**Lane Regional Air Protection Agency**
**Standard Air Contaminant Discharge Permit**

**REVIEW REPORT**

**Weyerhaeuser NR Company – Cottage Grove Lumber** **Permit No. 208853**
77629 South Pacific Highway
Cottage Grove, Oregon 97424
https://www.weyerhaeuser.com/

**Source Information:**

| | |
|---|---|
| Primary SIC | 2421 |
| Secondary SIC | -- |
| Primary NAICS | 321113 |
| Secondary NAICS | -- |

| | |
|---|---|
| Source Categories (LRAPA title 37, Table 1) | Part B: 62 – Sawmills and/or planing mills 25,000 or more board feet/maximum 8 hour finished product |
| Public Notice Category | I |

**Compliance and Emissions Monitoring Requirements:**

| | |
|---|---|
| Unassigned Emissions | Y |
| Emission Credits | N |
| Special Conditions | N |
| Compliance Schedule | N |

| | |
|---|---|
| Source Test [date(s)] | N |
| COMS | N |
| CEMS | N |
| Ambient monitoring | N |

**Reporting Requirements**

| | |
|---|---|
| Annual Report (due date) | February 15 |
| Semi-annual Report (due date) | N |
| SACC (due date) | N |
| GHG Report (due date) | N |

| | |
|---|---|
| Quarterly Report (due date) | N |
| Monthly Report (due dates) | N |
| Excess Emissions Report | Y |
| Other Reports (due date) | N |

**Air Programs**

| | |
|---|---|
| NSPS (list subparts) | IIII |
| NESHAP (list subparts) | ZZZZ |
| 40 CFR part 64 Compliance Assurance Monitoring (CAM) | N |
| Regional Haze (RH) | N |
| 40 CFR part 68 Risk Management | N |
| Cleaner Air Oregon (CAO) | N |
| Synthetic Minor (SM) | N |
| SM-80 | N |
| Title V | N |

| | |
|---|---|
| Major FHAP Source | N |
| Federal Major Source | N |
| TACT | N |
| Type A State New Source Review | N |
| Type B State New Source Review | N |
| Prevention of Significant Deterioration (PSD) | N |
| Nonattainment New Source Review (NNSR) | N |

**Permit Identification**

1. Weyerhaeuser NR Company – Cottage Grove Lumber ('Weyerhaeuser NR' or 'facility') operates a sawmill at 77629 South Pacific Highway, Cottage Grove, Oregon. The facility began operation in 1978.

2. The facility operates under the primary Standard Industrial Classification (SIC) code of 2421 – Sawmill and Planing Mills, General and the primary North American Industry Classification System (NAICS) code of 321113 - Sawmills.

**General Background**

3. Weyerhaeuser NR operates a sawmill that has the capacity to mill 700 million board feet of lumber annually. In support of its operations, the facility operates planer trimmer, Edger gang saw, Canter planer, and package saws. The facility also has a anti-sap stain spray booth, and two (3) automated cut end anti-sap stain applicators, and unpaved roads. Categorically insignificant activities include paved roads, one (1) 208 brake horsepower diesel-fired fire pond emergency pump engine (installed 4/7/1994), and two (2) 50-kilowatt (kW) diesel-fired emergency generators (installed 2019).

   The board cutting and planing operations generates particulate matter (PM) in the form of wood dust and shavings, The PM emissions from these processes are controlled by four (4) cyclones. Two (2) cyclones are high efficiency (C-1 and C-2) and two (2) are medium efficiency (C-25 and C-27). There are a total of eight (8) truck bins: two (2) for planer shavings, two (2) for chips, two (2) for sawdust and two (2) for bark. The truck bin throughput is green wood with a moisture content of approximately 50%.

**Reasons for Permit Action**

4. This is a Simple Technical Permit modification for a Type 3 change to install a 60 kW (96 horsepower) diesel-fired emergency generator.

**Attainment Status**

5. Weyerhaeuser NR is located inside the Cottage Grove Urban Growth Boundary. The facility is located in an area that has been designated attainment/unclassified for PM, $PM_{10}$, $PM_{2.5}$, ozone (VOC), CO, $NO_X$ and $SO_2$. The facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak and Three Sisters Wilderness areas.

**Permitting History**

6. LRAPA has reviewed and issued the following permitting actions to this facility:

| Date(s) Approved/Valid | Permit Action Type | Description |
|---|---|---|
| 01/01/1978 – 12/31/1982 | ACDP | Initial permit |
| 01/01/1983 – 12/31/1992 | ACDP | Renewal (10-year permit term) |
| 04/22/1992 | Modification | Removed plywood manufacturing |
| 01/01/1993 – 12/31/1997 | ACDP | Renewal |
| 08/27/1998 – 12/31/2002 | Standard ACDP | Renewal |
| 06/23/2004 | ACDP Addendum No. 1 | PSEL increase and baseline revision |
| 06/29/2010 – 06/29/2015 | Standard ACDP | Renewal |

| Date(s) Approved/Valid | Permit Action Type | Description |
|---|---|---|
| 12/27/2010 | ACDP Addendum No. 1 | Added two (2) automated anti-sap stain applicators |
| 05/20/2014 | ACDP Addendum No. 2 | Replaced and relocated the two (2) automated cut end anti-sap stain applicators, replaced the packaging saw, and added a new package saw |
| 07/05/2016 – 07/05/2021 | Standard ACDP | Renewal |
| 01/31/2017 | ACDP Addendum No. 1 | Added existing diesel-fired fire pond pump engine |
| 12/19/2019 | ACDP Addendum No. 2 | Added two (2) existing diesel-fired emergency generators |
| 09/08/2022 – 09/08/2027 | Standard ACDP | Renewal |
| Upon Issuance of modification | ACDP Addendum No. 1 | Added a new 60 kW diesel-fired emergency generator |

**Emission Unit Descriptions**

7. The emission units regulated by this permit are the following:

| Emission Unit ID | Emission Unit Description | PCD ID | Pollution Control Device (PCD ID) |
|---|---|---|---|
| EU-1 | Sawmill Operations:<br>Mill B/Planer Trimmer<br>Edger Gang Saw<br>Canter Planer<br>Package Saws | C-1<br>C-2<br>C-25<br>C-27 | Cyclone 1: High efficiency cyclone controlling Mill B/Planer Trimmer, Edger and Cyclone-27<br>Cyclone 2: High efficiency cyclone controlling Gang Saw and Canter Planer<br>Cyclone 25: Medium efficiency controlling Planer<br>Cyclone 27: Medium efficiency cyclone controlling Package Saws |
| EU-2 | Truck Bins (8) | None | None |
| EU-3 | One (1) spray booth | None | High efficiency internal scrubber |
| EU-4 | Unpaved Roads | None | None |
| EU-CIA | Categorical Insignificant Activities:<br>One (1) Diesel-fired Pond Engine<br>Two (2) 50 kW Diesel-fired emergency generators<br>***One (1) 60 kW Diesel-fired emergency generator**<br>Paved Roads | None | None |

***New Emission Unit**

**Nuisance, Deposition and Other Emission Limitations**

8. None added for this modification.

**General Emission Limitations**

9. None added for this modification.

**Typically Achievable Control Technology (TACT)**

10. None required for this modification.

**New Source Performance Standards (NSPS)**

11. 40 CFR part 60 subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is applicable to the 60-kW diesel-fired Caterpillar emergency engine (EU-CIA) because the emergency engine was manufactured after April 1, 2006 and is not a fire pump engine.

