United States Environmental Protection Agency
Region 10, Air & Radiation Division
1200 Sixth Avenue, Suite 155, 15-H13
Seattle, Washington 98101

Tribal Minor New Source Review Permit
Pursuant to Clean Air Act Title I and 40 CFR 49.158

Permit Number: **R10TNSR03000**

Source ID: **16-061-00002**

Issue Date: **July 1, 2022**

Effective Date: **July 31, 2022**

Permittee: **Empire Lumber Company**

Empire Lumber Company dba Kamiah Mills

This Permittee shall comply with all conditions of this permit for operations at the following location:

Railroad Street and Highway 12
Kamiah, Idaho 83536
Latitude: 46.2265, Longitude: -116.0184
Nez Perce Reservation

Pursuant to the provisions of Clean Air Act (CAA) sections 110(a) and 301(d) and the Code of Federal Regulations (CFR) Title 40, sections 49.158, the U.S. Environmental Protection Agency Region 10 (EPA) is issuing synthetic minor permit. This permit places enforceable restrictions on the potential to emit of the source's existing operations so that the provisions and requirements for major sources under the National Emission Standards for Hazardous Air Pollutants (NESHAP) and Title V programs in 40 CFR Parts 63 and 71 do not apply. This action establishes a synthetic minor source by limiting emissions of volatile organic compounds (VOC) and the hazardous air pollutant (HAP) methanol.

The Permittee must comply with all conditions of this permit, including emission limitations that apply to the affected emissions units at the source. Noncompliance with any permit term or condition is a violation of the permit and may constitute a violation of the CAA and is grounds for enforcement action and for a permit termination or revocation. This permit does not release the Permittee from any liability for compliance with other applicable federal and tribal environmental laws and regulations, including the CAA.

Pursuant to 40 CFR 49.159(a), this permit will become effective on the date specified above unless review is requested on the permit pursuant to 40 CFR 49.159(d).

Digitally signed by DAVIS ZHEN
Date: 2022.07.01 11:45:17 -07'00'

Davis Zhen, Deputy Director
Air and Radiation Division
U.S. EPA, Region 10

07/01/2022
Date

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Abbreviations, Acronyms and Symbols

%	percent
°F	degrees Fahrenheit
CAA	Clean Air Act [42 U.S.C. § 7401, *et seq*.]
CBI	Confidential Business Information
CDX	Central Data Exchange
CEDRI	Compliance and Emission Data Reporting Interface
CFR	Code of Federal Regulations
EF	Emission Factor
EPA	U. S. Environmental Protection Agency, Region 10
ESLP	Lumber product consisting of the following wood species: Engelmann Spruce and Lodgepole Pine
EU	Emission Unit
Facility	Empire Lumber Company dba Kamiah Mills located at Railroad Street and Highway 12 in Kamiah, Idaho
FHISOR	Fuel Heat Input to Steam Output Ratio
FL	Lumber product consisting of the following wood species: Douglas Fir and Western Larch
ft3	cubic foot
GWR	Green wood residue
HAP	Hazardous Air Pollutant
hr	hour
ID	Identification
IHFIR	Lumber product consisting of the following wood species: Western Hemlock and Western True Firs
lb	pound
lb/hr	pounds per hour
lb/odt	pounds per oven dry ton
mbf	one thousand board feet
mlb	one thousand pounds
mmBtu	one million British Thermal Units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NSR	New Source Review
O2	Oxygen
O&M	Operation and Maintenance
Operator	Empire Lumber Company dba Kamiah Mills
OTM	Other Test Method (see https://www.epa.gov/emc/emc-other-test-methods)
PC	personal computer
Permittee	Empire Lumber Company dba Kamiah Mills
PM	Particulate Matter
psi	pounds per square inch
Source	Empire Lumber Company dba Kamiah Mills
VOC	Volatile Organic Compounds
WRC&PMCS	Wood Residue Capture and Pneumatic Material Conveyance Systems

Part 49 Permit Issuance History

Date of Issuance	Permit Number	Description of Permit Action
07/01/2022	R10TNSR03000	Initial permit issued

Source/Project Description

The Empire Lumber Company d.b.a. Kamiah Mills (Permittee) facility is a planer mill that produces kiln-dried dimensional lumber from rough green lumber. Without restrictions on its potential to emit, the facility is an existing major source subject to the CAA Title V operating permit program because its unrestricted potential VOC and methanol (a HAP) emissions are greater than major source thresholds.

