lumber is stored in green inventory until it is dried in the dry kilns. Dried lumber from the dry kilns enters dry rough inventory. The dry rough lumber is planed in the planer building. Planed lumber is conveyed out of the planer building into the finished inventory area.

Bark from the debarker is conveyed to a bark hog where it is shredded. Shredded bark is conveyed from the hog to the hog fuel pile. Sawdust and slabs from the sawmill are conveyed to the sawdust screens. Large pieces are screened off and conveyed to the chipper. Sawdust is transported via conveyer from the screen to the fines truck bin. The larger pieces are sent through a chipper and then screened. Remaining sawdust is sent to the fines truck bin, and the chips are sent through the sawmill chip bin cyclone to the sawmill chip bins.

Planer ends are conveyed to the planer chipper. Chips from the planer chipper are transported via pneumatic conveyer to the sawmill chip bin cyclone and then into the sawmill chip bin. Shavings from the planer are pneumatically conveyed to the planer shavings baghouse, and then into the planer shavings bin.

The hog fuel boiler is used to provide steam for the drying of rough green lumber in the dry kilns and to provide steam for the drying of plywood veneer in the veneer dryers. Bark from the log debarking process is the main fuel for the boiler. The boiler design capacity is 140,000 pounds of steam per hour. The boiler particulate emissions are controlled by an electrostatic precipitator.

#### Plywood Plant

Another portion of the Plum Creek Evergreen facility is dedicated to the production of commercial grades of plywood.

After the logs from the raw log inventory are debarked, they are cut to 8 foot lengths by block saws and sent through block vats, where they are steamed. The steamed logs are then turned on lathes which peel the logs into thin veneers. The leftover log cores are either sold or chipped in the core chipper. The chips are screened and conveyed to the plywood chip bins. Any remaining sawdust is either sent to the hog fuel pile or sent through the fines cyclone to the fines truck bin.

The green veneers are cut, stacked and sent to the green veneer inventory. From the green veneer inventory, the veneers are sent through one of two veneer dryers, which dry the veneers with steam heat supplied by the hog fuel boiler. The veneer dryers have a combined drying capacity of 30,000 square feet of 3/8-inch veneer per hour. Emissions from the veneer dryers are controlled by a wet electrostatic precipitator and a biofilter.

When the veneer is dry, it is graded and stacked, and becomes part of the dry veneer inventory. The dry veneer is then made into plywood. Rejected veneer is chipped and follows the same process as the core chips.

Multiple layers of veneer are glued together and sent to a 36-opening press where the layers bond together under extreme pressure and heat. The plywood is added to the finished panel inventory, ready to be shipped.

Sander-dust from the plywood sanding operation is collected in the sander baghouse, then pneumatically conveyed to the sander-dust silo baghouse. The sander-dust is then emptied from the baghouse into the sander-dust silo, where it is stored until it is fed to the hog fuel boiler. Sawdust from the plywood trimming operations is collected in the sawline baghouse. It is then pneumatically conveyed to the dry fuel cyclone.

The Evergreen facility incorporates a MDO process in the plywood production, where a portion of the plywood produced has kraft paper glued to one or both of its faces. The Evergreen facility also incorporates a scarfing line process, where plywood panels are glued together to form panels longer than the standard 8-foot length.

## B. Emission Units and Pollution Control Device Identification

<b>Emissions Unit ID</b>	<b>Description</b>	<b>Pollution Control Device/Practice</b>
EU001	Hog Fuel Boiler	ESP
EU002	Veneer Dryers	ESP and Biofilter
EU003	Lumber Dry Kilns	None
EU004	Sawmill Chip Bin	Cyclone
EU005	Planer Shavings Cyclone	Baghouse
EU006	Plywood Fines Cyclone	Cyclone
EU007	Sanderdust Silo Baghouse	Baghouse
EU008	Plywood Sander Baghouse	Baghouse
EU009	Sawline Baghouse	Baghouse
EU010	Dry Fuel Baghouse	Baghouse
EU011	Hog Fuel Pile and Fuel Bunker	None
EU012	Fines Truck Loadout	None
EU013	Planer Shavings Truck Loadout	None
EU014	Haul Roads	Dust Suppressant
EU015	Remanufacturing Baghouse	Baghouse

### C. Categorically Insignificant Sources/Activities

Emissions Unit ID	Description
IEU01	Log Debarking
IEU02	Sawmill Block Sawing
IEU03	Sawmill/Planer Chips Loadout
IEU04	Plywood Block Sawing
IEU05	Plywood Chips Truck Loadout
IEU06	Remanufacturing Facility Fines Loadout
IEU07	Remanufacturing Facility Chips Loadout
IEU08	Medium Density Overlay (MDO) Process
IEU09	Scarfing Line Process
IEU10	Sawmill and Planer Chippers and Screens
IEU11	Plywood Chipper and Screen
IEU11	22,500 pound per hour emergency backup natural gas-fired boiler

## SECTION III. PERMIT CONDITIONS

### A. Emission Limits and Standards

Emission limitations contained in Operating Permit #OP2602-03 are existing limitations in Montana Air Quality Permit #2602-09, the September 17, 1993 Stipulation, and CAM, 40 CFR 63.

### B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor for all emission units. Furthermore, it does not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for an insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (**i.e., no monitoring**) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

### C. Test Methods and Procedures

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

### D. Recordkeeping Requirements

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least five years following the date of the generation of the record.