12. The 40 CFR part 60 subpart IIII requirements that are applicable to the Caterpillar 60-kW emergency engine are identified in the following table:

| 40 CFR part 60 subpart IIII Citation | Description | Applicable to Source (Yes/No) | Comments | Permit Condition |
|---|---|---|---|---|
| 60.4200 | Subpart applicability | Yes | Informational. | NA |
| 60.4201 | Emission standards (non-emergency engines) | No | -- | NA |
| 60.4202 | Emissions standards (emergency engine) | Yes | Applicable to (a)(2). | 15.g.i |
| 60.4203 | Emission standards (manufacturer) | No | -- | NA |
| 60.4204 | Emission (non-emergency engine) | No | -- | NA |
| 60.4205 | Emission standards (emergency engines) | Yes | Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with 60.4202. | 15.g |
| 60.4206 | Emission standards | Yes | The emission standards are applicable for the life of the engine. | 15.h |
| 60.4207 | Fuel requirements | Yes | Must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel. | NA |
| 60.4208 | Requirements – deadlines for installing | No | -- | NA |
| 60.4209 | Monitoring requirements | No | -- | NA |
| 60.4210 | Compliance requirements (manufacturer) | No | -- | NA |
| 60.4211 | Compliance requirements | Yes | -- | 15.i – 15.l |
| 60.4212 | Testing requirements | No | -- | NA |
| 60.4213 | Testing methods | No | -- | NA |
| 60.4214 | Notification, reporting, and recordkeeping requirements | Yes | If engine does not meet the applicable emission standards, then the owner or operator must install a non-resettable hour meter. | 15.m |

| 40 CFR part 60 subpart IIII Citation | Description | Applicable to Source (Yes/No) | Comments | Permit Condition |
|---|---|---|---|---|
| 60.4215 | Special requirements | No | Engine is not located in the listed geographic areas. | NA |
| 60.4216 | Special requirements | No | Engine is not located in the listed geographic areas. | NA |
| 60.4217 | Special requirements | No | Engines do not use special fuel | NA |
| 60.4218 | General provisions | Yes | Informational | NA |
| 60.4219 | Definitions | Yes | -- | NA |

**Hazardous Air Pollutants (HAPs) and National Emission Standards for Hazardous Air Pollutants (NESHAPs)**

13. The Caterpillar 60-kW emergency engine is subject to 40 CFR part 63 subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines because this emission unit is considered a new stationary RICE under this regulation. However, under 40 CFR 63.6590(c)(1), a new or reconstructed stationary RICE at an area source of federal HAP emissions must meet the requirements of 40 CFR part 63 subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII. No further requirements apply for these engines under 40 CFR part 63 subpart ZZZZ.

**Plant Site Emission Limits (PSELs)**

14. There was no change to Baseline or Netting Basis.

**Unassigned Emissions and Emission Reduction Credits**

15. There was no change to Unassigned Emissions.

**New Source Review (NSR) and Prevention of Significant Deterioration (PSD)**

16. This source is located in an area that is designated attainment or unclassified for all regulated pollutants. For pollutants, the proposed PSELs are less than the federal major source threshold for non-listed sources of 250 TPY per regulated pollutant and are not subject to Major NSR.

**Federal Hazardous Air Pollutants/Toxic Air Contaminants**

17. There has been no significant change to federal hazardous air pollutant emissions (FHAP) or toxic air contaminants (TACs).

**Toxic Release Inventory**

18. The Toxics Release Inventory (TRI) is a federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:

    - Cancer or other chronic human health effects;
    - Significant adverse acute human health effects; or
    - Significant adverse environmental effects.

There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI Program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA's TRI website.

In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. The facility's NAICS code 321113 - Sawmills is a reportable NAICS code, but the facility is below the reportable thresholds limits and therefore does not have to report to the TRI program.

**Compliance History**

19. There have been no changes to the Compliance History.

**Source Testing History**

20. The facility is not required to conduct performance testing at this time.

**Recordkeeping Requirements**

21. The facility is required to keep and maintain a record of the following information for a period of five (5) years.

| Activity | Units | Minimum Recording Frequency |
|---|---|---|
| (a) Dates of inspection and maintenance of paint booth and cyclones | NA | As performed |
| (b) Sawmill Production Rate | MBF | Daily |
| (c) Planing Mill Production Rate | MBF | Daily |
| (d) Sawmill and Planing Mill hours of operation | Hours | Daily |
| (e) Coating and Solvent Use including stains, etc., | Gallons | Daily and Monthly |
| (f) VOC and HAP content of coating and solvents, including stains, etc. (SDS or lab analyses) | % | NA |
| (g) Records required by RICE NESHAP specified in Condition 15.f | NA | Monthly |
| (h) Fugitive emissions survey | Log | Monthly |
| (i) Visible emissions survey | Log | Monthly |
| (j) Upset log of all planned and unplanned excess emission as required by Condition G15 | NA | Per occurrence |
| **(k) Records required by RICE NESHAP specified in permit Condition 15.m** | NA | Monthly |

**Reporting Requirements**

22. The facility must submit to LRAPA the annual reports by February 15th each year.

**Public Notice**

23. Public Notice is not required for this modification.

BE/aa
03/01/2024

Emission Detail Sheet

| Catepillar Emergency Generator installation date 2024 | | |
|---|---|---|
| Maximum Hours per year | 100 | hours |
| Engine rating | 60 | kW |
| Heat Value for diesel | 138.0 | MMBtu/gal |
| Maximum Fuel Consumption | 5.14 | gal/hour |
| Maximum Fuel Consumption | 0.00514 | Mgal/hour |
| Generator | 709 | MMbtu/hr |

| 60-kW Diesel-fired Catepiller Emergency Generator | | | | | |
|---|---|---|---|---|---|
| **Pollutant** | **Max Fuel Consumption (gals/hr)** | **Emission Factors** | | **Hourly Emission Rate (lbs/hr)** | **Annual Emissions (tpy)** |
| | | **Factors [1]** | **Units** | | |
| **PM** | 5.14 | 42.5 | lb/1000 gal | 0.22 | **0.01** |
| **$PM_{10}$** | 5.14 | 42.5 | lb/1000 gal | 0.22 | **0.01** |
| **$PM_{2.5}$** | 5.14 | 42.5 | lb/1000 gal | 0.22 | **0.01** |
| **CO** | 5.14 | 130 | lb/1000 gal | 0.67 | **0.03** |
| **$NO_X$** | 5.14 | 604 | lb/1000 gal | 3.10 | **0.16** |
| **$SO_2$** | 5.14 | 39.7 | lb/1000 gal | 0.20 | **0.01** |
| **VOC** | 5.14 | 49.3 | lb/1000 gal | 0.25 | **0.01** |
| | **MMBt/hr** | **Factors** | **lb/MMBtu** | **Hourly Emission Rate (lb/hr)** | **Annual Emisisons** |
| **GHG** | 709 | 22.7 | lb/MMBtu | 2221 | **111.07** |
| | | | | | |
| (1) Emission factors are from Oregon DEQ AQ-EF07 - Emission Factors - Power (Electric) Generators (08/01/2011) | | | | | |
| 2.20462 is the conversion from kilograms to pound | | | | | |

| GHG-Related Emission Factors | | |
|---|---|---|
| | **Diesel** | |
| **Pollutant** | **(kg/MMBtu)** | **GWP** |
| Carbon Dioxide | 73.96 | 1 |
| Methane | 3.0E-03 | 25 |
| Nitrous Oxide | 6.0E-04 | 298 |

| GHG Emission Factor Conversion Calculations | | |
|---|---|---|
| Distillate Fuel | 138,700 | Btu/gallon |
| | 0.1387 | MMBtu/gallon |
| GHG Emission Factor | 163.61 | lb/MMBtu |
| GHG Emission Factor | 22.69 | lb/gallon |