This permit limits VOC and methanol emissions generated by the activities at the facility listed in Table 1 to less than major source thresholds. Control technologies identified in Table 1 are required by this permit pursuant to Condition 37. The table does not list control technologies associated with reducing pollutant emissions other than HAP and VOC.

Table 1: Source Information and Emission Units

Emission Unit (EU) ID	Unit Description	Manufacturer & Construction Date	Capacity	Control Technology & Pollutant Reduced	Fuel Type
EU-01	*Biomass Gasifier and Boiler*. Steam generating unit consisting of a biomass gasifier and a scotch marine fire-tube boiler. The gasifier produces gas from biomass, and the boiler combusts the produced gas. A pipe conveys the gas from the gasifier to the boiler where it is introduced through a burner. Boiler exhaust is routed to a multiclone and exhausted to the atmosphere via an induced draft fan.[1]	Converta Kiln, Inc. biomass gasifier and Superior Boiler Works, Inc. Mohawk Scotch Marine fire-tube boiler. Installed November 1999.	25 mmBtu/hr heat input capacity steam. Maximum steam production of 18,061 lb/hr generating 100 psi, with fluctuations up to 110 psi, saturated steam.	PM including trace metal HAP: Multiclone manufactured by Boiler & Steam Systems, LLC. Model: MC-60-UP 46-7-7-4.0. Installed June 6, 2006.	Biomass
EU-02	*Lumber Drying Kilns.* Five 84-foot double-track indirectly heated lumber drying kilns.	Wellons kilns P14, P15 and P16 were installed circa Fall 2005 to Spring 2006. Wellons kilns P31 and P32 began operating April 23, 2012.	120,000 mbf kiln-dried lumber per year	None	N/A

[1] The gas produced by the gasifier may be diverted away from the boiler and released directly to atmosphere via a pressure relief stack as necessary to maintain safe operation. In the permit and the permit analysis, use of the term "boiler" refers to the boiler section of this emission unit. Use of the term "gasifier" refers to the gasifier section of this emission unit. Use of the term "EU-01" refers to the single emission unit consisting of both the gasifier and boiler.

Emission Unit (EU) ID	Unit Description	Manufacturer & Construction Date	Capacity	Control Technology & Pollutant Reduced	Fuel Type
EU-03	*Wood Residue Capture and Pneumatic Material Conveyance Systems.* Wood residue is captured and pneumatically conveyed to storage structures.	N/A	N/A	None	N/A

The descriptions of the source and its VOC and HAP-emitting activities provided above are for informational purposes only.

Section 1: General Provisions Requirements

1. Definitions
   The terms used herein shall have the meaning as defined in 40 CFR 49.152, unless otherwise defined in this permit. If a term is not defined, it shall be interpreted in accordance with normal business use.

2. Location and Equipment
   Unless otherwise specified, the terms and conditions of this permit apply to the emission units and control devices identified in Table 1.

3. Inspection and Entry
   Upon presentation of proper credentials, the Permittee must allow the EPA Regional Administrator, and/or an authorized representative, to:
   3.1 Enter upon the premises where the source is located or emissions-related activity is conducted or where records are required to be kept under the conditions of this permit;
   3.2 Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   3.3 Inspect, during normal business hours or while the source is in operation, any facilities, equipment (including monitoring and air pollution control equipment), practices or operations regulated or required under the permit;
   3.4 Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
   3.5 Record any inspection by use of written, electronic, magnetic and photographic media.

4. Severability
   The provisions of this permit are severable. If any portion of this permit is held to be invalid, the remaining terms and conditions of the permit shall remain valid and in force.

5. Compliance
   The Permittee must comply with all conditions of this permit. Noncompliance with any permit term or condition is a violation of the permit and may constitute a violation of the CAA and is grounds for an enforcement action and for the EPA to terminate or revoke the permit. The Permittee shall operate the equipment described in Table 1 in compliance with this permit, the application on which this permit is based, and all other applicable federal and tribal air quality regulations.

6. Unavailable Defense
   In an enforcement action it shall not be a defense for the Permittee that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

7. Property Rights
   This permit does not convey property rights of any sort, or any exclusive privilege.

8. Credible Evidence
   For the purpose of establishing whether the Permittee violated or is in violation of any requirement of this permit, nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the Permittee had performed the appropriate performance or compliance test procedure.