### E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semi-annual and annual monitoring reports to the Department

and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

**F. Public Notice**

In accordance with ARM 17.8.1232, a public notice was published in the *Missoulian* newspaper on or before April 18, 2014. The Department provided a 30-day public comment period on the draft operating permit from April 21, 2014, to May 21, 2014. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by May 21, 2014, will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to Plum Creek so they may have an opportunity to respond to these comments as well.

**Summary of Public Comments**

Person/Group Commenting	Comment	Department Response
No comments received	None	None

**G. Draft Permit Comments**

**Summary of Permittee Comments**

Permit Reference	Permittee Comment	Department Response
No comments received	None	None

**Summary of EPA Comments**

Permit Reference	EPA Comment	Department Response
No comments received	None	None

## SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

Pursuant to ARM 17.8.1221, Plum Creek requested a permit shield for all non-applicable regulatory requirements and regulatory orders identified in the tables in Section 8 of the permit application. In addition, the Plum Creek permit application identified a permit shield request for applicable requirements for both the facility and for certain emissions units. The Department has determined that the requirements identified in the permit application for the individual emissions units are non-applicable. These requirements are contained in the permit in Section IV – Non-applicable Requirements.

The following table outlines those requirements that Plum Creek had identified as non-applicable in the permit application but will not be included in the operating permit as non-applicable. The table includes both the applicable requirements and the reason that the Department did not identify this requirement as non-applicable.

Rule Citation	Reason
40 CFR 50 40 CFR 51 40 CFR 53 40 CFR 58 40 CFR 71	Although these rules contain requirements for the regulatory authorities and not major sources, these rules can be used as authority to impose specific requirements on a major source.
40 CFR 61, Subpart M ARM 17.8.120 ARM 17.8.504 ARM 17.8.514 ARM 17.8.515 ARM 17.8.611 ARM 17.8.612	This rule is procedural and has specific requirements that may become relevant to a major source during the permit span.
ARM 17.8.322 ARM 17.8.324 ARM 17.8.326	These rules are applicable to the source and may contain specific requirements for compliance.
ARM 17.8.804 ARM 17.8.825 ARM 17.8.826 ARM 17.8.828	These rules are for major sources and may become applicable during the permit term.
ARM 17.8.701 ARM 17.8.901 ARM 17.8.1001 ARM 17.8.1103	These rules consist of either a statement of purpose, applicability statement, regulatory definitions or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.

## SECTION V. FUTURE PERMIT CONSIDERATIONS

### A. MACT Standards

Plum Creek is subject to the MACT standards under 40 CFR 63, Subpart DDDD, National Emission Standards for Hazardous Air Pollutants (NESHAP) from Plywood and Composite Wood Products manufacturing, as applicable and will continue to be subject based on EPA's "once in, always in" policy regarding MACT standards. Therefore, Plum Creek will continue to comply with NESHAP Subpart DDDD even after becoming an area source of HAP. Plum Creek will be subject to the recently promulgated National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart JJJJJJ for industrial boilers at area sources.

### B. NESHAP Standards

As of the date of issuance of this permit, the Department is not aware of any NESHAP Standards that are applicable to this source.

### C. NSPS Standards

As of the date of issuance of this permit, the Department is not aware of any NSPS Standards that are applicable to this source. The hog fuel boiler is not subject to 40 CFR 60, Subpart Db because Plum Creek has not commenced construction, modification, or reconstruction of the boiler after June 19, 1984. The NSPS definition of modification is "any physical change in, or change in the method of operations of, an existing facility which increases the amount of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. Although some work has been done on the boiler since the trigger date, including installation of an ESP, no changes have been made which resulted in an increase in regulated pollutants. Furthermore, the modification resulting in MAQP #2602-07, which increased the emissions from the boiler also included information demonstrating that the modification to increase the production rate of the boiler could be made without a capital expenditure and was not considered a modification under 40 CFR 60.14(e)(2). Therefore, it was not considered a modification for NSPS purposes and did not trigger NSPS requirements.

### D. Risk Management Plan

As of the date of issuance of this permit, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than June 21, 1999; three years after the date on which a regulated substance is first listed under 40 CFR 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

### E. CAM Applicability

An emitting unit located at a Title V facility that meets the following criteria listed in ARM 17.8.1503 is subject to Subchapter 15 and must develop a CAM Plan for that unit:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (unless the limitation or standard that is exempt under ARM 17.8.1503(2));
- The emitting unit uses a control device to achieve compliance with such limit; and
- The emitting unit has potential pre-control device emission of the applicable regulated air pollutant that is greater than major source thresholds.

EU001 – Riley Stoker Hog Fuel Boiler meets the criteria for requiring a CAM Plan. This unit uses a dry ESP for control of particulate emissions and is subject to a PM<sub>10</sub> emission limit of 11.25 lb/hr. Uncontrolled PM<sub>10</sub> emissions from this unit would exceed major source thresholds. The CAM plan for EU001 – Riley Stoker Hog Fuel Boiler is contained in Appendix F of Operating Permit #OP2602-03.

## **F. PSD and Title V Greenhouse Gas Tailoring Rule**

On May 7, 2010, EPA published the “light duty vehicle rule” (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG “Tailoring Rule” (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that would become final on or after January 2, 2011 would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 TPY of carbon dioxide equivalent (CO<sub>2</sub>e) and greater than 0 TPY on a mass basis. Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO<sub>2</sub>e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO<sub>2</sub>e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO<sub>2</sub>e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

The Evergreen facility is currently considered a major source of emissions under PSD/NSR regulations based on criteria pollutant levels and is therefore already subject to the PSD/NSR program. Any permit modification must also address potential CO<sub>2</sub>e emissions.