| FHAP and CAO TAC for Generators | | | | | | |
|---|---|---|---|---|---|---|
| **Polluant Name (Chemical Compound)** | **CAS/DEQ Number** | **Emission Factor lb/M gal** | **Hourly Emissions (lb/hr)** | **Annual Emissions (tpy)** | **Federal HAP** | **CAO TAC** |
| 1,3-Butadiene | 106-99-0 | 0.2174 | 1.12E-06 | 5.59E-08 | Yes | Yes |
| 2-Methyl naphthalene | 91-57-6 | 1.23E-02 | 6.32E-08 | 3.16E-09 | No | Yes |
| Acenaphthene | 83-32-9 | 7.35E-04 | 3.78E-09 | 1.89E-10 | Yes | Yes |
| Acenaphthylene | 208-96-8 | 8.10E-04 | 4.16E-09 | 2.08E-10 | Yes | Yes |
| Acetaldehyde | 75-07-0 | 0.7833 | 4.03E-06 | 2.01E-07 | Yes | Yes |
| Acrolein | 107-02-8 | 0.0339 | 1.74E-07 | 8.71E-09 | Yes | Yes |
| Ammonia | 7664-41-7 | 0.8 | 4.11E-06 | 2.06E-07 | No | Yes |
| Anthracene | 120-12-7 | 4.52E-04 | 2.32E-09 | 1.16E-10 | Yes | Yes |
| Antimony and compounds | 7440-36-0 | 3.18E-04 | 1.64E-09 | 8.18E-11 | No | Yes |
| Arsenic and compounds | 7440-38-2 | 2.77E-04 | 1.42E-09 | 7.12E-11 | Yes | Yes |
| Barium and compounds | 7440-39-3 | 3.74E-04 | 1.92E-09 | 9.61E-11 | No | Yes |
| Benz[a]anthracene | 56-55-3 | 4.85E-05 | 2.50E-10 | 1.25E-11 | Yes | Yes |
| Benzene | 71-43-2 | 0.1863 | 9.58E-07 | 4.79E-08 | Yes | Yes |
| Benzo[a]pyrene | 50-32-8 | 1.44E-05 | 7.39E-11 | 3.70E-12 | Yes | Yes |
| Benzo[b]fluoranthene | 205-99-2 | 4.44E-05 | 2.28E-10 | 1.14E-11 | Yes | Yes |
| Benzo[e]pyrene | 192-97-2 | 3.29E-05 | 1.69E-10 | 8.45E-12 | Yes | Yes |
| Benzo[g,h,i]perylene | 191-24-2 | 2.19E-05 | 1.12E-10 | 5.62E-12 | Yes | Yes |
| Benzo[k]fluoranthene | 207-08-9 | 1.31E-05 | 6.71E-11 | 3.35E-12 | Yes | Yes |
| Beryllium and compounds | 7440-41-7 | 4.77E-06 | 2.45E-11 | 1.23E-12 | Yes | Yes |
| Cadmium and compounds | 7440-43-9 | 8.08E-05 | 4.15E-10 | 2.08E-11 | Yes | Yes |
| Chlorobenzene | 108-90-7 | 2.00E-04 | 1.03E-09 | 5.14E-11 | Yes | Yes |
| Chromium VI, chromate and dich | 18540-29-9 | 6.31E-05 | 3.25E-10 | 1.62E-11 | Yes | Yes |
| Chrysene | 218-01-9 | 6.70E-05 | 3.44E-10 | 1.72E-11 | Yes | Yes |
| Cobalt and compounds | 7440-48-4 | 1.58E-05 | 8.10E-11 | 4.05E-12 | Yes | Yes |
| Copper and compounds | 7440-50-8 | 5.02E-04 | 2.58E-09 | 1.29E-10 | No | Yes |
| Dibenz[a,h]anthracene | 53-70-3 | 1.04E-06 | 5.33E-12 | 2.67E-13 | Yes | Yes |
| Diesel particulate matter (DPM) | 200 | 16.98 | 8.73E-05 | 4.36E-06 | No | Yes |
| Ethyl benzene | 100-41-4 | 0.0109 | 5.60E-08 | 2.80E-09 | Yes | Yes |
| Fluoranthene | 206-44-0 | 3.70E-04 | 1.90E-09 | 9.51E-11 | Yes | Yes |
| Fluorene | 86-73-7 | 2.18E-03 | 1.12E-08 | 5.61E-10 | Yes | Yes |
| Formaldehyde | 50-00-0 | 2.71 | 1.39E-05 | 6.97E-07 | Yes | Yes |
| Hexane | 110-54-3 | 0.0269 | 1.38E-07 | 6.91E-09 | Yes | Yes |
| Hydrochloric acid | 7647-01-0 | 0.19 | 9.58E-07 | 4.79E-08 | Yes | Yes |

| FHAP and CAO TAC for Generators | | | | | | |
|---|---|---|---|---|---|---|
| **Polluant Name (Chemical Compound)** | **CAS/DEQ Number** | **Emission Factor lb/M gal** | **Hourly Emissions (lb/hr)** | **Annual Emissions (tpy)** | **Federal HAP** | **CAO TAC** |
| Indeno[1,2,3-cd]pyrene | 193-39-5 | 1.07E-05 | 5.51E-11 | 2.75E-12 | Yes | Yes |
| Lead and compounds | 7439-92-1 | 3.64E-04 | 1.87E-09 | 9.35E-11 | Yes | Yes |
| Manganese and compounds | 7439-96-5 | 4.20E-04 | 2.16E-09 | 1.08E-10 | Yes | Yes |
| Mercury and compounds | 7439-97-6 | 1.51E-05 | 7.77E-11 | 3.88E-12 | Yes | Yes |
| Naphthalene | 91-20-3 | 2.64E-02 | 1.35E-07 | 6.77E-09 | Yes | Yes |
| Nickel and compounds | 7440-02-0 | 1.82E-04 | 9.37E-10 | 4.68E-11 | Yes | Yes |
| Perylene | 198-55-0 | 1.18E-06 | 6.06E-12 | 3.03E-13 | Yes | Yes |
| Phenanthrene | 85-01-8 | 4.54E-03 | 2.33E-08 | 1.17E-09 | Yes | Yes |
| Phosphorus and compounds | 504 | 8.40E-03 | 4.32E-08 | 2.16E-09 | No | Yes |
| Propylene | 115-07-1 | 4.70E-01 | 2.42E-06 | 1.21E-07 | No | Yes |
| Selenium and compounds | 7782-49-2 | 3.76E-04 | 1.93E-09 | 9.67E-11 | Yes | Yes |
| Silver and compounds | 7440-22-4 | 4.80E-05 | 2.47E-10 | 1.23E-11 | No | Yes |
| Thallium and compounds | 7440-28-0 | 2.40E-04 | 1.23E-09 | 6.17E-11 | No | Yes |
| Toluene | 108-88-3 | 0.11 | 5.42E-07 | 2.71E-08 | Yes | Yes |
| Xylene (mixture), including m-xylene, o-xylene, p-xylene | 1330-20-7 | 0.04 | 2.18E-07 | 1.09E-08 | Yes | Yes |
| Zinc and compounds | 7440-66-6 | 5.23E-03 | 2.69E-08 | 1.34E-09 | No | Yes |
| | | | | **TOTALS** | **1.12E-06** | **5.81E-06** |
| | | | | **Max Federal HAP (tpy)** | **6.97E-07** | |

LRAPA
Lane Regional Air Protection Agency

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**Standard Air Contaminant Discharge Permit**

**Review Report**

**Weyerhaeuser NR Company – Cottage Grove Lumber** **Permit No. 208853**
77629 South Pacific Highway
Cottage Grove, Oregon 97424
Website: http://www.weyerhaeuser.com

**Source Information:**

| | |
|---|---|
| Primary SIC | 2421 - Sawmill/Planing Mill |
| Secondary SIC | -- |
| Primary NAICS | 321113 - Sawmills |
| Secondary NAICS | -- |

| | |
|---|---|
| Source Categories (LRAPA title 37, Table 1) | B:62. – Sawmills and/or planing mills 25,000 or more board feet/maximum 8 hour finished product |
| Public Notice Category | III |

**Compliance and Emissions Monitoring Requirements:**

| | |
|---|---|
| Unassigned Emissions | Y |
| Emission Credits | N |
| Compliance Schedule | N |
| Source Test [date(s)] | N |

| | |
|---|---|
| COMS | N |
| CEMS | N |
| Ambient monitoring | N |

**Reporting Requirements**

| | |
|---|---|
| Annual Report (due date) | February 15 |
| Semi-Annual Report (due date) | N |
| GHG Report (due date) | N |
| Monthly Report (due date) | N |

| | |
|---|---|
| Quarterly Report (due date) | N |
| Excess Emissions Report | Y |
| Other Reports (due date) | N |

**Air Programs**

| | |
|---|---|
| NSPS (list subparts) | N |
| NESHAP (list subparts) | N |
| CAM | N |
| Regional Haze (RH) | N |
| Synthetic Minor (SM) | N |
| SM-80 | N |
| Title V | N |
| Part 68 Risk Management | N |
| ACDP (SIP) | N |
| Major FHAP Source | N |
| Federal Major Source | N |
| NA New Source Review (NSR) | N |
| Prevention of Significant Deterioration (PSD) | N |
| Acid Rain | N |
| Clean Air Mercury Rule (CAMR) | N |
| TACT | N |
| >20 Megawatts | N |

Permittee Identification

1. Weyerhaeuser NR Company – Cottage Grove Lumber ("the facility") operates a sawmill at 77629 South Pacific Highway, Cottage Grove, Oregon.

General Background

2. Weyerhaeuser NR Company – Cottage Grove Lumber is proposing to expand the capacity of the facility. Currently the facility has an annual capacity of 500 million board feet of lumber. The facility is proposing to increase capacity to 700 million board feet of lumber. Their modernization project includes changes to the residual handling system and replacement of existing cyclones (C-21 and C-26) with new, higher efficiency cyclones (C-1 and C-2). The facility also proposes to add new sawmill equipment, including new chip screening operations, a new trimmer, a new merchandiser, and a new gang saw within the Sawmill Operations emission unit (EU-1). This expansion is considered a Type 3 change under LRAPA 34-035.

