April 25th, 2023

Ashley Williams
Weyerhaeuser NR Company
Evergreen Facility
P.O. Box 5257
Kalispell, MT 59903

Sent via email: Ashley.Williams@weyerhaeuser.com

RE: Final Permit Issuance for MAQP #2602-13

Dear Ms. Williams:

Montana Air Quality Permit (MAQP) #2602-13 is deemed final as of April 25th, 2023, by DEQ. This permit is for Weyerhaeuser NR Company Evergreen Facility, a plywood plant. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,

Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626

Tim Gauthier
Air Quality Engineering Scientist
Air Quality Bureau
(406) 444-2467

Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau

Montana Air Quality Permit #2602-13

Weyerhaeuser NR Company
Evergreen Facility
P.O. Box 5257
Kalispell, MT 59903

April 25th, 2023

MONTANA AIR QUALITY PERMIT

Issued to: Weyerhaeuser NR Company
Evergreen Facility
P.O. Box 5257
Kalispell, MT 59903

MAQP: #2602-13
Administrative Amendment (AA)
Request Received: 2/22/2023
Department's Decision Issued: 4/7/2023
Permit Final: 4/25/23

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Weyerhaeuser NR Company (Weyerhaeuser) pursuant to Section 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM), 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. This permit covers all existing sources of air contaminants at Weyerhaeuser's Evergreen plywood plant located approximately 3 miles northeast of Kalispell, Montana, near the Evergreen subdivision in the SW ¼ of Section 33, Township 29 North, Range 21 West, Flathead County, Montana, Latitude 48.2328° North, Longitude -114.2852° West. A listing of permitted equipment is contained in the permit analysis attached to this permit.

B. Current Permit Action

On March 22nd, 2023, the Department received a request from Weyerhaeuser to replace the previously permitted Clark Log Yard Reclaim System with an RDO 616 Screener. The screener will separate the constituents bark, rock, and sawdust.

The primary considerations for emissions are total particulate matter (PM) and total particulate matter below 10 microns (PM10). Weyerhaeuser submitted screener flow rate, estimated usage hours, and volumetric percentages of the constituents. Based on these inputs, the Department determined the total PM = 4.0 tpy and the total PM10 = 1.4 tpy. These values fall well below the values for the Clark Log Yard Reclaim System of total PM = 7.5 tpy and total PM10 = 3.2 tpy, as calculated in MAQP #2602-02.

Detailed calculations can be found in Section III. Emission Inventory. Weyerhaeuser shall report hours of operation of the RDO 616 Screener, not to exceed 962 hours per year. **MAQP #2602-13** replaces MAQP #2602-12.

Section II: Limitations and Conditions

A. Facility-Wide Limits and Conditions

1. Weyerhaeuser shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, installed on or before November

23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

2. Weyerhaeuser shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any source, installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).

3. Weyerhaeuser shall not cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control airborne particulate matter are taken. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.308).

4. Weyerhaeuser shall not process more than 850,000 tons of logs during any rolling 12-month time period (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

5. Weyerhaeuser shall not exceed 10 tons during any rolling 12-month time period of any single HAP from the Sawmill and Plywood facilities combined. The following equation shall be used to calculate the single HAP emissions from the Sawmill and Plywood facilities combined (ARM 17.8.749):

   Single HAP tons = (SP MMBF *0.039437 tons/MMBF) + (PP MMSF 3/8"*0.032436 tons/MMSF 3/8")

   Where: SP = Sawmill Plant production as measured by amount of product processed by the Sawmill Kiln
   PP = Plywood Plant production as measured by amount of product processed by the Veneer Dryers
   MMBF = million board feet
   MMSF 3/8" = million square feet of plywood, 3/8-inch basis

6. Weyerhaeuser shall not exceed 25 tons during any rolling 12-month time period of combined HAPs from the Sawmill and Plywood facilities combined. The following equation shall be used to calculate the combined HAP emissions from the Sawmill and Plywood facilities combined (ARM 17.8.749):

   Combined HAP tons = (SP MMBF*0.112957 tons/MMBF) + (PP MMSF 3/8"*0.067969 tons/MMSF 3/8")

   Where: SP = Sawmill Plant production as measured by amount of product processed by the Sawmill Kiln
   PP = Plywood Plant production as measured by amount of product processed by the Veneer Dryers
   MMBF = million board feet
   MMSF 3/8" = million square feet of plywood, 3/8-inch basis

B. Individual Source Limits and Conditions

1. Riley Stoker Boiler

   a. Emissions from the boiler shall be limited to 11.25 lb/hr of total particulate matter (ARM 17.8.752).

   b. Emissions from the boiler shall be limited to 11.25 lb/hr of PM_{10} (ARM 17.8.752).

   c. Visible emissions from the boiler shall be limited to 20% opacity (ARM 17.8.304).

   d. Nitrogen oxide emissions from the boiler shall be limited to 104 lb/hr (ARM 17.8.752).

   e. Carbon monoxide emissions from the boiler shall be limited to 506 lb/hr (ARM 17.8.752).

2. Veneer Dryers (2)

   a. Plywood veneer dryer emissions shall be limited to 12.60 lb/hr of total particulate (ARM 17.8.752).

   b. Plywood veneer dryer emissions shall be limited to 12.60 lb/hr of PM_{10} (ARM 17.8.752).

   c. Visible emissions shall be limited to 20% opacity (ARM 17.8.304).

3. Total Sawmill Process

   Visible emissions shall be limited to 20% opacity from all sources included in the sawmill (ARM 17.8.304).

4. Total Planer Process – Replacement Baghouse

   a. Emissions from the planer shavings bin baghouse shall be limited to 16.40 lb/hr of total particulate (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

   b. Emissions from the planer shavings bin baghouse shall be limited to 8.20 lb/hr of PM_{10} (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

   c. Emissions of PM and PM_{10} from the planer shavings bin baghouse shall not exceed 0.004 grains per dry standard cubic foot (gr/dscf) and 1.71 lb/hr (ARM 17.8.749 and ARM 17.8.752).

   d. Emissions of $PM_{2.5}$ from the planer shavings bin baghouse shall not exceed 0.002 grains per dry standard cubic foot (gr/dscf) and 0.86 lb/hr (ARM 17.8.749).

e. Visible emissions shall be limited to 20% opacity from all sources included in the planer process (ARM 17.8.304).

f. Weyerhaeuser shall use a cyclone and a baghouse to control particulate emissions from the planer process (ARM 17.8.752).

5. Total Plywood Process Excluding the Dryers

a. Emissions from the plywood sander baghouse shall be limited to 6.17 lb/hr of total particulate (ARM 17.8.752).

b. Emissions from the plywood sander baghouse shall be limited to 6.17 lb/hr of PM_{10} (ARM 17.8.752).

c. Emissions from the sander dust silo baghouse shall be limited to 0.32 lb/hr of total particulate (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

d. Emissions from the sander dust silo baghouse shall be limited to 0.32 lb/hr of PM_{10} (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

e. Emissions from the sawline baghouse shall be limited to 0.89 lb/hr of total particulate (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

f. Emissions from the sawline baghouse shall be limited to 0.89 lb/hr of PM_{10} (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

g. Emissions from the dry fuel baghouse shall be limited to 0.86 lb/hr of total particulate (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

h. Emissions from the dry fuel baghouse shall be limited to 0.86 lb/hr of PM_{10} (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

i. Visible emissions shall be limited to 20% opacity from all sources included in the plywood process (ARM 17.8.304).

6. Dry Chip Cyclone and Baghouse

a. Emissions of PM and PM_{10} from the dry chip baghouse shall not exceed 0.004 gr/dscf and 0.86 lb/hr (ARM 17.8.752 and ARM 17.8.749).

b. Emissions of $PM_{2.5}$ from the dry chip baghouse shall not exceed 0.002 gr/dscf and 0.43 lb/hr (ARM 17.8.749).

7. Fugitive Dust from Haul Roads

   a. Weyerhaeuser shall not cause or authorize to be discharged into the atmosphere from any access roads, parking lots, and log decks of the general plant property any visible fugitive emissions that exhibit opacity of 5% or greater averaged over 6 consecutive minutes (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

   b. Weyerhaeuser shall treat all unpaved portions of the haul roads, access roads, parking lots, and the general plant area with chemical dust suppressant as necessary to maintain compliance with the 5% opacity limitation (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

   c. Weyerhaeuser shall treat all log decks with water as necessary to maintain compliance with the 5% opacity limitation (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation).