9. Liability
   This permit does not relieve the Permittee of the responsibility to comply fully with applicable provisions of any EPA-approved implementation plan, federal implementation plan or tribal implementation plan and any other requirements under applicable law.

10. Information Requests
    The Permittee shall furnish to the EPA, within a reasonable time, any information that the EPA may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit as specified, or to determine compliance with the permit. For any such information claimed to be confidential, the Permittee must submit a claim of confidentiality in accordance with 40 CFR Part 2, subpart B.

11. Revising, Reopening, Revoking and Reissuing, or Terminating for Cause
    The permit may be revised, reopened, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and re-issuance, or termination, or of a notification of planned changes or anticipated noncompliance, does not stay any condition of this permit.
    11.1 Cause includes:
        11.1.1 The Permittee is not in compliance with the provisions of this permit;
        11.1.2 The Permittee failed to disclose a material fact required by the regulations applicable to the permitted source of which the Permittee had or should have had knowledge at the time the Permittee submitted the application;
        11.1.3 The permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
        11.1.4 The permit must be revised or revoked to assure compliance with applicable requirements.
    11.2 Except for those permit revisions and reopenings that do not increase the emissions limitations in the permit, such as permit reopenings that correct typographical, calculation and other errors, all other permit revisions and reopenings shall be carried out after the opportunity of public

notice and comment and in accordance with one or more of the public participation requirements under 40 CFR 49.157(b)(1)(ii).

12. Changes in Ownership or Operator
In the event of any changes in control or ownership of the source, this permit shall be binding on all subsequent owners and operators. The Permittee shall notify the succeeding owner or operator of the existence of this permit and its conditions by letter, a copy of which shall be forwarded to the EPA at the address shown. The Permittee shall ensure that the permitted source remains in compliance with the permit until any such transfer of ownership or operator is effective. The Permittee shall ensure the new owner or operator is provided all records required by this permit prior to the transfer of ownership or operator. The EPA may change the Permittee name and contact information to reflect the new owner or operator in accordance with the administrative amendment provisions in 40 CFR 49.159(f).

Section 2: Source Wide Emission Limitations and Standards

13. Source Operation
At all times, including periods of startup, shutdown and malfunction, the Permittee shall, to the extent practicable, maintain and operate the equipment that is subject to this permit in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be on information available to the EPA, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

14. Source Wide 12-Month Rolling Methanol Emission Limit
Methanol emissions from the facility shall not exceed 9 tons per year as determined on a rolling 12-month basis by calculating the emissions (tons) for each month and adding the emissions (tons) for the previous eleven months. For the months preceding and including the month in which the permit becomes effective, monthly methanol emissions (tons) shall be determined consistent with how they were determined to comply with Condition 3.41 of Permit No. R10T5070101. Beginning the month after the month this permit becomes effective, monthly methanol emissions (tons) shall be determined in accordance with Conditions 39, 40, 49, and 52.

15. Source Wide 12-Month Rolling VOC Emission Limit
VOC emissions from the facility shall not exceed 99 tons per year as determined on a rolling 12-month basis by calculating the emissions (tons) for each month and adding the emissions (tons) for the previous eleven months. For the months preceding and including the month in which the permit becomes effective, monthly VOC emissions (tons) shall be determined consistent with how they were determined to comply with Condition 3.41 of Permit No. R10T5070101. Beginning the month after the month this permit becomes effective, monthly VOC emissions (tons) shall be determined in accordance with Conditions 39, 40, 49, and 52.

Section 2.1: Source Wide Monitoring and Testing Requirements

16. Performance Tests Protocols
    If performance testing is required, the Permittee shall submit a performance test protocol for all performance tests to the EPA no later than 30 days prior to the test to allow review of the test plan and to arrange for an observer to be present at the test. The performance test shall be conducted in accordance with the submitted protocol and any changes required by the EPA.

17. Performance Tests
    17.1 If the Permittee is required to conduct a performance test, the performance test shall be conducted according to a test protocol as follows:
    17.2 While the permitted source is operating within 10% of maximum operating rate, unless EPA determines in writing that other operating conditions are representative of normal operations or unless specified in the emission unit sections of this permit;
    17.3 Using test methods from 40 CFR Part 60, appendix A unless alternative methods are approved by the EPA in writing in advance of the test.
    17.4 Calculating an emission factor by averaging the results of at least three test runs of at least one-hour duration each.