3. The facility was initially constructed in 1975. The plywood plant closed in August 1985, the laminating plant ceased operation in September 1992, and the hog fuel-fired boilers were permanently shut down in February 1994. The sawmill operations have continued since the initial air permit was issued.

Reasons for Permit Action and Fee Basis

4. The facility operates a process listed in LRAPA title 37, Table 1, Part B (B.62, Sawmills and/or planing mills 25,000 or more board feet/maximum 8 hour finished product) and is, therefore, required to obtain an air contaminant discharge permit. The current Standard ACDP for the facility expired on July 5, 2021. The facility submitted a renewal application on February 3, 2021. Because the facility submitted a renewal application prior to the expiration of the Standard ACDP, they are authorized to continue operating until the Standard ACDP is renewed. The renewal application deadline was changed in an LRAPA rulemaking during the previous permit term for Standard ACDPs from 60 days prior to expiration to 180 days prior to expiration; even though the facility submitted their application less than 180 days prior to the July 5, 2021 expiration date, LRAPA deemed the application timely since the facility's existing permit contained the 60 day deadline in General Condition G22.

5. The Standard ACDP renewal also includes a Type 3 change under LRAPA 34-035 as discussed in this review report.

Attainment Status

6. The facility is located outside of the Eugene-Springfield Air Quality Management Area and in an area that has been designated attainment/unclassified for $PM_{10}$, $PM_{2.5}$, ozone (VOC), CO, $NO_2$, $SO_2$, and Pb. The facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak Wilderness and Three Sisters Wilderness area.

Permitting History

7. LRAPA has reviewed and issued the following permitting actions to this facility:

| Date Approved/Valid | Permit Action Type | Description |
|---|---|---|
| 01/01/1978 – 12/31/1982 | ACDP | Initial air permit issued to Weyerhaeuser Company for plywood manufacturing, sawmill, fuel burning equipment, planing mill, and laminating plant. |
| 01/01/1983 – 12/31/1992 | ACDP | Renewal (10-year permit term) |
| 04/22/1992 | ACDP Modification | Removed plywood manufacturing |
| 01/01/1993 – 12/31/1997 | ACDP | Renewal |

| Date Approved/Valid | Permit Action Type | Description |
|---|---|---|
| 08/27/1998 – 12/31/2002 | ACDP | Renewal |
| 01/01/2003 – 12/31/2007 | ACDP | Renewal |
| 06/23/2004 | ACDP Addendum No. 1 | PSEL increase and baseline revision |
| 06/29/2010 – 06/29/2015 | ACDP | Renewal |
| 12/27/2010 | ACDP Addendum No. 1 | Add two (2) automated anti-sap stain applicators |
| 05/20/2014 | ACDP Addendum No. 2 | Replace and relocate the two (2) automated cut end anti-sap stain applicators, replace the packaging saw, and add a new package saw. |
| 07/05/2016 – 07/05/2021 | ACDP | Renewal |
| 01/31/2017 | ACDP Addendum No. 1 | Add existing diesel-fired fire pond engine |
| 12/19/2019 | ACDP Addendum No. 2 | Add two (2) existing diesel-fired emergency generators |

Emission Unit Descriptions

8. The emission units regulated by the permit are the following:

| Emission Unit ID | Emission Unit Description | PCD ID | Pollution Control Device (PCD) Description |
|---|---|---|---|
| EU-1 | Sawmill Operations:<br>Mill B/Planer Trimmer, Edger Gang Saw, Canter Planer<br>Package Saws | C-1<br>C-2<br>C-25<br>C-27 | Cyclone-1: High efficiency cyclone controlling Mill B/Planer Trimmer, Edger and Cyclone-27<br>Cyclone-2: High efficiency cyclone controlling Gang Saw, Canter<br>Cyclone 25: Medium efficiency cyclone controlling Planer<br>Cyclone-27: Medium efficiency cyclone controlling Package Saw |
| EU-2 | Truck Bins (8) | None | None |
| EU-3 | Spray-applied coatings (including Anti-Sap Stain Spray Booth and 2 Automated Cut End Anti-Sap Stain Applicators) | None | One (1) spray booth with high efficiency internal scrubber:<br>None for 2 Automated Cut End Anti-Sap Stain Applicators (fugitives) |
| EU-4 | Unpaved Roads | None | None |
| EU-CIA | Categorically Insignificant Activities:<br>Three (3) Diesel-fired emergency pumps/generators and Paved Roads | None | None |

9. Sawmill/Planing Mill Activities (Mills)

The board cutting and planing activities generate particulate matter in the form of wood dust and shavings. The particulate matter emissions from these processes are ultimately controlled by four cyclones. The criteria pollutant emissions from these sources are based on emission factors from Table 13.2 of the DEQ General ACDP for sawmills, planning mills, millwork, plywood manufacturing, and/or veneer drying (AQGP-010 expiring 10/01/2027). These sources are not expected to have any significant FHAP or CAO TAC emissions. There are five (5) cyclones in this

emission unit with four (4) emission points: C-1, C-2, C-25, and C-27. Cyclones 1 and 2 are high efficiency cyclones. Cyclones 25 and 27 are medium efficiency cyclones.

10. Truck Bins
There are a total of eight (8) truck bins: two (2) for planer shavings, two (2) for chips, two (2) for sawdust and two (2) for bark. Truck bin throughput is green wood with a moisture content of approximately 50%.

11. Unpaved Roads
This emissions unit consists of unpaved roads at the facility.

12. Paved Roads
This former emissions unit is now in EU-CIA. LRAPA's Section 12-005 defines categorically insignificant activity (CIA) to include paved roads and paved parking lots within an urban growth boundary. The facility is now within the Cottage Grove Urban Growth Boundary.

13. Categorically Insignificant Activities (CIA)
The facility has one (1) 208 brake horsepower diesel-fired fire pond engine (installed 4/7/1994) and two (2) 50 kW diesel-fired emergency generators (installed in 2019). These devices are considered CIA under LRAPA's title 12 and are also subject to 40 CFR part 63 subpart ZZZZ. The emissions from paved roads are now considered CIA.

General Emission Limitations

14. The facility is subject to the general requirements for fugitive emissions under LRAPA 48-015. The facility must not have visible emissions that leave the property of a source for a period or periods totaling more than 18 seconds in a six (6) minute period. The facility must follow, but is not limited to, the list of reasonable precautions under LRAPA 48-015(1)(a)-(g). When fugitive particulate emissions escape from an air contaminant source, LRAPA may order the facility to abate the emissions. If requested by LRAPA, the facility must develop a Fugitive Emission Control Plan. Compliance will be demonstrated through quarterly monitoring of fugitive emissions.

15. The cyclones in EU-1 are subject to the visible emission limitations under LRAPA 32-010(3). For sources, other than wood-fired boilers, no person may emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. Compliance will be demonstrated through quarterly monitoring of fugitive emissions.

16. Cyclones 25 and 27 in Emission Unit EU-1 are subject to the particulate matter emission limitations under LRAPA 32-015(2)(b). For sources installed, constructed, or modified on or after April 16, 2015 for which there are not representative compliance source test results, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance will be demonstrated through monthly monitoring of visible emissions.

17. Cyclones 1 and 2 in Emission Unit EU-1 are subject to the particulate matter emission limitations under LRAPA 32-015(2)(c). For sources installed, constructed, or modified on or after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance will be demonstrated through monthly monitoring of visible emissions.

18. Sawmill/Planing Mill Activities in EU-1 are subject to the process weight rate emission limitations under LRAPA 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in LRAPA 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion

air are not included in the total weight of all materials. Compliance will be demonstrated through quarterly monitoring of visible emissions.

Typically Achievable Control Technology (TACT)

19. LRAPA 32-008(1) requires an existing unit a facility to meet TACT if the emission unit meets the following criteria: The emission unit is not already subject to emission standards for the regulated pollutant under LRAPA title 30, title 32, title 33, title 38, title 39 or title 46 at the time TACT is required; the source is required to have a permit; the emission unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment.

20. LRAPA 32-008(2) requires new or modified emission units to meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR or Type A State NSR in LRAPA title 38, and applicable NSPS in LRAPA title 46, or any other standard applicable to only new or modified sources in LRAPA title 32, title 33, or title 39 for the regulated pollutant; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.