8. Boiler Fuel Storage and Handling.

   Visible emissions shall be limited to 20% opacity from all sources included in boiler fuel storage and handling operations (ARM 17.8.308).

9. Medium Density Overlay (MDO) Process.

   Visible emissions shall be limited to 20% opacity from all sources included in the MDO process (ARM 17.8.308).

10. Scarfing Line Process

   a. Visible emissions shall be limited to 20% opacity from all sources included in the scarfing line process (ARM 17.8.308).

   b. Emissions from the scarfing saw, the cutoff saw, and the small spot sander shall be controlled by the plywood sander baghouse (ARM 17.8.752).

11. Chip Bins

   Weyerhaeuser shall use a cyclone to control emissions from the Chip Bins (ARM 17.8.752).

12. RDO 616 Screener

   Weyerhaeuser shall limit operation of the RDO 616 Screener to 962 hours/year (ARM 17.8.749).

C. Testing Requirements

1. Weyerhaeuser shall conduct initial performance tests for total particulate, PM_{10} and opacity and demonstrate compliance with the Riley Stoker Boiler limitations in Sections II.B.1.a - c within 180 days of completion of the feed system modification. The testing and compliance demonstrations shall continue on an every 4-year basis. The tests shall conform to the methods and requirements of 40 CFR 60.8 and the Montana Source Test Protocol and Procedures Manual. Total particulate results may be used as a surrogate for PM_{10} if the impinger analysis ("back-half") is included (ARM 17.8.105).

2. Weyerhaeuser shall conduct initial performance tests for NO_x and CO concurrently and demonstrate compliance with the Riley Stoker Boiler limitations in Sections II.B.1.d and e within 180 days of completion of the feed system modification. The testing and compliance demonstrations shall continue on an every 4-year basis (ARM 17.8.105).

3. Source testing shall be conducted on the veneer dryers to demonstrate compliance with the limitations contained in Section II.B.2.a and b. The testing was performed on September 19, 1995, and shall continue on an every 3-year basis. Total particulate tests shall include an impinger (back-half) analysis. The Department may allow a total particulate test only if the back-half is included and it is acknowledged that this test can be used as a surrogate for PM_{10} (ARM 17.8.105).

4. Source testing shall be conducted on the planer shavings bin baghouse to determine compliance with the limitations contained in Section II.B.4. An initial performance test of the replacement baghouse shall occur within 180 days of startup of the baghouse and shall continue on a once every three-year basis. Such testing shall include Method 201 and Method 202, or as otherwise approved in writing by the Department. Weyerhaeuser may propose a discontinuance of $PM_{2.5}$ testing upon Department approval if testing results have sufficiently demonstrated emissions levels significantly below associated permit limits. Such proposal and approval shall be made in writing. A determination that the emissions levels are significantly below associated permit limits may occur if emissions testing results indicate actual emissions at 50% or less of $PM_{2.5}$ permit limits or multiple tests (at least 3) consistently result in emissions that are 65% or less of $PM_{2.5}$ limits (ARM 17.8.749 and ARM 17.8.105).

5. Source testing shall be conducted on the plywood sander baghouse to demonstrate compliance with the limitations contained in Section II.B.5.a and b. The testing was performed on November 2 and 3, 1994, and shall continue on an every 3-year basis. The Department may allow a total particulate test only if the back-half is included and it is acknowledged that this test can be used as a surrogate for PM_{10} (ARM 17.8.105).

6. Source testing shall be conducted on the Dry Chip Baghouse to determine compliance with the limitations contained in Section II.B.6. An initial performance test of the replacement baghouse shall occur within 180 days of startup of the baghouse and shall continue on a once every three-year basis.

Such testing shall include Method 201 and Method 202, or as otherwise approved in writing by the Department. Weyerhaeuser may propose a discontinuance of $PM_{2.5}$ testing upon Department approval if testing results have sufficiently demonstrated emissions levels significantly below associated permit limits. Such proposal and approval shall be made in writing. A determination that the emissions levels are significantly below associated permit limits may occur if emissions testing results indicate actual emissions at 50% or less of $PM_{2.5}$ permit limits or multiple tests (at least 3) consistently result in emissions that are 65% or less of $PM_{2.5}$ limits (ARM 17.8.749 and ARM 17.8.105).

7. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

8. The Department may require further testing (ARM 17.8.105).

D. Control Equipment Performance Monitoring and Reporting

1. The appropriate performance parameters for the wet electrostatic precipitator (ESP) on the veneer dryers and the ESP on the boiler shall be monitored and recorded. These shall include the secondary voltage (volts, D.C.) and secondary current (amps). Each of the readings shall be recorded once per shift. Weyerhaeuser shall maintain these records on site for 3 years and shall submit the records to the Department upon request (ARM 17.8.752).

2. Weyerhaeuser shall operate the following control equipment (Board Order Montana SIP 15.2.5 and the 9/17/93 Stipulation):

a.	Hog Fuel Boiler	ESP
b.	Two Veneer Dryers	ESP
c.	Sawmill Log Debarking	Water Sprays
d.	Plywood Log Debarking	Water Sprays
e.	Sawmill Chip Bin	Cyclone
f.	Planer Shavings Bin	Baghouse
g.	Plywood Fines	Cyclone
h.	Sanderdust Silo	Baghouse
i.	Sander Cyclone	Baghouse
j.	Sawline	Baghouse
k.	Dry Fuel	Baghouse
l.	Planer Shavings Loadout	Partial Enclosure

E. Operational Reporting Requirements

1. Weyerhaeuser shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis, sources identified in Section I of this permit, and Section I.C. of the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. This information may be used for calculating operating fees based on actual emissions from the facility and/or verifying compliance with permit limitations. Information shall be in the units as required by the Department (ARM 17.8.505).

2. Weyerhaeuser shall supply the Department with annual production information for the following emitting units (ARM 17.8.749):

Source	Units of material processed
Planer Shavings Bin	Tons of planer shavings handled
Block Saws	Tons of logs
Debarkers	Tons of logs
Fines Bin	Tons of fines handled
Chip Bins	Tons of chips handled
Veneer Dryer	10^4 ft^2 of veneer processed, 3/8" basis
Lumber Dry Kilns	MBF
Sander Dust Silo	Tons of sander dust handled
Fuel Bunker	Tons of fuel (wood waste) handled
Dry Fuel Baghouse	Tons of fuel (wood waste) handled
Riley Stoker Boiler	Tons of fuel (wood waste and sander dust) handled
Plywood Sawline and Sander	ft^2 of plywood through sawline and sander, 3/8" basis

3. Weyerhaeuser shall provide the hours of operation for the following sources (ARM 17.8.749):

Sawmill
Planer
Planer Baghouse
Dry Chip Baghouse
Plywood Mill
Veneer Dryer
Riley Stoker Boiler
RDO 616 Screener

4. Weyerhaeuser shall provide the total miles traveled for each vehicle type (ARM 17.8.749).

5. Weyerhaeuser shall provide the following information regarding fugitive dust control for haul roads and general plant area (ARM 17.8.749):

a. Hours of operation of water trucks.

b. Application schedule for chemical dust suppressant if applicable.

Weyerhaeuser shall document, by month, the total tons of logs processed at the facility. By the 25th day of each month, Weyerhaeuser shall total the tons

of logs processed during the previous 12 months to verify compliance with the limitation in Section II.A.4. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

6. Weyerhaeuser shall document, by month, the total amount of product (in million square feet, 3/8-inch basis) processed by the Veneer Dryers. By the 25th day of each month, Weyerhaeuser shall total the square feet of product processed by the Veneer Dryers during the previous 12 months to verify compliance with the limitations in Section II.A.5 and Section II.A.6. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

7. Weyerhaeuser shall document, by month, the total amount of product (in million board feet) processed by the Sawmill Kiln. By the 25th day of each month, Weyerhaeuser shall total the board feet of product processed by the Sawmill Kiln during the previous 12 months to verify compliance with the limitations in Section II.A.5 and Section II.A.6. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

F. Notification

Weyerhaeuser shall provide the Department with written notification of the following dates within the specified time periods:

1. Pre-test information must be completed and received by the Department no later than 25 working days prior to any proposed test date according to the Montana Source Test Protocol and Procedures Manual (ARM 17.8.105).