18. Unless otherwise required in this permit, the Permittee shall ensure that the monitoring equipment required in Sections 3, 4 and 5 of the permit meets the following performance, operational and maintenance criteria:
    18.1 Measurement locations that provide for obtaining data that are representative of the emissions or parameters being monitored;
    18.2 Quality assurance and control practices, considering manufacturer recommendations, that are adequate to ensure the continuing validity of the data;
    18.3 Maintaining necessary parts for routine repairs of the monitoring equipment; and
    18.4 Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), continuous operation of the monitoring equipment (or collecting data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this permit, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

19. The Permittee shall develop and implement a monitoring plan demonstrating that each monitoring system required in Sections 3, 4, and 5 of the permit complies with Condition 18. All elements of the plan shall be implemented no later than the sixth calendar month after the month in which the permit becomes effective. The monitoring plan shall be updated as necessary and shall address design, data collection and quality assurance and quality control elements of each monitoring system consistent with manufacturer's specifications and recommendations including, but not limited to the following:
    19.1 Equipment make, model, date of manufacture, date of installation and description of technology used to perform measurement;

19.2 Description of the measurement location and data displays of the monitoring system including, as necessary, photographs and diagrams;
19.3 General explanation of how the monitoring system performs measurements/calculations and subsequently displays and records the results;
19.4 Performance and equipment specifications for the measurement device (e.g., expected accuracy and precision ranges) and the data collection and reduction systems;
19.5 Performance evaluation procedures, frequency and acceptance criteria (e.g., calibration techniques, accuracy audits, analytical drift); and
19.6 Ongoing operation and maintenance procedures, including inventory of spare parts.

Section 2.2: Source Wide Recordkeeping Requirements

20. Record Retention
The Permittee shall maintain all records required by this permit for at least 5 years from the date of origin, unless otherwise stated. The Permittee shall maintain the application and all materials supporting the application for the duration of time the affected emission units are covered by this permit. All records shall be maintained onsite or be accessible electronically onsite.

21. Records of Monitoring and Testing
The Permittee shall maintain records of all required monitoring data and support information for any monitoring sample, measurement, report or application, including records of all performance testing pursuant to Conditions 20. Support information would include, for example, all calibration and maintenance records, and all original strip-chart records or digital records for continuous monitoring instrumentation. Records shall include the following information, as applicable:
21.1 The location, date and time of sampling, performance test, or measurements;
21.2 The date(s) analyses were performed;
21.3 The test plan or monitoring protocol followed;
21.4 Any documentation required to approve an alternate test method;
21.5 The company or entity that performed the analyses;
21.6 The analytical techniques or methods used;
21.7 The results of such analyses; and
21.8 The operating conditions existing at the time of sampling or measurement, including the generator power rating.

22. Records of Malfunction, Maintenance, and Repair
The Permittee shall maintain records of malfunctions, maintenance, and repairs for all emission units and control equipment. The records shall include the following information, as applicable:
22.1 Identification of the components malfunctioning, inspected, or repaired;
22.2 The date of the malfunction (including duration), inspection, or repair;
22.3 For scheduled maintenance, the elapsed time, hours of operation, or other applicable measure since the activity was last performed and when the activity should next be performed;
22.4 The results of each inspection or repair;
22.5 The amount of start-ups and shut-downs, and the duration of these events;
22.6 Any corrective actions taken as a result of a malfunction or inspection; and
22.7 The results of any corrective actions taken.

23. Records of Reports and Notifications
The Permittee shall maintain records of all reports and notifications.

24. By the final day of each month, the Permittee shall calculate and record facility-wide 12-month rolling emissions of VOC and methanol by using the emissions calculated for the previous 12 months pursuant to Conditions 14 and 15.

Section 2.3: Source Wide Notification and Reporting Requirements

25. Notification of Change in Ownership or Operator
If the source changes ownership or operator, then the new owner or operator must submit a written or electronic notice to the EPA within 90 days after the change in ownership or operator is effective. In the notice, the new owner or operator must provide a written agreement containing a specific date for transfer of ownership or operator, and an effective date on which the new owner or operator assumes partial and/or full coverage and liability under this permit. The submittal must identify the previous owner and operator, and update the name, street address, mailing address, contact information, and any other information about the source, if such information would change as a result of the change of ownership or operator.