21. The Sawmill/Planing Mill Activities in EU-1 exhaust to four (4) cyclones. These control devices are considered TACT for these processes.

Plant Site Emission Limits (PSELs)

22. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limit, and potential-to-emit:

| Pollutant | Baseline Emission Rate (TPY) | Netting Basis | | Plant Site Emission Limit (PSEL) | | PTE (TPY) |
|---|---|---|---|---|---|---|
| | | Previous (TPY) | Proposed (TPY) | Previous PSEL (TPY) | Proposed PSEL (TPY) | |
| PM | 96 | 81 | 81 | 56 | 28 | 28 |
| $PM_{10}$ | 75 | 31 | 31 | 16 | 18 | 18 |
| $PM_{2.5}$ | NA | 17 | 17 | 9 | 10 | 10 |
| VOC | 180 | 79 | 79 | 39 | 39 | 27 |

22a. Baseline emission rates are from 1978 actual emissions as summarized in the June 23, 2004 Review Report (see emission details to this Review Report).

22b. The netting basis was established in the previous renewal and remains unchanged with this renewal.

22c. Paved Roads (EU-5) was removed from the permit and the PSELs because the facility is now located within the Cottage Grove urban growth boundary (UGB) and the emissions from paved roads are therefore a categorically insignificant activity (CIA) under the definition in LRAPA's title 12.

Significant Emission Rate

23. The PSEL increase over the netting basis is less than the Significant Emission Rate (SER) as defined in LRAPA title 12 for all pollutants as shown below.

| Pollutant | Proposed PSEL (TPY) | PSEL Increase Over Netting Basis (TPY) | PSEL Increase Due to Utilizing Existing Baseline Period Capacity (TPY) | PSEL Increase Due to Modification (TPY) | SER (TPY) |
|---|---|---|---|---|---|
| PM | 28 | 0 | 0 | 0 | 25 |
| $PM_{10}$ | 18 | 0 | 0 | 0 | 15 |
| $PM_{2.5}$ | 10 | 0 | 0 | 0 | 10 |
| VOC | 39 | 0 | 0 | 0 | 40 |

Unassigned Emissions and Emission Reduction Credits

24. The facility has unassigned emissions as shown in the table below. Unassigned emissions are equal to the netting basis minus the source's current PTE, minus any banked emission reduction credits. The facility has zero (0) tons of emission reduction credits. The unassigned emissions were reduced to no more than the SER for each pollutant in the previous renewal. In accordance with LRAPA 42-0055(5) the unassigned emissions were established again with this renewal and will be reduced to be no more than the SER at the next renewal.

| Pollutant | Proposed Netting Basis (TPY) | PTE (TPY) | Unassigned Emissions (TPY) | Emission Reduction Credits (TPY) | SER (TPY) |
|---|---|---|---|---|---|
| PM | 81 | 28 | 53 | 0 | 25 |
| $PM_{10}$ | 31 | 18 | 13 | 0 | 15 |
| $PM_{2.5}$ | 17 | 10 | 7 | 0 | 10 |
| VOC | 79 | 27 | 52 | 0 | 40 |

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

25. This source is located in an area that is designated attainment or unclassified for all regulated pollutants. For all pollutants, the proposed PSELs are less than the federal major source threshold for non-listed sources of 250 TPY per regulated pollutant and are not subject to Major NSR.

Federal Hazardous Air Pollutants/Toxic Air Contaminants

26. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and is therefore, not yet required to perform a risk assessment or report annual emissions of toxic air contaminants. LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 toxic air contaminants. The FHAPs and toxic air contaminants listed below are based upon source testing and standard emission factors for the types of emission units at this facility. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially.

27. The table below represents the potential emissions of FHAPs/TACs from SSC assuming operation at full capacity, excluding emergency generator operation. The potential emissions are calculated based on standard emission factors for the types of emission units at this facility.

| CAS Number | Pollutant | PTE (TPY) | FHAP | CAO TAC |
|---|---|---|---|---|
| 7647-01-0 | HCl | 0.2 | Yes | Yes |
| 67-56-1 | Methanol | 0.5 | Yes | Yes |
| 100-41-4 | Ethyl Benzene | 0.02 | Yes | Yes |
| 78-93-3 | Methyl Ethyl Ketone | 0.05 | No | Yes |
| 108-88-3 | Toluene | 0.22 | Yes | Yes |
| 110-54-3 | Hexane | 0.09 | Yes | Yes |
| 1330-20-7 | Xylenes | 0.14 | Yes | Yes |
| | **Total (TPY) =** | 1.2 | | |

*40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

28. RICE NESHAP (40 CFR 63 Subpart ZZZZ) is applicable to this facility and all requirements have been incorporated into the permit. The facility has one (1) 208 brake horsepower diesel-fired fire pond engine (installed 4/7/1994) and two (2) 50 kW diesel-fired emergency generators (installed in 2019) that are subject to the requirements under this subpart. Based upon the definition of Categorically Insignificant Activity in LRAPA title 12, an emergency generator in this emission unit is not allowed to operate for non-emergency situations. Non-emergency situations do not include maintenance and testing.

Toxic Release Inventory

29. The Toxics Release Inventory (TRI) is federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment, over which LRAPA has no regulatory authority. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:

    - Cancer or other chronic human health effects;
    - Significant adverse acute human health effects; or
    - Significant adverse environmental effects.

    There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI Program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA's TRI website.

    In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. This facility has not reported any emissions to the TRI program because they do not manufacture, process, or otherwise use chemicals in excess of the applicable reporting thresholds.

Compliance History

30. This facility is regularly inspected by LRAPA. The following table indicates the inspection history of this facility since 1994:

| Type of Inspection | Date | Results |
|---|---|---|
| LRAPA - Full Compliance Evaluation | 01/12/1994 | In compliance |
| LRAPA - Full Compliance Evaluation | 02/16/1995 | In compliance |
| LRAPA - Full Compliance Evaluation | 01/25/1996 | In compliance |
| LRAPA - Full Compliance Evaluation | 04/22/1997 | In compliance |
| LRAPA - Full Compliance Evaluation | 11/24/1999 | In compliance |
| LRAPA - Full Compliance Evaluation | 01/03/2001 | In compliance |
| LRAPA - Full Compliance Evaluation | 12/17/2001 | In compliance |
| LRAPA - Full Compliance Evaluation | 11/19/2002 | In compliance |
| LRAPA - Full Compliance Evaluation | 02/07/2003 | On schedule: Fugitive emissions |
| LRAPA - Full Compliance Evaluation | 02/05/2004 | In compliance |
| LRAPA - Full Compliance Evaluation | 08/26/2005 | In compliance |
| LRAPA - Full Compliance Evaluation | 07/12/2006 | In compliance |
| LRAPA - Full Compliance Evaluation | 11/28/2007 | In compliance |
| LRAPA - Full Compliance Evaluation | 08/06/2010 | In compliance |
| LRAPA - Full Compliance Evaluation | 11/06/2010 | In compliance |
| LRAPA - Full Compliance Evaluation | 11/21/2013 | In compliance |
| LRAPA - Full Compliance Evaluation | 04/19/2017 | In compliance |
| LRAPA - Full Compliance Evaluation | 01/22/2018 | In compliance |
| LRAPA - Full Compliance Evaluation | 07/15/2019 | On schedule: monitoring and reporting |
| LRAPA - Full Compliance Evaluation | 08/02/2019 | In compliance |

31. LRAPA has issued the following violation notices and/or taken the following enforcement actions against this facility:

    31a. The facility was issued Notice of Non-Compliance (NON) Number 3415 on February 21, 2013 for failure to take reasonable precautions to prevent particulate matter from becoming airborne while processing and handling (grinding) dry material on August 12, 2012. The facility implemented a program to eliminate such occurrences and the file was closed.

Performance Test Results

32. The facility is not required to conduct performance testing at this time as the basis for the facility's emission estimates, industry-specific emission factors, appears to be reasonable. The only source testing done at this facility was done on the hog fueled boilers which were removed in 1994. No source tests are required at this time.