2. The Department must be notified of any proposed test date 10 working days before that date according to the Montana Source Test Protocol and Procedures Manual (ARM 17.8.105).

3. Weyerhaeuser shall provide written notification to the Department of the date of startup of each of the new baghouses within 30 days of startup, as determined by the earlier of email or postmark date (ARM 17.8.749).

Section III: General Conditions

A. Inspection – Weyerhaeuser shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Weyerhaeuser fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be

construed as relieving Weyerhaeuser of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Weyerhaeuser may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Montana Air Quality Permit (MAQP) Analysis
Weyerhaeuser NR Company
Evergreen Facility
MAQP #2602-13

I. Introduction/Process Description

A. Site Location

The Weyerhaeuser NR Company – Evergreen facility (Weyerhaeuser) is located approximately 3 miles northeast of Kalispell, Montana, near the Evergreen subdivision in the SW ¼ of Section 33, Township 29 North, Range 21 West, in Flathead County. The nearest Class I area is Glacier National Park, located approximately 16 miles northeast of Weyerhaeuser's existing plant. Other nearby Class I areas which may be of concern are the Flathead Indian Reservation, approximately 25 miles south, and the Bob Marshall Wilderness, approximately 43 miles southeast. Weyerhaeuser's plant is located within the boundaries of the Kalispell PM_{10} nonattainment area.

B. Source Description

Weyerhaeuser currently operates an existing plywood plant near the Evergreen subdivision in Kalispell, Montana. The process of making plywood is as follows: Raw logs are cut to desired lengths, debarked, and peeled into thin uniform veneers. The veneers are then transported to the veneer dryers where they are dried. Indirect heat for the two veneer dryers is supplied by the Riley Stoker boiler. The maximum capacity of the two veneer dryers is a combined 30,000 ft^2 per hour of veneer @ 3/8". After drying, the veneer is sorted and sent to the lay-up operation where it is assembled in various layers. A plywood panel is formed by applying resin to the veneer layers then pressing the veneer layers under heat. The plywood is then trimmed and sanded. The Riley Stoker boiler is fueled with hogged wood waste and sander dust. The steam capacity of the Riley Stoker boiler is 140,000 lb/hour (MAQP #2606-07). The boiler stack is 6.5 feet in diameter and 100 feet in height. The particulate control device on the boiler has been a wet scrubber. An electrostatic precipitator (ESP) was added in 1992 to satisfy a consent decree.

C. Permitted Process and Control Equipment:

1. Riley Stoker Boiler - with a design input capacity of 225 million Btu/hr. This is based on a maximum steam output rate of 140,000 lb steam/hr. This boiler is controlled with an ESP.

2. Veneer Dryers (2) - with a combined capacity of 30,000 square feet of 3/8" veneer per hour. This equals 937.5 cubic feet of wood per hour. The density of the wood is estimated at 47.6 lb/cubic foot at 66% moisture. The maximum process rate is then 22.31 ton/hr. These dryers are controlled with a GeoEnergy E-Tube wet ESP.

3. Total Sawmill Process - This process includes all point source emissions from the chip bin cyclone. Fugitive sources are log debarking, log sawing, chip screen, chip bin loadout, and sawmill building vents.

4. Total Planer Process - This process includes all point source emissions from the shavings cyclone/baghouse. Fugitive emissions are planer shavings bin, dry chip target box, chipper and chip screen process.

5. Total Plywood Process Excluding the Veneer Dryers - This process includes all point source emissions from the fines cyclone, sander dust silo baghouse, sander dust baghouse, sawline baghouse, and dry fuel baghouse. Fugitive sources include the debarker, block saw, lily pad chipper, chip screen, chip bin loadout, and green stackers.

6. Lumber Kilns - This process includes the emissions from the drying process.

7. Mobile Source Fugitive Emissions - This process includes all particulate emissions from mobile vehicle activity on company property, as well as the gaseous emissions from the gasoline and diesel engines used in these vehicles.

8. Boiler Fuel Storage and Handling - This process includes fugitive particulate emissions from the bark hog, bark belt, fuel bunker, overs conveyor, and the fuel pile.

9. RDO 616 Screener – This process includes fugitive particulate emissions from bark, rock, and sawdust separation.

10. Medium Density Overlay (MDO) Process - This process will produce a plywood panel that has kraft paper glued onto one or both of its faces. The process equipment for the MDO process line is a heat press and a trim saw.

11. Scarfing Line Process - This process will glue plywood panels together to make long panels. The equipment for the scarfing line is the scarfing saw, the cutoff saw, and the small spot sander, which is tied into the existing plywood sander baghouse system.

D. Permit History

The plywood plant near the Evergreen subdivision in Kalispell, Montana has operated since the late 1970s when Plum Creek Manufacturing (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. **MAQP #1752** was initially issued for operation of the Riley Stoker boiler on April 29, 1983. Plum Creek was merged with Weyerhaeuser in 2016, with the facility changing names to Weyerhaeuser.

MAQP #2602 was issued to Plum Creek on October 13, 1989, for an increase of the Riley Stoker boiler capacity.

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

1. To consolidate all of the source's existing permits into a single permit. This modification 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 modification of MAQP #2602 was done to document the installation of the new systems. Plum Creek was required to permanently derate the Riley Stoker boiler back to the 100,000 lb 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 ESP 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 the 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 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 ± 15" w.c. and the inlet dust loading design value, under extreme conditions, was limited to 1.0 gr/dscf. Stack gas design velocity is 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 PM_{10} nonattainment areas. RACM was 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 air quality permit (MAQP #2602) to include the 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 non-attainment area. The modifications made to MAQP #2602 established those allowable emission limitations. MAQP #2602-01 replaced MAQP #2600.

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 allowed Plum Creek to recycle log yard debris that was previously trucked to an on-site landfill. Debris is separated into wood waste, soil, and rock fractions. Reclaimed wood waste is 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 is returned to the log yard. Overall environmental benefits from the project included 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 off-site landfill. MAQP #2602-02 replaced MAQP #2602-01.

Plum Creek was issued **MAQP #2602-03** on June 6, 1994, for the construction and operation of a new sanderdust 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 will create a smoother surface and improve the quality of the plywood. The new baghouse is larger and can handle the larger airflow that will result from the new sander. There was an increase in 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 jointer, 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 for deposit in the truck bin. The chipper cyclone exhaust is sent to a new fabric filter baghouse. The exhaust from the finger jointer, 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 jointer 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 #2602-03 replaced MAQP#2602-02.

Plum Creek was issued **MAQP #2602-04** 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 because 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 included the scarfing saw, the cutoff saw, and the small spot sander, which was tied into the existing plywood sander baghouse system. The scarfing line did 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 did 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 was still less than the current design air flow of 72,000 acfm at a permitted emission rate of 6.17 lb/hr. The scarfing line resulted in an increase in VOC emissions of 0.006 tons/year from the glue that is used in this process. MAQP #2602-04 replaced MAQP #2602-03.

Plum Creek was issued **MAQP #2602-05** 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 included 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 resulted in an increase in TSP emissions of 0.29 tons/year and in an increase in PM_{10} emissions of 0.75 tons/year. Because Plum Creek's facility is located in a PM_{10} nonattainment area and there would be an increase in PM_{10} emissions, the operation of the Rawlings system was limited to 2940 hours/year of operation during the months of April through November. MAQP #2602-05 replaced MAQP #2602-04.

MAQP #2602-06 removed 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_{10} 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.

The Title V Operating Permit Program imposes different requirements on a facility depending on whether a particular source is considered significant or insignificant. If the specific emission limits were not an applicable requirement for the units listed above, they would be considered insignificant sources because of their size and function. Plum Creek suggested, and the Department agreed, that the limits on the above sources were meaningless because they equal the PTE of the units and, by definition, the sources were 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 #2602-06 replaced MAQP #2602-05.

MAQP #2602-07 was issued on February 15, 1997, and authorized 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 the review requirements of the New Source Review (NSR) Prevention of Significant Deterioration (PSD) program for NO_X and CO. Plum Creek "netted out" of PSD review for PM and PM_{10}.