26. Notification of Closure
The Permittee must submit a report of any permanent or indefinite closure to the EPA in writing within 90 days after the cessation of all operations at the permitted source. It is not necessary to submit a report of closure for regular, seasonal closures.

27. Annual Reports
The Permittee shall submit an annual report on or before March 15 of each year to the EPA. The annual report shall cover the period from January 1 to December 31 of the previous year and shall include:
27.1 An evaluation of the permitted source's compliance status with the requirements in Sections 2, 3, 4 and 5;
27.2 Summaries of the required monitoring, testing, and recordkeeping in Sections 2, 3, 4, and 5;
27.3 Summaries of deviation reports submitted pursuant to Condition 28;
27.4 The twelve monthly rolling 12-month emissions calculations, calculated and recorded pursuant to Condition 24, for the previous calendar year. The report shall contain a description of all emissions estimating methods used, including EF and their sources, assumptions made and production data;
27.5 The mass (tons) of each of the following fuels fed to the gasifier: (a) wet non-resinated wood residue, (b) bark, and (c) kiln-dried non-resinated wood residue, and the basis for the estimation;
27.6 For each charge of lumber in kilns EU-02 in which the kiln-wide average lumber moisture content was less than 13%, dry basis, report the following: (a) identity of the kiln, (b) lumber product and volume, and (c) kiln-wide average moisture content and date of measure;
27.7 For each instance boiler EU-01 exhaust gas O2 content or multiclone pressure drop is outside the recommended range in the plan required in Condition 38, report the following: (a) pressure drop across multiclone and (b) O2 concentration; and

27.8 For each instance gas produced by the gasifier is diverted to the pressure relief stack serving boiler EU-01, report the reasons for the occurrence and the corrective actions, if any, performed to bring the episode to a conclusion.

28. Deviation Reports
The Permittee shall promptly report to the EPA any deviations (as the term is defined in the following paragraph) from permit requirements including deviations attributable to upset conditions. For the purposes of this permit, "promptly" shall be defined to mean to notify the EPA within 15 days of any deviation. Deviation reports shall include:
28.1 The identity of the affected emission unit where the deviation occurred;
28.2 The nature of the deviation;
28.3 The length of time of the deviation;
28.4 The probable cause of the deviation; and
28.5 Any corrective actions or preventive measures taken as a result of the deviation to minimize emissions from the deviation and to prevent future deviations.

29. *Deviation* means any situation in which an emission unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined by observation or through review of data obtained from any testing, monitoring, or recordkeeping established in accordance with the requirements of this permit. For a situation lasting more than 24 hours which constitutes a deviation, each 24-hour period is considered a separate deviation. Included in the meaning of deviation are any of the following:
29.1 A situation where emissions exceed an emission limitation or standard;
29.2 A situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met;
29.3 A situation in which any testing, monitoring, recordkeeping or reporting required by this permit is not performed or not performed as required; and
29.4 A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit.

30. The boiler EU-01 O&M plan required pursuant to Condition 38, kilns EU-2 O&M plan required pursuant to Condition 48 and the monitoring plan required pursuant to Condition 19 shall be submitted to the EPA no later than the sixth calendar month after the month in which the permit becomes effective.
30.1 The Permittee shall review each plan at least annually, update it as needed, and submit updates to the EPA within 30 days of the update.
30.2 The Permittee shall revise any of these plans at any time if the EPA determines that a plan does not achieve the goal of the plan. In such event, the EPA will notify the Permittee of the specified deficiencies, and the Permittee shall submit a revised plan to the EPA within 30 days.

31. The plan for determining monthly GWR_{EQP} required pursuant to Conditions 53 shall be submitted to the EPA for approval before the activity occurs.

32. Performance Test Reports
The Permittee shall submit a test report to the EPA within 60 days after the completion of any required performance test. At a minimum, the test report shall include:

32.1 A description of the affected emission unit and sampling location(s);
32.2 The time and date of each test;
32.3 A summary of test results, reported in units consistent with the applicable standard;
32.4 A description of the test methods and quality assurance procedures used;
32.5 A summary of any deviations from the proposed test plan and justification for why the deviation(s) was necessary;
32.6 The amount and type of fuel burned, raw material consumed, and product produced, as applicable, during each test run;
32.7 Operating parameters of the affected emission units and control equipment during each test run;
32.8 Sample calculations of equations used to determine test results in the appropriate units; and
32.9 The name of the company or entity performing the performance test [and/or lab analysis].