Recordkeeping Requirements

33. The facility is required to keep and maintain a record of the following information for a period of five (5) years:

| Parameter | Units | Minimum Recording Frequency |
|---|---|---|
| (a) Dates of inspection and maintenance of paint booth and cyclones | NA | As performed |

| Parameter | Units | Minimum Recording Frequency |
|---|---|---|
| (b) Sawmill Production Rate | MBF | Daily |
| (c) Planing Mill Production Rate | MBF | Daily |
| (d) Sawmill and Planing Mill hours of operation | Hours | Daily |
| (e) Coating and Solvent Use including stains, etc., on a daily and monthly basis | Gallons | Daily and Monthly |
| (f) VOC and HAP content of coatings and solvents, including stains, etc. (SDS or lab analyses) | % | NA |
| (g) Records required by RICE NESHAP specified in Condition 11.f | NA | Monthly |
| (h) Fugitive emissions survey | Log | Monthly |
| (i) Visible emissions survey | Log | Monthly |
| (j) Upset log of all planned and unplanned excess emissions as required by Condition G15 | NA | Per occurrence |

Reporting Requirements

34. The facility must submit to LRAPA the annual reports by February 15th each year.

Public Notice

35. The draft permit was on public notice from August 4, 2022 to September 7, 2022. No comments were submitted during the 35-day comment period.

MKH/rr
09/07/2022

Emission Detail Sheets:

**Emission Summary**

| Emission Unit (EU) | EU ID | PM (tpy) | PM10 (tpy) | PM2.5 (tpy) | VOC (tpy) | HAPs (tpy) |
|---|---|---|---|---|---|---|
| Sawmill Operations: C-1 (Mill B/Planer Trimmer, Edger + C-27) | EU-1 | 0.2 | 0.2 | 0.1 | -- | -- |
| Sawmill Operations: C-25 (Planer) | EU-1 | 16 | 14 | 8 | -- | -- |
| Sawmill Operations: C-2 (Gang, Canter) | EU-1 | 1.4 | 1.3 | 1.1 | -- | -- |
| Sawmill Operations: C-27 (Package Saw) | EU-1 | 0.05 | 0.05 | 0.03 | -- | -- |
| Truck Bins-Shavings #1 & #2 | EU-2 | 0.45 | 0.21 | 0.03 | -- | -- |
| One Spray Booth including Sap stain, grade stamping, etc | EU-3 | -- | -- | -- | 25.3 | 1.2 |
| Unpaved Roads | EU-4 | 9.9 | 3.1 | 0.3 | | |
| | **TOTAL** | **28** | **18** | **10** | **25** | **1.2** |

Note: Paved Road emissions are now categorically insignificant and have been removed (see previous permit for Paved Roads details)

**Netting Basis and Unassigned Emissions**

| | Baseline Emission Rate (tpy) | Previous Netting Basis (tpy) | Previous PSEL (tpy) | Proposed PSEL (tpy) | Increase over Netting Basis (tpy) | PTE (tpy) | SER (tpy) | Unassigned Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|
| PM | 96 | 81 | 56 | 28 | -53 | 28 | 25 | 53 |
| $PM_{10}$ | 75 | 31 | 16 | 18 | -13 | 18 | 15 | 13 |
| $PM_{2.5}$ | NA | 17 | 9 | 10 | -7 | 10 | 10 | 7.0 |
| CO | 0.0 | NA | NA | 0 | NA | | 100 | 0 |
| NOx | 0.0 | NA | NA | 0 | NA | | 40 | 0 |
| $SO_2$ | 0.0 | NA | NA | 0 | NA | | 40 | 0 |
| VOC | 180 | 79 | 39 | 39 | -40 | 25 | 40 | 54 |

The PM2.5 Netting Basis was set in the previous permit as equal to the PM10 Netting basis multiplied by the PM2.5 to PM10 PSEL fraction at the time (0.562
The unassigned emissions are established with this permit renewal and will be established again and reduced upon the following permit renewal to no more th
SER

**Emission Factor Summary**

| Emission Unit | EU ID | Pollutant | Emission Factor (EF) | EF units | EF Refrerence |
|---|---|---|---|---|---|
| Sawmill Operations: C-1 (Mill B/Planer Trimmer, Edger + C-27) and C-2 (Gang, Canter) | EU-1 | PM | 0.2 | lb/BDT | EQ AQ-EF02 |
| | | PM10 | 0.19 | lb/BDT | DEQ AQ-EF03, 8/1/11 |
| | | PM2.5 | 0.16 | lb/BDT | DEQ AQ-EF03, 8/1/11 |
| Sawmill Operations: C-25 (Planer) and C-27 (Package Saw) | EU-1 | PM | 0.5 | lb/BDT | EQ AQ-EF02 |
| | | PM10 | 0.425 | lb/BDT | DEQ AQ-EF03, 8/1/11 |
| | | PM2.5 | 0.25 | lb/BDT | DEQ AQ-EF03, 8/1/11 |
| Truck Bins-Shavings #1 & #2 | EU-2 | PM | 0.0012 | lb/GT | See Truck Bin Sheet |
| | | PM10 | 0.00057 | lb/GT | See Truck Bin Sheet |
| | | PM2.5 | 0.000086 | lb/GT | See Truck Bin Sheet |
| One Spray Booth including Sap stain, grade stamping, etc: *Sap Stain Inhibitor* - P50/Emulse XT; IC20; and End Treatment | EU-3 | VOC | 2.66 | lb/gallon | P50/Emulse XT, per vendor |
| | | | 6.56 | lb/gallon | IC20, per vendor |
| | | | 1.31 | lb/gallon | End Treatment, per vendor |
| One Spray Booth including Sap stain, grade stamping, etc: *Grade Stamp Ink* | | | 2.97 | lb/MMBF | See Misc. Chem Sheet |
| One Spray Booth including Sap stain, grade stamping, etc: *Misc. chemicals, paints, etc.* | | | 5.75 | lb/MMBF | See Misc. Chem Sheet |
| Unpaved Roads | EU-4 | PM | 28.2 | lb/MMBF | See Unpaved Roads Sheet |
| | | PM10 | 8.8 | lb/MMBF | See Unpaved Roads Sheet |
| | | PM2.5 | 0.88 | lb/MMBF | DEQ AQ-EF08 (PM2.5 = 10% of PM10) |

**PM Emissions**

| Emission Unit | EU ID | Annual Production | Units | EF | Units | Annual Emissions (tpy) |
|---|---|---|---|---|---|---|
| Sawmill Operations: C-1 (Mill B/Planer Trimmer, Edger + C-27 | EU-1 | 1,748 | BDT | 0.2 | lb/BDT | 0.2 |
| Sawmill Operations: C-25 (Planer) | EU-1 | 64,000 | BDT | 0.5 | lb/BDT | 16.0 |
| Sawmill Operations: C-2 (Gang, Canter) | EU-1 | 13,593 | BDT | 0.2 | lb/BDT | 1.4 |
| Sawmill Operations: C-27 (Package Saw) | EU-1 | 213 | BDT | 0.5 | lb/BDT | 0.1 |
| Truck Bins-Shavings #1 & #2 | EU-2 | 743,850 | GT | 0.001198 | lb/GT | 0.45 |
| Unpaved Roads | EU-4 | 700 | MMBF | 28.17857 | lb/MMBF | 9.862501 |
| | | | | | **TOTAL =** | **27.9 tpy** |

Notes:
Truck Bin throughput units are in green tons (GT) with a moisture content of 50%
Paved road emissions are now categorically insignificant and have been removed since the facility is now included in the Cottage Grove

**PM10 Emissions**

| Emission Unit | EU ID | Annual Production | Units | EF | Units | Annual Emissions (tpy) |
|---|---|---|---|---|---|---|
| Sawmill Operations: C-1 (Mill B/Planer Trimmer, Edger + C-27) | EU-1 | 1,748 | BDT | 0.19 | lb/BDT | 0.2 |
| Sawmill Operations: C-25 (Planer) | EU-1 | 64,000 | BDT | 0.425 | lb/BDT | 13.6 |
| Sawmill Operations: C-2 (Gang, Canter) | EU-1 | 13,593 | BDT | 0.19 | lb/BDT | 1.3 |
| Sawmill Operations: C-27 (Package Saw) | EU-1 | 213 | BDT | 0.425 | lb/BDT | 0.05 |
| Truck Bins-Shavings #1 & #2 | EU-2 | 743,850 | GT | 0.000567 | lb/GT | 0.2 |
| Unpaved Roads | EU-4 | 700 | MMBF | 8.754785 | lb/MMBF | 3.1 |
| | | | | | **TOTAL =** | **18.4 tpy** |

Notes:
Truck Bin throughput units are in green tons (GT) with a moisture content of 50%; calculated as GT x BDT x (1 + moisture decimal)
Paved road emissions are now categorically insignificant and have been removed since the facility is now included in the Cottage Grove UGB