The increase in steaming capacity of the boiler was needed during the winter months to provide heat for new building space as well as steam for recently installed processes such as the medium density fiberboard (MDF) facility. Plum Creek was limited to 100,000 lb of steam/hour from the hog fuel boiler and requested that this limit be increased to 140,000 lb/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 was needed to offset increasingly heavier wood. A decrease in the amount of salvage timber 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_{10} SIP and was meant to allow the mill to operate at full capacity. Plum Creek determined that because of the increased log density, the production allowed by the previous debarking limit was 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 as follows:

PM - 18.0 tons/year decrease
PM_{10} - 22.9 tons/year decrease
NOx - 128.4 tons/year increase

CO - 628.2 tons/year increase
SO_2 - 2.0 tons/year increase
VOC - 6.3 tons/year increase

These changes in allowable emissions were different from the net emissions increases used to determine if the Major NSR/PSD programs were applicable (Section II.E and II.F of MAQP Analysis #2602-07). The net emissions increases for PSD and NSR applicability are based on the difference between past actual emissions and future potential emissions and not the change in allowable emissions. MAQP #2602-07 replaced MAQP #2602-06.

On May 30, 2002, the Department received a complete NSR/PSD permit application for the historical 1989 Small Log Sawmill (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. On November 15, 1990, the area was re-designated as a PM_{10} nonattainment area, 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 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 the 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 were contained in the table below.

Small Log Sawmill Total Emission Increase		
Pollutant	**Increase (tons/year)**	**NSR/PSD SERs (tons/year)**
PM	125.00	25
PM_{10}	83.70	15
CO	170.00	100
NOx	18.70	40
SO2	1.50	40
VOC	22.70	40
Lead	0.00	0.6

As indicated in the table above, the SLS project resulted in net emissions increases exceeding the applicable SER for PM, PM_{10}, and CO; therefore, NSR/PSD review applied to these pollutants under the permit action. NSR/PSD review was conducted for CO emissions, including Riley Stoker Boiler emissions, under MAQP #2602-07; therefore, NSR/PSD review for CO was not required for the permit action, because it had already been satisfied. However, the appropriate review for PM and 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_{10} emission sources in the area (including the Plum Creek facility) the Department determined that air dispersion modeling for the SLS project was 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 was applied on a pollutant-by-pollutant basis to each physically modified emission unit that experienced an emission increase of the pollutant of concern as a result of the project. The affected emitting units in the permit action included 5 saws, the planer, chip bins, chippers, and the sawmill lumber dry kilns. A particulate matter BACT analysis for the SLS project was contained in Section IV of the permit analysis. A CO BACT analysis was not required for the 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 were considered secondary or associated emissions and BACT review was not required. Further, the retroactive NSR/PSD action also accounted for the increase in CO emissions associated with the historical 1995 Veneer Dryer Control Project (Veneer Dryer Project). Although CO emissions were directly associated with the Riley Stoker Boiler and did not result from operation of the Veneer Dryers themselves, the Veneer Dryer Project de-bottlenecked the plywood process and increased steam production from the Riley Stoker Boiler. Therefore, CO emissions from the Riley Stoker Boiler were considered in the analysis for the Veneer Dryer Project. **MAQP #2602-08** replaced MAQP #2602-07.

On January 22, 2014, the Department received correspondence from Plum Creek 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 reduced Plum Creek's HAP emissions to below the major source threshold and the Evergreen Complex became a minor (area) source of HAPs. As such, Plum Creek would be subject to the recently promulgated National Emission Standards for Hazardous Air Pollutants of 40 CFR 63 Subpart JJJJJJ rather than 40 CFR 63 Subpart DDDDD for boilers and process heaters at major sources of HAP. The Subpart DDDDD compliance date was January 31, 2015. Therefore, in accordance with EPA's guidance document "Potential to Emit for MACT Standards - - Guidance on Timing Issues", becoming an area source before the compliance date of the MACT allowed Plum Creek to limit emissions to area source levels and avoid the Subpart DDDDD requirements.

In order to become an area source of HAPs, Plum Creek requested that the permitted capacity of two production processes be lowered. The plywood production was reduced from 227,760 thousand ft^2 3/8" per year of product to 180,000 thousand ft^2 3/8" per year. The Sawmill Kiln was 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 remained unchanged as part of this

modification. The permit format was updated to reflect the current Department air quality permit format at the time. **MAQP #2602-09** replaced MAQP #2602-08. On December 9, 2016, the Department received from Weyerhaeuser notification that this facility became a wholly owned subsidiary of Weyerhaeuser. As of the end of 2016, Plum Creek Manufacturing was fully absorbed and the company name changed to Weyerhaeuser. **MAQP #2602-10** replaced MAQP #2602-09.

On July 26, 2017, the Department received from Weyerhaeuser a concurrent application to modify the MAQP and the Title V permit for this facility. Weyerhaeuser sought to replace a cyclone and baghouse at the sawmill planer, modify the plywood plant dry waste wood air system, and modify production limits on the Plywood Plant and Sawmill in a manner that would continue to maintain emissions of Hazardous Air Pollutants to below major source thresholds, and also would maintain a synthetic minor status with respect to the Maximum Achievable Control Technology (MACT) rules applicable to boilers. The permit was also updated to reflect the shutdown and dismantling of the remanufacturing facility.

The Department received the application fee and an affidavit of publication of public notice on August 30, 2017.

As a major stationary source as defined in ARM 17.8, the project related emissions increases were reviewed against the significant emissions rates and the project was determined to not trigger the requirements of the Prevention of Significant Deterioration program. The requirements of ARM 17.8 Subchapter 7, including Best Available Control Technology review, were fulfilled and appropriate emissions limitations associated with the facility changes established. Further, the permit action represented a reduction of allowable emissions. **MAQP #2602-11** replaced MAQP #2602-10.

On September 12, 2019, the Department received an application from Weyerhaeuser to modify the production limits for the Plywood and Sawmill facilities to allow for more flexibility while still maintaining an area source status for Hazardous Air Pollutant (HAP) emissions. The Plywood Facility previously had a production limit of 175 million feet^2 of 3/8 inch per year (MMSF 3/8") and the Sawmill Facility had a production limit of 100 million board feet per year (MMBF). These production limits ensured that the Evergreen facility stayed below Major Source thresholds for HAP emissions. Weyerhaeuser proposed a sliding production scale in which the two facilities would adjust production in concert (if one facility's production is high, the other will decrease production) and still maintain area source status.

The Evergreen plywood plant is a major stationary source as defined in ARM 17.8; therefore, any criteria pollutant emission change that would occur because of an increase in allowable production levels must be evaluated in the context of Prevention of Significant Deterioration (PSD). The PSD applicability analysis determines if there is any significant increase in any criteria pollutant by reviewing the project-related emissions increases against the significant emissions rates. Weyerhaeuser provided this analysis and it was determined to not trigger additional requirements of the PSD program. **MAQP #2602-12** replaced MAQP #2602-11.

E. Current Permit Action

On March 22nd, 2023, the Department received a request from Weyerhaeuser to replace the previously permitted Clark Log Yard Reclaim System with an RDO 616 Screener. The screener will separate the constituents: bark, rock, and sawdust.

The primary considerations for emissions are total particulate matter (PM) and total particulate matter below 10 microns (PM10). Weyerhaeuser submitted screener flow rate, estimated usage hours, and volumetric percentages of constituents. Based on these inputs, the Department determined the total PM = 4.0 tpy and the total PM10 = 1.4 tpy. These values fall well below the values for the Clark Log Yard Reclaim System of total PM = 7.5 tpy and total PM10 = 3.2 tpy, as calculated in MAQP #2602-02.

Detailed calculations can be found in Section III. Emission Inventory. Weyerhaeuser shall report hours of operation of the RDO 616 Screener, not to exceed 962 hours per year. **MAQP #2602-13** replaces MAQP #2602-12.

F. Response to Public Comments

G. Additional Information

Additional information, such as applicable rules and regulations, BACT/RACT determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each permit or change to the permit.

II. Applicable Rules and Regulations

The following are partial quotations of some applicable rules and regulations, which apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available upon request from the Department. Upon request, the Department will provide references for locations of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices, and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of

Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

Plum Creek shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.222 Ambient Air Quality Standard for Lead
8. ARM 17.8.223, Ambient Air Quality Standard for PM_{10}.

Weyerhaeuser must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Weyerhaeuser shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow or permit to be discharged into the

atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.340 New Source Performance Standards. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not incorporate any equipment meeting the definition of an NSPS affected unit contained in any subpart.

   Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units is not applicable to the Riley Stoker Boiler. The boiler was constructed prior to June 19, 1984, and all subsequent boiler upgrades have not constituted a modification or reconstruction of the unit triggering NSPS requirements.

   ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

   40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAP Subpart as listed below:

   40 CFR 63, Subpart JJJJJJ – Standards for Industrial, Commercial, and Institutional Boilers at Area Sources. Weyerhaeuser has established limitations which maintain the facility as a minor source of emissions with respect to HAPs. As such, this Subpart is applicable to Weyerhaeuser.

   40 CFR 63 Subpart DDDD – Standards for Plywood and Composite Wood Products at Major Sources applies to this source based on the "once in always in" policy. The limitations developed to keep this source a synthetic minor source with respect to HAP emissions was established after applicability of 40 CFR 63 Subpart DDDD.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. The Department received the required application fee on September 12, 2019.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air

quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits –When Required. This rule requires a facility to obtain an air quality permit or permit modification if they construct, modify or use any air contaminant sources that have the potential to emit greater than 25 tons per year of any pollutant. Weyerhaeuser has the potential to emit more than 25 tons per year of PM, PM_{10}, NO_x, CO, and VOC; therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. Weyerhaeuser provided the required permit application. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Weyerhaeuser submitted an affidavit of publication of public notice as proof of publication. Public notice was made in the *Daily Inter Lake* on October 16, 2019.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Weyerhaeuser of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.

12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

15. ARM 17.8.765 Transfer of Permit. This section states that an air quality permit may be transferred from one person to another if written notice of

Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

This facility is not a listed source but has potential emissions greater than 250 tons per year; therefore, the facility is major. The current permit action does not result in a significant emissions increase; therefore, it does not require review under the Prevention of Significant Deterioration program. The emissions analysis can be found in the emissions inventory portion of this document.

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:

a. Potential to Emit (PTE) > 100 tons/year of any pollutant;

b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

c. Sources with the PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2602-13 for Weyerhaeuser, the following conclusions were made:

a. The facility's PTE is greater than 100 tons/year for PM, PM_{10}, CO, and NO_X.

b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs as a result of limitations in place specifically to ensure the source is not considered a major source for HAPs.

c. This source is not located in a serious PM_{10} nonattainment area.

d. This facility is not subject to any current NSPS.

e. This facility is subject to current NESHAP (40 CFR 63 Subpart JJJJJJ – Standards for Industrial, Commercial, and Institutional Boilers at Area Sources. Portions of 40 CFR 63 Subpart DDDD – Standards for Plywood and Composite Wood Products at Major Sources still apply due to having previously operated as a major source).

f. This source is not a Title IV affected source, nor a solid waste combustion unit.

g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Weyerhaeuser is a major source of criteria pollutant emissions as defined under Title V. Voluntary production limits are in place to reduce HAP emissions to below the major source threshold, thus becoming an area source of HAPs.

III. Emission Inventory

MAQP 2602-12

Plywood and Sawmill Production Data:

Achievable Production Data [1]		
Biofilter Control of HAP:	45%	reduction of HAP
Biofilter Control of Formaldehyde	75%	reduction of HCOH
Emergency Generator:	460	kW
Boiler Max Rating:	120,000	lb/hr steam
Max Production Plywood:	140,000	MSF 3/8"
Max Production Sawmill Kilns:	130,000	MBF
Operation Hours: [2]	8,760	hrs/yr

1. The achievable production rates is the maximum possible production rate at which the facility can be considered a synthetic minor for HAPs. The emergency generator's emissions are calculated on a 500 hours per year basis. The rest of the production data is linearly scalable from the maximum production data using the same scaling factor for each production input parameter.
2. The hours of operation are used to calculate the emissions from the Veneer Dryers' Emissions Test which detail the HAP emission rate for formaldehyde, methanol, acetaldehyde, acrolein, propionaldehyde, and phenol in units of lb/hr.

HAP Summary: [1]

Compound	**Total Emissions (tpy)**	**Below Major Threshold?**
Acetaldehyde	7.05	Yes
Acrolein	0.43	Yes
Benzene	0.66	Yes
Formaldehyde	2.24	Yes
Hydrochloric Acid	0.00	Yes
Methanol	9.69	Yes
Methyl Isobutyl Ketone	0.84	Yes

Phenol	1.06	Yes
Misc. HAPs	2.24	Yes
Total HAPs	24.20	Yes

1. The major source thresholds are 10 tpy for individual HAPs and 25 tpy for combined HAPs.

HAP Emissions Inventory:

Compound	HAP?	Sawmill Kilns (lb/yr)	Ply Vats (lb/yr)	Veneer Dryers (Biofilter) [2,3] (lb/yr)	Ply Press (lb/yr)	Veneer Dryer Cooling Zone (lb/yr)	Boiler [4] (lb/yr)	Emergency Generator [5] (lb/yr)	Total (tons/yr)
1,1-Dichloroethane	#N/A	--	--	--	--	--	--	--	0.00
1,1,1-Trichloroethane	Yes	--	--	--	--	--	73.0	--	0.04
1,1,2-Trichloroethane	Yes	--	--	--	--	--	--	--	0.00
1,2,3,4,6,7,8,9-octachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,4,6,7,8-heptachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,4,7,8,9-heptachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,4,7,8-hexachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,6,7,8-hexachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,7,8,9-hexachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,7,8-pentachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
1,2,3,7,8-pentachlorodibenzo-p-dioxin	Yes	--	--	--	--	--	0.0	--	0.00
1,2,4-Trichlorobenzene	Yes	--	--	--	--	--	--	--	0.00
1,1-Dichloroethene	Yes	--	--	--	--	--	--	--	0.00
1,2-Dichloroethane	Yes	--	--	--	--	--	36.9	--	0.02
1,2-Dichloropropane	Yes	--	--	--	--	--	21.2	--	0.01
1,3-Butadiene	Yes	--	--	--	--	--	--	0.0	0.00
1,4-Dichlorobenzene	Yes	--	--	--	--	--	352.5	--	0.18
2,3,4,6,7,8-hexachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
2,3,4,7,8-pentachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
2,3,7,8-tetrachlorodibenzofuran	Yes	--	--	--	--	--	0.0	--	0.00
2,3,7,8-tetrachlorodibenzo-p-dioxin	Yes	--	--	--	--	--	0.0	--	0.00
2,4,6-Trichlorophenol	Yes	--	--	--	--	--	0.3	--	0.00
2,4-Dinitrophenol	Yes	--	--	--	--	--	0.2	--	0.00
2,4-Dinitrotoluene	Yes	--	--	--	--	--	1.2	--	0.00
2-Chloronaphthalene	Yes	--	--	--	--	--	0.0	--	0.00