33. Reporting and Notification Address

The Permittee shall send all required notifications, reports and test plans to the EPA through the EPA's Central Data Exchange/Compliance and Emission Data Reporting Interface (CDX/CEDRI) at.

CDX/CEDRI
https://cdx.epa.gov

(First-time users will need to register with CDX. If no specific reporting option is available in CEDRI, select "Other Reports." If the system is unavailable contact EPA Region 10's Enforcement and Compliance Assurance Division at (206) 553-1200)

Confidential Business Information (CBI) may not be submitted through CDX and must be submitted by hardcopy to the EPA at one of the two addresses below as follows. For applications to revise this permit, submit the materials to the EPA at the following address:

Tribal NSR Air Quality Permits
U.S. EPA – Region 10, 15-H13
1200 Sixth Avenue, Suite 155
Seattle, WA 98101

For any other documents that contain CBI, submit the materials to the EPA at the following address:

Clean Air Act Compliance Manager
U.S. EPA – Region 10, 20-C04
1200 Sixth Avenue, Suite 155
Seattle, WA 98101

A copy of each document submitted to the EPA that does not contain CBI shall be sent to the Tribal address below:

Air Quality Manager
Nez Perce Tribe
P.O. Box 365

Lapwai, ID 83540-0365

34. Signature Verifying Truth, Accuracy, and Completeness
    All reports and notifications required by this permit shall be signed by a responsible official as to the truth, accuracy and completeness of the information. The certification must state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate, and complete. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

35. *Responsible official* means one of the following:
    35.1 For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is directly responsible for the overall operation of the permitted source.
    35.2 For a partnership or sole proprietorship: a general partner or the proprietor, respectively.
    35.3 For a public agency: Either a principal executive officer or ranking elected official, such as a chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Section 3.0: Boiler EU-01 Emission Limitations

36. The Permittee is prohibited from combusting in boiler EU-01 any fuel other than non-resinated wood residue and bark.

37. At all times the boiler operates, the boiler exhaust shall be directed to the multiclone.

38. No later than the sixth calendar month after the month in which the permit becomes effective, the Permittee shall develop and implement an O&M plan for the boiler and multiclone (including the multiclone ash hopper airlock) that describes the methods and procedures that will be followed to assure good air pollution control practices and efficient operation in accordance with manufacturer specifications and recommendations. The O&M plan shall be updated as necessary and shall include the following, at a minimum:
    38.1 Description of equipment;
    38.2 Normal operating conditions and procedures including, but not limited to, the recommended operating range for percentage of O2 in boiler exhaust and pressure drop across multiclone;
    38.3 Startup, shutdown, and maintenance procedures;
    38.4 Inspection procedures and inspection frequency (at least twice annually while boiler EU-01 is not operating); and
    38.5 Upset conditions guidelines and corrective action procedures for restoring operation of the emissions unit (including the control device and associated capture system) to its normal or usual manner of operation considering, among other variables, the recommended operating ranges for boiler O2 and multiclone pressure drop.

Section 3.1: Boiler EU-01 Emission Calculations

39. Monthly boiler EU-01 methanol and VOC emissions (tons), excluding periods while not generating steam, shall be calculated using Equation 3-1 as follows:

Equation 3-1

$$E_X = steam \times \frac{1.360\ mmBtu}{mlb\ steam} \times EF_X \times \left(\frac{ton}{2000\ lb}\right); where$$

- "E_X" is monthly emissions of pollutant X in units of "ton/month";
- "$steam$" is the mass of steam generated during the month in units of "mlb steam/month";
- "$\frac{1.360\ mmBtu}{mlb\ steam}$" is source-specific test-derived FHISOR;
- "EF_X" is "0.000732 lb/mmBtu" for methanol and "0.0369 lb/mmBtu" for VOC; and
- "$\frac{ton}{2000\ lb}$" is a conversion factor.

40. Monthly boiler EU-01 methanol and VOC emissions (tons) while not generating steam shall be calculated using Equation 3-2 as follows:

Equation 3-2

$$E_X = fuel \times \left(\frac{0.357\ mmBtu}{ft^3}\right) \times EF_X \times \left(\frac{ton}{2000\ lb}\right); where$$

- "E_X" is monthly emissions of pollutant X in units of "ton/month";
- "$fuel$" is the volume of fuel fired in boiler EU-01 during the month while not generating steam in units of "ft3/month, wet basis";
- "$\frac{0.357\ mmBtu}{ft^3}$" is the heat content of fuel on a wet, volume basis;
- "EF_X" is 0.000732 lb/mmBtu" for methanol and "0.0369 lb/mmBtu" for VOC; and
- "$\frac{ton}{2000\ lb}$" is a conversion factor.