**PM2.5 Emissions**

| Emission Unit | EU ID | Annual Production | Units | EF | Units | Annual Emissions (tpy) |
|---|---|---|---|---|---|---|
| Sawmill Operations: C-1 (Mill B/Planer Trimmer, Edger + C-27) | EU-1 | 1,748 | BDT | 0.16 | lb/BDT | 0.1 |
| Sawmill Operations: C-25 (Planer) | EU-1 | 64,000 | BDT | 0.25 | lb/BDT | 8.0 |
| Sawmill Operations: C-2 (Gang, Canter) | EU-1 | 13,593 | BDT | 0.16 | lb/BDT | 1.1 |
| Sawmill Operations: C-27 (Package Saw) | EU-1 | 213 | BDT | 0.25 | lb/BDT | 0.03 |
| Truck Bins-Shavings #1 & #2 | EU-2 | 743,850 | GT | 0.000086 | lb/GT | 0.03 |
| Unpaved Roads | EU-4 | 700 | MMBF | 0.9 | lb/MMBF | 0.3 |
| | | | | | **TOTAL =** | **9.6 tpy** |

Notes:
Truck Bin throughput units are in green tons (GT) with a moisture content of 50%; calculated as GT x BDT x (1 + moisture decimal)
Paved road emissions are now categorically insignificant and have been removed since the facility is now included in the Cottage Grove UGB

**VOC Emissions**

| Emission Unit/Activity | EU ID | Annual Production | Units | EF | Units | Annual Emissions (tpy) |
|---|---|---|---|---|---|---|
| Sap Stain Inhibitor (One Spray Booth) | EU-3 | 35,000 | gallons | 1.3125 | lb/gal | 23.0 |
| Grade Stamp Ink | EU-3 | 700 | MMBF | 2.97 | lb/MMBF | 0.4 |
| Miscellaneous Chemical Usage (see Misc Chem worksheet) | EU-3 | 700 | MMBF | 5.75 | lb/MMBF | 2.0 |
| | | | | | **TOTAL =** | **25.3** |

**New Cyclone C-2: Emission Factors and Emissions**

Gang Saw Canter residuals will be handled by a new high efficiency cyclone C-2. Residuals are handled mechanically and pneumaitically. The residual handling rate is based on the proposed 700 MBF/year of facility production. PM/PM10/PM2.5 emission calculations for Cyclone C-2 are for a high efficiency cyclone as shown below.

**Emission Factors (EFs): High Efficiency Cyclones**

| Pollutant | EF (lb/BDT) | Ref. |
|---|---|---|
| PM | 0.2 | DEQ AQ-EF02 |
| PM10 | 0.19 | DEQ AQ-EF03, 8/1/11 |
| PM2.5 | 0.16 | DEQ AQ-EF03, 8/1/11 |

**Annual Project Emissions from New Cyclone C-2:**

| Cyclone | Annual Production | Units | PM EF | Units | Emissions (tpy) |
|---|---|---|---|---|---|
| C-2 | 13,593 | BDT | 0.2 | lb/BDT | 1.4 |

| Cyclone | Annual Production | Units | PM10 EF | Units | Emissions (tpy) |
|---|---|---|---|---|---|
| C-2 | 13,593 | BDT | 0.19 | lb/BDT | 1.3 |

| Cyclone | Annual Production | Units | PM2.5 EF | Units | Emissions (tpy) |
|---|---|---|---|---|---|
| C-2 | 13,593 | BDT | 0.16 | lb/BDT | 1.1 |

**Miscellaneous Chemical VOC Emissions**

| Emission Unit/Activity | EU ID | Annual Production | Units | EF | Units | Reference | Annual Emissions (tpy) |
|---|---|---|---|---|---|---|---|
| Miscellaneous Chemical Usage - ***Paint*** | EU-3 | 3500 | cans | 0.75 | lb/can | SDS | 1.31 |
| Miscellaneous Chemical Usage - ***Maintenance Chemicals*** | EU-3 | 1400 | lbs | 100% | -- | Engineering Estimate | 0.7 |
| | | | | | | **TOTAL =** | **2.0** |

**Production Based Emission Factor: TOTAL VOC (lbs) divided by 700 MMBF = 5.75 lbs/MMBF**

Miscellanous Chemical Usage - ***Grade Stamp Ink*** EU-3

| Products | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 5 yr AVE | Conversion to L |
|---|---|---|---|---|---|---|---|---|
| IC-234BK Reg. Printing Ink - each | 168 | 162 | 336 | 90 | 98 | 82 | 156 | 128.7 |
| MC-234BK Regular Make up - each | 870 | 780 | 876 | 222 | 384 | 366 | 583 | 480.975 |
| WL-200 Ink Wash- each | 49 | 83 | 108 | 45 | 99 | 51 | 72.5 | 72.5 |
| | | 0 | 0 | 0 | 0 | | | |
| | | 0 | 0 | 0 | 0 | | | |
| | | 0 | 0 | 0 | 0 | | | |
| | | 0 | 0 | 0 | 0 | | | |
| | | 0 | 0 | 0 | 0 | | | |
| IR-234BK Reg Ink Reservoir | 38 | 26 | 22 | 3 | 9 | 7 | 17.5 | |
| | lb | lb | lb | lb | lb | | | |
| IC-234BK Reg. Printing Ink - each ( | 259.6 | 250.3 | 519.1 | 139 | 151.4 | 126.7 | | |
| MC-234BK Regular Make up - each | 1265.1 | 1134.2 | 1273.8 | 322.8 | 558.4 | 565.5 | | |
| Total of ink and makeup, lb | 1524.6 | 1384.5 | 1792.9 | 461.9 | 709.8 | 692.2 | | |
| Lumber production, MMBF | 414.375 | 294.92 | 371.868 | 393.455 | 403.274 | 409.895 | | |
| lb Ink/MMBF | 3.68 | 4.69 | 4.82 | 1.17 | 1.76 | 1.69 | | **2.97 lb/MMBF** |

Sizes purchased:

| | |
|---|---|
| IC-234 BK Printing Ink | 0.825 L |
| MC-234 BK Makeup | 0.825 L |
| WL-200 Ink Wash | 1 L |

Production:

| | Sawmill | Finish Dept |
|---|---|---|
| 2016 | 414561 | 414375 |
| 2017 | 295859 | 294920 |
| 2018 | 379193 | 371868 |
| 2019 | 393534 | 393455 |
| 2020 | 398307 | 403274 |
| 2021 | 415483 | 409895 |

**Sap Stain VOC Content**

NOVATECH

July 19, 2022

Yvonne,

Per your request, please find the following information below.

VOC content for our products:

2.66 lbs/gal for Novastat P50/Emulse XT

6.56 lbs/gal for Novastat IC20

0.65 lbs/gal for End Treatment

Novatech VOC data reported on SDSs are based on laboratory determinations performed in accordance with ASTM D2369 and corrected for known exempt compound content (including water and ammonia if present).

This approach is consistent with California EPA Air Resource Board Method 310 Section 4.2 (calculation for non-aerosol products).

Exception: Defoamers C and D values are determined by Dow Chemical.

Steve Nielsen
NW US Sales Manager
503-679-5359

**FHAP/TAC Emissions**

| Emission Unit | EU ID | Annual Production | Units | HAP | EF | Units | Reference | Annual Emissions (tpy) | |
|---|---|---|---|---|---|---|---|---|---|
| Sap Stain Inhibitor (One Spray Booth) | EU-3 | 700 | MMBF | HCl | 0.56 | lb/MMBF | Facility Est. | 0.196 | |
| **Paint (Misc. Chemical Usage)** | EU-3 | 3500 | cans | Methanol | 38.0% | -- | SDS | 0.50 | |
| | | | | Ethyl Benzene | 1.8% | -- | SDS | 0.02 | |
| | | | | Methyl Ethyl Ketone | 3.5% | -- | SDS | 0.05 | TAC not HAP |
| | | | | Toluene | 17.0% | -- | SDS | 0.22 | |
| | | | | Hexane | 6.5% | -- | SDS | 0.09 | |
| | | | | Xylene | 10.3% | -- | SDS | 0.14 | |
| **TOTAL HAP Emissions =** | | | | | | | | 1.21 | |

Notes:

1. The sapstain system applied at the sawmill is a blend of chemicals. The only HAP-containing component is HCl in the "Ferrobrite AQ". The estimated EF is 0.56 lbs/MMBF.
2. Grade stamp ink contains MEK, which is no longer a regulatory HAP.
3. HAPs in paint is estimated from SDS data (average content in a sample of different products.) Each can contains about 0.75 lbs.