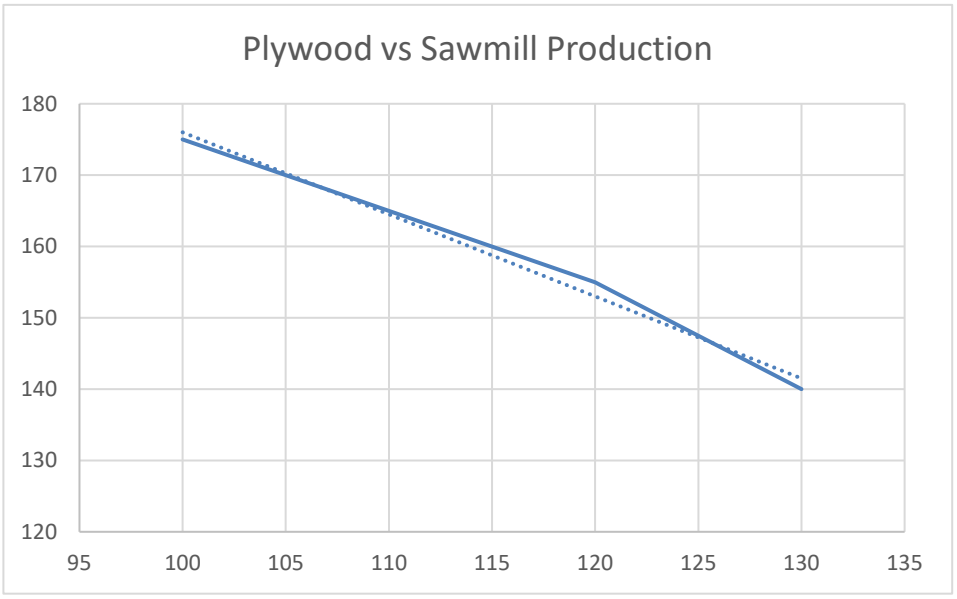
Compound	HAP?	Sawmill Kilns (lb/yr)	Ply Vats (lb/yr)	Veneer Dryers (Biofilter) [2,3] (lb/yr)	Ply Press (lb/yr)	Veneer Dryer Cooling Zone (lb/yr)	Boiler [4] (lb/yr)	Emergency Generator [5] (lb/yr)	Total (tons/yr)
2-Methyl Naphthalene	Yes	--	--	--	--	--	1.8	--	0.00
4,6-Dinitro-2-methylphenol	Yes	--	--	--	--	--	2.7	--	0.00
4-Nitrophenol	Yes	--	--	--	--	--	0.1	--	0.00
Acenaphthene	Yes	--	--	--	--	--	1.1	--	0.00
Acenaphthylene	Yes	--	--	--	--	--	5.9	--	0.00
Acetaldehyde	Yes	8,866	654	3,180	529	518	357.6	0.6	7.05
Acetophenone	Yes	--	--	--	--	--	2.3	--	0.00
Acrolein	Yes	143	--	385	--	--	328.5	0.1	0.43
Anthracene	Yes	--	--	--	--	--	3.4	--	0.00
Antimony	Yes	--	--	--	--	--	--	--	0.00
Arsenic	Yes	--	--	--	--	--	2.4	--	0.00
Benzene	Yes	--	--	72	--	--	1,238.3	0.7	0.66
Benzo(a)anthracene	Yes	--	--	--	--	--	0.1	--	0.00
Benzo(a)phenanthrene	Yes	--	--	--	--	--	0.1	--	0.00
Benzo(a)pyrene	Yes	--	--	--	--	--	3.4	--	0.00
Benzo(b)fluoranthene	Yes	--	--	--	--	--	0.2	--	0.00
Benzo(e)pyrene	Yes	--	--	--	--	--	0.3	--	0.00
Benzo(g,h,i)perylene	Yes	--	--	--	--	--	0.2	--	0.00
Benzo(j)fluoranthene	Yes	--	--	--	--	--	0.2	--	0.00
Benzo(j,k)fluoranthene	Yes	--	--	--	--	--	0.2	--	0.00
Benzo(k)fluoranthene	Yes	--	--	--	--	--	0.1	--	0.00
Beryllium	Yes	--	--	--	--	--	0.0	--	0.00
Bis(2-Ethylhexyl)phthalate	Yes	--	--	--	--	--	0.1	--	0.00
Bromomethane	Yes	--	--	--	--	--	14.4	--	0.01
Cadmium	Yes	--	--	--	--	--	0.5	--	0.00
Camphene	Yes	--	--	--	--	--	--	--	0.00
Carbazole	Yes	--	--	--	--	--	2.3	--	0.00
Carbon Disulfide	Yes	--	--	--	--	--	157.9	--	0.08
Carbon Tetrachloride	Yes	--	--	--	--	--	14.7	--	0.01
Chlorine	Yes	--	--	--	--	--	--	--	0.00
Chlorobenzene	Yes	--	--	--	--	--	21.0	--	0.01
Chloroethane	Yes	--	--	--	--	--	--	--	0.00
Chloroform	Yes	--	--	--	--	--	25.4	--	0.01
Chloromethane	Yes	--	--	--	--	--	47.8	--	0.02
Chromium	Yes	--	--	--	--	--	3.1	--	0.00
Chromium (VI)	Yes	--	--	--	--	--	0.3	--	0.00
Cobalt	Yes	--	--	--	--	--	3.0	--	0.00
Cumene	Yes	--	--	--	--	--	22.4	--	0.01
Decachlorobiphenyl	Yes	--	--	--	--	--	0.0	--	0.00
Dibenzo(a,h)anthracene	Yes	--	--	--	--	--	0.0	--	0.00
Dichlorobiphenyl	Yes	--	--	--	--	--	0.0	--	0.00
Di-n-Butyl Phthalate	Yes	--	--	--	--	--	42.1	--	0.02
Ethyl Benzene	Yes	--	--	--	--	--	499.1	--	0.25

Compound	HAP?	Sawmill Kilns (lb/yr)	Ply Vats (lb/yr)	Veneer Dryers (Biofilter) [2,3] (lb/yr)	Ply Press (lb/yr)	Veneer Dryer Cooling Zone (lb/yr)	Boiler [4] (lb/yr)	Emergency Generator [5] (lb/yr)	Total (tons/yr)
Fluoranthene	Yes	--	--	--	--	--	2.1	--	0.00
Fluorene	Yes	--	--	--	--	--	3.8	--	0.00
Formaldehyde	Yes	247	--	2,409	529	--	1,288.8	0.9	2.24
Heptachlorodibenzo-p-furans	Yes	--	--	--	--	--	0.0	--	0.00
Hexachlorobenzene	Yes	--	--	--	--	--	1.3	--	0.00
Hexachlorobiphenyl	Yes	--	--	--	--	--	0.0	--	0.00
Hexachlorodibenzo-p-dioxins	Yes	--	--	--	--	--	2.0	--	0.00
Hexachlorodibenzo-p-furans	Yes	--	--	--	--	--	0.0	--	0.00
Hydrochloric Acid	Yes	--	--	--	--	--	--	--	0.00
Hydrogen Cyanide	Yes	--	--	--	--	--	25.9	--	0.01
Hydrogen Fluoride	Yes	--	--	--	--	--	--	--	0.00
Indeno(1,2,3-c,d)pyrene	Yes	--	--	--	--	--	0.1	--	0.00
Lead	Yes	--	--	--	--	--	6.6	--	0.00
m,p-Xylene	Yes	--	--	144	--	137	4.5	--	0.14
Manganese	Yes	--	--	--	--	--	115.4	--	0.06
MDI	Yes	--	--	--	--	--	--	--	0.00
Mercury	Yes	--	--	--	--	--	1.3	--	0.00
Methanol	Yes	8,970	1,027	1,734	6,017	700	924.9	--	9.69
Methyl Isobutyl Ketone	Yes	--	--	102	291	728	562.3	--	0.84
Methylene Chloride	Yes	--	--	--	--	--	691.2	--	0.35
Monochlorobiphenyl	Yes	--	--	--	--	--	0.0	--	0.00
Naphthalene	Yes	--	--	--	--	--	125.8	--	0.06
n-Hexane	Yes	--	--	--	--	--	363.9	--	0.18
Nickel	Yes	--	--	--	--	--	3.5	--	0.00
Octochlorodibenzo-p-dioxins	Yes	--	--	--	--	--	0.1	--	0.00
o-Xylene	Yes	26	--	--	--	83	14.3	--	0.06
Pentachlorobiphenyl	Yes	--	--	--	--	--	0.0	--	0.00
Pentachlorophenol	Yes	--	--	--	--	--	0.3	--	0.00
Perylene	Yes	--	--	--	--	--	0.0	--	0.00
Phenanthrene	Yes	--	--	--	--	--	8.2	--	0.00
Phenol	Yes	1,339	--	145	379	48	202.2	--	1.06
Phosphorus	Yes	--	--	--	--	--	24.4	--	0.01
Propionaldehyde	Yes	91	--	29	--	--	318.4	--	0.22
Pyrene	Yes	--	--	--	--	--	4.5	--	0.00
Selenium	Yes	--	--	--	--	--	2.0	--	0.00
Styrene	Yes	--	--	--	--	--	602.7	--	0.30
Tetrachlorobiphenyl	Yes	--	--	--	--	--	0.0	--	0.00
Tetrachlorodibenzo-p-dioxins	Yes	--	--	--	--	--	0.0	--	0.00
Tetrachlorodibenzo-p-furans	Yes	--	--	--	--	--	0.0	--	0.00
Tetrachloroethylene	Yes	--	--	--	--	--	31.1	--	0.02
Toluene	Yes	13	--	152	--	--	26.7	0.3	0.10
Trichlorobiphenyl	Yes	--	--	--	--	--	0.0	--	0.00
Trichloroethylene	Yes	--	--	--	--	--	25.1	--	0.01