**Residuals Handling**

| Emission Unit | Material Handled | Material Generated | % Through cyclone | Volume Through Cyclone (BDT/yr) | Comments |
|---|---|---|---|---|---|
| Sawmill Operations: C-1 (Mill B/Planer Trimmer, Edger + C-27) | Sawdust | 4,263 | 41% | 1,748 | Facility engineering estimate of material flows |
| Sawmill Operations: C-25 (Planer) | Shavings | 64,000 | 100% | 64,000 | Facility engineering estimate of material flows |
| Sawmill Operations: C-2 (Gang, Canter) | Sawdust | 56,637 | 24% | 13,593 | Facility engineering estimate of material flows |
| Sawmill Operations: C-27 (Package Saw) | Sawdust | 213 | 100% | 213 | Facility engineering estimate of material flows |

**Total Sawdust Production = 60,900 BDT/yr**

| Sawdust Source | Percent Handled | Material Volume Handled | Units |
|---|---|---|---|
| Mill B Trimmer | 0.90% | 548 | BDT/yr |
| Planer Trimmer | 0.75% | 457 | BDT/yr |
| Package Saw | 0.35% | 213 | BDT/yr |
| Cantertwin | 40.00% | 24360 | BDT/yr |
| Mill B Gang | 53.00% | 32277 | BDT/yr |
| Mill B Edger | 5.00% | 3045 | BDT/yr |
| Total | 100% | 60900 | BDT/yr |

Notes: Estimated total sawdust production @ 700 MMBF/year is 60,900 BDT. Sawdust generating sources are listed below. Most sawdust is handled mechanically, however percentages handled by cyclones are listed above. The sawdust from the Package saw is double handled (through C-27 and also through C-21).

**Residual Trucks**
**ROAD DUST - Unpaved**
**PM/PM10 Emissions Analysis**

| | | |
|---|---|---|
| Unloaded trips per day: | 46 | Based on 0.0652 trips per MMBF, as scaled from 2006 data |
| Loaded trips per day: | 46 | |
| Days per year of operation: | 350 | |
| Mean haul distance unloaded (mi): | 0.2 | |
| Mean haul distance loaded (mi): | 0.2 | |
| Average weight unloaded (tons), W: | 15 | Engineering estimate |
| Average weight loaded (tons), W: | 45 | Engineering estimate |
| S, silt content (%) | 8.4 | AP 42 Table 12.2.2-1 |
| Number of days/year with rainfall > 0.01inch | 150 | AP 42 |
| Road cleaning/watering efficiency (%): | 50% | Sweeping/watering |

AP-42 Parameters (12/03 version) E, lb/VMT = C + k(s/12)^a(W/3)^b

| | | PM | PM10 |
|---|---|---|---|
| C | | 0.00047 | 0.00047 |
| k | | 4.9 | 1.5 |
| a | | 0.7 | 0.9 |
| b | | 0.45 | 0.45 |
| s | Silt content, % | | |
| W | Vehicle Weight, tons | | |

| | | PM | PM10 |
|---|---|---|---|
| Unloaded, lbs/VMT (uncorrected) | | 7.8764 | 2.7779 |
| Loaded, lbs/VMT (uncorrected) | | 12.9128 | 3.6811 |
| Uncorrented Annual Tons | Unloaded | 12.681 | 4.4724 |
| | Loaded | 20.790 | 5.92655 |
| | | **PM** | **PM10** |
| Corrected* Annual Emissions, tpy | | **9.9** tpy | **3.1** tpy |
| (*account for rainfall and watering control) | | | |
| Emission Factor, lbs/MMBF | | 28.2 lb/MMBF | 8.8 lb/MMBF |
| tons/month | | 0.8 | 0.3 |

**Truck Bins**

**PM, PM10, and PM2.5 Emission Factors (EFs)**

**AP-42 13.2.4 Equation 1 (11/06)** **E, lb/ton = k*(0.0032)*[(U/5)^a/(M/2)^b]**

| | PM | | PM10 | | PM2.5 |
|---|---|---|---|---|---|
| k | 0.74 | | 0.35 | | 0.053 |
| U (mph) | 7.6 | | 7.6 | | 7.6 |
| a | 1.3 | | 1.3 | | 1.3 |
| M (%) | 4.80 | | 4.8 | | 4.8 |
| b | 1.4 | | 1.4 | | 1.4 |
| Truck dump emission factor (lb/green ton) = | **0.0012** | | **0.000567** | | **0.000086** |

Notes:

Wind Speed (U): Historical average wind speed at Eugene airport

Re-examined by LRAPA on 6/10/22 and verified the average wind speed is approximately 7/6 m

Moisture content typically 50%. However, EPA emprically derived drop equation only had moisture contents up to 4.8%.

There are a total of eight (8) truck bins: 2 planer shavings, 2 chips, 2 sawdust and 2 bark

**1978 Baseline Emission Rates - Summary**

Page 1 of 1

Baseline Emissions Summary

Permit Number: 208853

Facility Name/Site Identifier: Weyerhaeuser Company--Cottage Grove Mill

Summary of 1978 Emissions

| Device/process | PM (tons/yr) | | PM10 (tons/yr) | | VOC (tons/yr) |
|---|---|---|---|---|---|
| Sawmill | 35.2 | | 35.2 | | 64.6 |
| Kilns | 2.9 | | 2.9 | | 3.8 |
| Lam Plant | 1.2 | | .6 | | 4.6 |
| Veneer Dryer | 23.6 | | 23.6 | | 67.5 |
| Plywood Plant | 10.8 | | 8.0 | | 39.4 |
| Roads-U | 14.3 | | 3.1 | | .0 |
| Roads-P | 8.5 | | 1.7 | | .0 |
| TOTALS | **96.4** | | **75.1** | | **180** |

From 2011 Review Report Detail Sheets

**1978 Baseline Emission Rates - Throughputs**

Weyerhaeuser Company--Cottage Grove Mill
Permit Number: 208853
Baseline Throughput Summary

| | | | |
|---|---|---|---|
| Sawmill | 163,169 | MBF (finished) | 1978 production data |
| | 4,000 | hours | 1978 production data |
| | 203 | MCCF | 1978 production data |
| Kilns | 163,169 | MBF | 1978 production data |
| | 4,000 | hours | 1978 production data |
| Lam Plant | 32,825 | MBF | 1978 production data |
| | 4,160 | hours | 1978 production data |
| | 139 | MMCF | 1978 production data |
| Plywood | 75,025 | MSF (3/8" basis) | 1978 production data |
| | 80 | MCCF | 1978 production data |
| | 4,455 | BDT wood residual | Based on waste rate of 10% |

From 2011 Review Report Detail Sheets

**1978 Baseline Emission Rates -Emission Factors**

Weyerhaeuser Company--Cottage Grove Mill
Permit Number: 208853
Baseline Emission Factor Summary

| | | | |
|---|---|---|---|
| Sawmill | | PM | 17.6 lb/hr |
| | | PM10 | 17.6 lb/hr |
| | | VOC | 32.3 lb/hr |
| Kilns | | PM/PM10 | 0.035 lb/MBF |
| | | VOC | 0.047 lb/MBF |
| Lam Plant | | PM | 0.072 lb/MBF |
| | | PM10 | 0.036 lb/MBF |
| | | VOC | 0.282 lb/MBF |
| Veneer Dryer | | PM | 0.63 lb/MSF(3/8" basis) |
| | | PM10 | 0.63 lb/MSF(3/8" basis) |
| | | VOC | 1.8 lb/MSF(3/8" basis) |
| Plywood Plant | Presses | PM | 0.2 lb/MSF(3/8" basis) |
| | Presses | PM10 | 0.17 lb/MSF(3/8" basis) |
| | Cyclones | PM | 1.5 lb/BDT |
| | Cyclones | PM10 | 0.75 lb/BDT |
| | Presses | VOC | 0.869 lb/MSF(3/8" basis) |
| | Sanding | VOC | 0.18 lb/MSF(3/8" basis) |
| Roads-U | | PM | 67.6 lb/MCCF |
| | | PM10 | 14.6 lb/MCCF |
| Roads-P | | PM | 40.1 lb/MCCF |
| | | PM10 | 7.8 lb/MCCF |

From 2011 Review Report Detail Sheets