Compound	HAP?	Sawmill Kilns (lb/yr)	Ply Vats (lb/yr)	Veneer Dryers (Biofilter) [2,3] (lb/yr)	Ply Press (lb/yr)	Veneer Dryer Cooling Zone (lb/yr)	Boiler [4] (lb/yr)	Emergency Generator [5] (lb/yr)	Total (tons/ yr)
Vinyl Chloride	Yes	--	--	--	--	--	23.2	--	0.01
Xylenes (mixed isomers)	Yes	--	--	--	--	--	6.6	0.2	0.00
Total HAPs (tons/yr)		9.85	0.84	4.18	3.87	1.11	4.35	0.00	24.20

Sliding Production Scale Calculations

Sawmill Production mm	100	110	120	130	
Plywood Production mm	175	165	155	140	
Max single HAP	9.62	9.69	9.76	9.69	max 10 tons
Max multi HAP	23.44	23.76	24.09	24.20	max 25 tons



Any production below line is acceptable for Minor Source

single HAP	sawmill	100	110	120	130
	plywood	175	165	155	140
	eq. single	9.62	9.69	9.76	9.67
multi HAP	sawmill	100	110	120	130
	plywood	175	165	155	140
	eq. multi	23.19	23.64	24.09	24.20

eq. single **=(saw*0.039437) + (ply*0.032436) <10**

eq. multi **=(saw*0.112957) + (ply*0.067969) <25**

Assumptions:

The maximum production rates except for that of the emergency generator and maximum plywood production are all linearly scalable. Each maximum production data is based on a single production scaling factor, when appropriate This assumes that the facility is not limited by any one particular production rate (i.e. a 50% boiler steam rate can only support a 40% sawmill kilns production rate).

The emergency generator is assumed to be in operation 500 hours per year regardless of the other production

rates at the facility.

The Veneer Dryer's Biofilter has an 80% control for all organic HAPs.

The Veneer Dryer is indirectly fired.

The Veneer Dryer emissions test for HAPs is based on the Veneer Dryers operating continuously at full capacity. This assumption is crucial as the emission rates are given on a ppm or lb/hr basis.

Douglas Fir and Larch wood species are primarily used at the Weyerhaeuser facility. All emission factors are based on Western Softwoods when the emission factors do not detail the specific wood species used.

Hydrogen chloride (hydrochloric acid), hydrogen fluoride, chlorine, and antimony are non-detectable per Weyerhaeuser analytical report of the boilers.

HAP Potential to Emit Equations

Sawmill Kilns

Speciated Emission Rate ($^{lb}/_{yr}$) = Max Production Sawmill Kilns ($^{MBF}/_{yr}$) * Kiln Emission Factor ($^{lb}/_{MBF}$)

Kiln Emission Factor ($^{lb}/_{MBF}$) =		
	if $K_{EPA} > 0$	$= K_{EPA}$
	if $K_{EPA} = 0$ or "--"	$= K_{NCASI}$

where: K_{EPA} = EPA Region 10 Lumber Drying Kilns emission factor ($^{lb}/_{MBF}$)

K_{NCASI} = NCASI Sawmill Kiln emission factor ($^{lb}/_{MBF}$)

Ply Vats

Speciated Emission Rate ($^{lb}/_{yr}$) = Max Production Plywood ($^{MSF}/_{yr}$) * NCASI Ply Vats Emission Factor ($^{lb}/_{MSF}$)

Veneer Dryer with Biofilter

Speciated Emission Rate ($^{lb}/_{yr}$) =		
	if $V_{ST} > 0$	$= V_{ST}$ * Hours of Operation ($^{hrs}/_{yr}$) * (1 - BF)
	if $V_{ST} = 0$ or "--"	$= V_{NCASI}$ * Max Production Plywood ($^{lb}/_{MSF}$) * (1 - BF)

where: V_{ST} = Veneer Dryer Stack Test ($^{lb}/_{hr}$)

V_{NCASI} = NCASI Veneer Dryer emission factor ($^{lb}/_{MSF}$)

BF = Biofilter Control of HAP.

Ply Press

Speciated Emission Rate ($^{lb}/_{yr}$) = Max Production Plywood ($^{MSF}/_{yr}$) * NCASI Ply Press Emission Factor ($^{lb}/_{MSF}$)

Veneer Dryer Cooling Zone

Speciated Emission Rate ($^{lb}/_{yr}$) = Max Production Plywood ($^{MSF}/_{yr}$) * Cooling Zone Emission Factor ($^{lb}/_{MSF}$)

Cooling Zone Emission Factor ($^{lb}/_{MSF}$) =		
	if CZ_{NCASI} = ND	= 0

	if $CZ_{NCASI} > 0$	$= CZ_{NCASI}$
	if $CZ_{NCASI} = 0$ or "--"	$= CZ_{NESHAP}$
	if CZ_{NCASI} and $CZ_{NESHAP} = 0$ or "--"	$= CZ_{AP42}$

where:
CZ_{NCASI} = NCASI Cooling Zone Emission Factor ($^{lb}/_{MSF}$)
CZ_{NESHAP} = NESHAP Cooling Zone Emission Factor ($^{lb}/_{MSF}$)
CZ_{AP42} = AP-42 Cooling Zone Emission Factor ($^{lb}/_{MSF}$)
ND = Non-Detect

Boiler

Speciated Emission Rate ($^{lb}/_{yr}$) = Max Boiler Rating ($^{lb\ steam}/_{hr}$) * 1,202 ($^{Btu}/_{lb\ steam}$) / 10^6 ($^{Btu}/_{MMBtu}$) * 8,760 ($^{hr}/_{yr}$) * Boiler Emission Factor ($^{lb}/_{MMBtu}$)

Boiler Emission Factor ($^{lb}/_{MMBtu}$) =	if B_{NCASI} = ND	=0
	if $B_{NCASI} > 0$	= B_{NCASI}
	if B_{NCASI} = 0 or "--"	= B_{AP42}

where:
B_{NCASI} = NCASI Boiler Emission Factor ($^{lb}/_{MMBtu}$)
B_{AP42} = AP-42 Boiler Emission Factor ($^{lb}/_{MMBtu}$)

Emergency Generator

Speciated Emission Rate ($^{lb}/_{yr}$) = Emergency Generator Capacity (kW) * 3412.142 ($^{Btu}/_{kW}$) / 10^6 ($^{Btu}/_{MMBtu}$) * 500 ($^{hr}/_{yr}$) * Generator Emission Factor ($^{lb}/_{MMBtu}$)

Weyerhaeuser provided an emissions analysis that compared the projected actual criteria pollutant emissions in the future to actual criteria pollutant emissions from 2017 and 2018 for the Plywood and Sawmill plants. If the future actual emissions are greater than the current actual emissions by a "significant" amount, then the operation of the sliding production scale would fall within the definition of "major modification".

The following tables contains the information provided by Weyerhaeuser:

Past Actual Emissions:

Plywood					
	2017	2018	Avg.	Per Sq. Foot	Current Permit Max
Production	125,394,000	136,079,000	130,736,500		175,000,000
PM (TPY)	38.760	44.571	41.666	0.000000319	55.772
PM10 (TPY)	18.548	21.010	19.779	0.000000151	26.476
PM2.5 (TPY)	9.274	10.505	9.890	0.000000076	13.238
VOC (TPY)	10.801	11.721	11.261	0.000000086	15.074
NOX (TPY)	--	--	--	--	
SO2 (TPY)	--	--	--	--	
CO (TPY)	--	--	--	--	

Sawmill					
	2017	2018	Avg.	Per bd. Foot	Current Permit Max
Production	85,119,000	95,316,000	90,217,500		100,000,000
PM (TPY)	22.711	26.401	24.556	0.000000272	27.219
PM10 (TPY)	8.661	10.052	9.356	0.000000104	10.371
PM2.5 (TPY)	4.330	5.026	4.678	0.000000052	5.185
VOC (TPY)	68.095	76.253	72.174	0.000000800	80.000
NOX (TPY)	--	--	--	--	
SO2 (TPY)	--	--	--	--	
CO (TPY)	--	--	--	--	

Boiler			
	2017	2018	Avg.
PM (TPY)	30.99	30.29	30.64
PM10 (TPY)	13.69	13.61	13.65
PM2.5 (TPY)	6.85	6.81	6.83
VOC (TPY)	7.92	7.64	7.78
NOX (TPY)	132.86	136.32	134.59
SO2 (TPY)	5.40	5.21	5.31
CO (TPY)	851.16	873.30	862.23

Future Actual Emissions:

Plywood				
Production	175,000,000	165,000,000	155,000,000	145,000,000
PM (TPY)	55.772	52.585	49.398	46.211
PM10 (TPY)	26.476	24.963	23.450	21.937
PM2.5 (TPY)	13.238	12.482	11.725	10.969
VOC (TPY)	15.074	14.212	13.351	12.490
NOX (TPY)	--	--	--	--
SO2 (TPY)	--	--	--	--
CO (TPY)	--	--	--	--

Sawmill				
Production	100,000,000	110,000,000	120,000,000	130,000,000
PM (TPY)	27.219	29.940	32.662	35.384
PM10 (TPY)	10.371	11.408	12.445	13.482
PM2.5 (TPY)	5.185	5.704	6.222	6.741
VOC (TPY)	80.000	88.000	96.000	104.000
NOX (TPY)	--	--	--	--
SO2 (TPY)	--	--	--	--
CO (TPY)	--	--	--	--

	Boiler			
Production	175/100	165/110	155/120	145/130
PM (TPY)	33.04	32.91	32.78	32.65
PM10 (TPY)	14.73	14.67	14.61	14.55
PM2.5 (TPY)	7.36	7.33	7.31	7.28
VOC (TPY)	8.39	8.36	8.33	8.30
NOX (TPY)	145.17	144.60	144.03	143.46
SO2 (TPY)	5.72	5.70	5.68	5.66
CO (TPY)	929.96	926.33	922.70	919.07

assume PM2.5 is	50.0%	of PM10
assume boiler base load:		70.0%
assume Ply Boiler load		20.0%
assume Saw Boiler load		10.0%

Actual-to-Future Actual comparisons:

Combined Emissions					
Production	Current Actual Emissions 131/90	Emissions 175/100	165/110	155/120	145/130
PM (TPY)	96.86	116.03	115.44	114.84	114.25
PM10 (TPY)	42.79	51.57	51.04	50.51	49.97
PM2.5 (TPY)	21.39	25.79	25.52	25.25	24.99
VOC (TPY)	91.22	103.47	110.57	117.68	124.79
NOX (TPY)	134.59	145.17	144.60	144.03	143.46
SO2 (TPY)	5.31	5.72	5.70	5.68	5.66
CO (TPY)	862.23	929.964466	926.33	922.70	919.07

Combined Difference (Current Actual minus Future Potential)					
Production	175/100	165/110	155/120	145/130	Allowed Change In Tons per Year
PM (TPY)	19.18	18.58	17.99	17.39	<25
PM10 (TPY)	8.78	8.25	7.72	7.18	<15
PM2.5 (TPY)	4.39	4.13	3.86	3.59	<10
VOC (TPY)	12.25	19.36	26.46	33.57	<40
NOX (TPY)	10.57	10.01	9.44	8.87	<40
SO2 (TPY)	0.42	0.39	0.37	0.35	<40
CO (TPY)	67.73446598	64.10	60.47	56.84	<100

MAQP 2602-11

	PM	**PM_{10}**	**NO_X**	**VOC**	**CO**	**SO_X**
Hog Fuel Boiler	49.30	49.30	452.82	22.12	2216.28	7.54
Veneer Dryers	55.19	55.19	0.00	11.4	0.00	0.00
Lumber Dry Kilns	0.00	0.00	0.00	80.0	0.00	0.00
Log Debarking(sawmill and plywood)	4.25	2.34	0.00	0.00	0.00	0.00
Block Sawing(Sawmill and Plywood)	8.50	4.68	0.00	0.00	0.00	0.00
Sawmill Chip Bin Cyclone	11.30	5.65	0.00	0.00	0.00	0.00
Planer Shavings Bin Baghouse	7.51	7.51	0.00	0.00	0.00	0.00
Dry Chip Baghouse	3.75	3.75	0.00	0.00	0.00	0.00
Fines Cyclone	5.87	2.93	0.00	0.00	0.00	0.00
Sanderdust Silo Baghouse	1.40	1.40	0.00	0.00	0.00	0.00
Sander Cyclone Baghouse	27.02	27.02	0.00	0.00	0.00	0.00
Sawline Baghouse	3.90	3.90	0.00	0.00	0.00	0.00
Dry Fuel Baghouse	3.77	3.77	0.00	0.00	0.00	0.00
Hog Fuel Pile & Fuel Bunker	24.18	9.07	0.00	0.00	0.00	0.00
Plywood Chips Truck Loadout	9.54	3.39	0.00	0.00	0.00	0.00
Sawmill/Planer Chips	10.67	3.79	0.00	0.00	0.00	0.00
Fines Truck Loadout	24.19	8.71	0.00	0.00	0.00	0.00
Planer Shavings Truck Loadout	30.00	18.00	0.00	0.00	0.00	0.00
Fugitive Road Dust	68.10	24.51	0.00	0.00	0.00	0.00
Log Yard Emissions	8.16	0.35	0.00	0.00	0.00	0.00
Total	**356.6**	**235.26**	**452.82**	**113.52**	**2,215.28**	**7.54**

*Calculations supporting emission estimates for sources not affected by the MAQP #2602-11 permitting action are contained in the analysis for MAQP #2602-05, #2602-06, #2602-07, #2602-09

Lumber Dry Kilns
Production Rate: 100,000 MBF/yr * 1.6 lb/MBF / 2000 lbs = 80 tpy VOC

Veneer Dryers
Production Rate: 175,000 MSF/yr / 10 * 1.3 lb/10^4SF / 2000 lbs = 11.4 tpy VOC

Dry Chip Baghouse
25,000 dscfm * 60 min/hr * 0.004 gr/dscf * 1 lb/7000 gr * 8760 hr/yr * ton/2000 lb = 3.75 ton/yr

Planer Baghouse
50,000 dscfm * 60 min/hr * 0.0004 gr/dscf * 1 lb/7000 gr * 8760 hr/yr * ton/2000 lb = 7.51 ton/yr

**Calculations of VOC and HAP emissions were submitted as part of the MAQP #2602-11 application and is within the electronic files associated with this application.

RDO 616 Screener emission calculations

In determining the RDO screener emissions for MAQP #2602-13, the following calculations were used:

BARK

Total throughput: 45%
Material Density: 0.346 g/cm3
Emission Factor: PM= 0.02, PM10= 0.011 (3-07-008-01: Log Debarking)*

Calculations:
PM= 0.02 x 0.346 g/cm3 x 0.8428 x 100 yd3/hr x 0.45 x 962 hpy x 0.0005 lb/ton = 0.1262 tpy
PM10= 0.011 x 0.346 g/cm3 x 0.8428 x 100 yd3/hr x 0.45 x 962 hpy x 0.0005 lb/ton = 0.0694 tpy

ROCK

Total throughput: 15%
Material Density: 2.65 g/cm3
Emission Factor: PM= 0.029, PM10 = 0.0064 (3-05-025-03: Material Transfer)*

Calculations:
PM= 0.029 x 2.65 g/cm3 x 0.8428 x 100 yd3/hr x 0.15 x 962 hpy x 0.0005 lb/ton = 0.4672 tpy
PM10= 0.0064 x 2.65 g/cm3 x 0.8428 x 100 yd3/hr x 0.15 x 962 hpy x 0.0005 lb/ton = 0.1031 tpy

SAWDUST

Total throughput: 40%
Material Density: 0.21 g/cm3
Emission Factor: PM =1, PM10 = 0.36 (3-07-008-03: Sawdust Pile Handling)*

Calculations:
PM= 1 x 0.21 g/cm3 x 0.8428 x 100 yd3/hr x 0.40 x 962 hpy x 0.0005 lb/ton = 3.404 tpy
PM10= 0.36 x 0.21 g/cm3 x 0.8428 x 100 yd3/hr x 0.40 x 962 hpy x 0.0005 lb/ton = 1.226 tpy

TOTAL

Calculations:
PM = 0.1262 tpy + 0.4672 tpy + 3.404 tpy = 3.998 tpy
PM10 = 0.0694 tpy + 0.1031 tpy + 1.226 tpy = 1.398 tpy

*EIIP V02 Ch14 Uncontrolled Emission Factors for Criteria Air Pollutants

IV. Environmental Assessment

An Environmental Assessment was not required for this permitting action because it is considered an administrative action.

Analysis Prepared by: T. Gauthier
Date: 4/7/2022