Section 3.1: Boiler EU-01 Monitoring and Testing Requirements

41. At the end of each month, for the fuel fired in boiler EU-01 during that month, the Permittee shall estimate and record the following:
    41.1 The mass (ton/month) of each of the following fuels fed to the gasifier: (a) wet non-resinated wood residue, (b) bark, and (c) kiln-dried non-resinated wood residue;
    41.2 The volume of fuel fired (wet basis) while not generating steam (ft3/event, ft3/month); and
    41.3 The basis for the estimations.

42. For boiler EU-01, the Permittee shall install, calibrate, operate, and maintain, in accordance with manufacturer specifications, equipment and procedures necessary to measure, display, calculate, and record (including the date and time of measurements or records and, if applicable, the company or

entity that performed the analyses and the analytical techniques or methods used) the following while the boiler is operating:

42.1 Steam production (lb/hr): Using a totalizer, measure and display continuously, and record hourly and monthly with a 90% minimum monthly data capture based upon availability of hourly recordings;

42.1.1 For those hours in which no measurements have been recorded by the totalizer, the steam production rate for each hour in the missing data period shall be equal to the average of either of the following: (a) the steam production rates recorded by the totalizer for the hour immediately preceding the period and the hour immediately following the period, or (b) all instantaneous steam production rates displayed by the totalizer and manually recording during the period.

42.2 Exhaust gas oxygen concentration (% by volume) downstream of the combustion chamber but upstream of the multiclone: Measure oxygen concentration at least every 15 minutes. Calculate rolling 60-minute average at least every 15 minutes based on all measurements performed within that 60-minute period. Record the one-hour block average each hour based on all measurements performed within that hour. 90% minimum monthly data capture based upon availability of hourly recordings; and

42.3 Pressure drop across the multiclone (inches of water): Continuous measurement/display, recorded at least once per day.

43. Upon detecting an excursion for EU-1, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. An excursion is defined as:

43.1 Any multiclone pressure drop outside the recommended operating range defined in the plan required in Condition 38; or

43.2 Any O2 concentration outside the recommended operating range defined in the plan required in Condition 38.

44. The Permittee shall inspect the multiclone and multiclone ash hopper airlock at least twice annually while boiler EU-01 is not operating consistent with the O&M plan required in in Condition 38.

45. The permittee shall install, calibrate, operate and maintain equipment necessary to measure and record the frequency and duration of time periods in which gas produced by the gasifier is diverted to the pressure relief stack.

45.1 For each instance gas produced by the gasifier is diverted to the pressure relief stack, the permittee shall record the reasons for the occurrence and the corrective actions, if any, performed to bring the episode to a conclusion.

Section 3.2: Boiler EU-01 Recordkeeping Requirements

46. The Permittee shall keep records showing that only non-resinated wood residue and bark are fed into the gasifier.

Section 4: Kilns EU-02 Emission Limitations

47. The Permittee shall not dry any species of wood other than Pacific Northwest softwood lumber in kilns EU-02.

48. No later than the sixth calendar month after the month in which the permit becomes effective, the Permittee shall develop and implement an O&M plan for the lumber drying kilns that describes the methods and procedures that will be followed to assure good air pollution control practices and efficient operation in accordance with manufacturer specifications and recommendations. The O&M plan shall be updated as necessary and shall include the following, at a minimum:
    48.1 Air temperature measurement systems used in the kiln;
    48.2 Lumber moisture estimation systems used in the kiln; and
    48.3 Handheld lumber moisture measurement system.
    48.4 Systems for ensuring only allowed species of wood are dried in the kiln;
    48.5 Sizing and placement of stickers, bolsters and boards;
    48.6 Door seals and kiln structure integrity;
    48.7 Kiln vent, baffle and fan systems (including, but not limited to, regular air velocity checks);
    48.8 Kiln steam system;
    48.9 Kiln control PC interface system;
    48.10 Recordkeeping of inspections, maintenance and calibrations including dates and the personnel conducting the work; and
    48.11 Availability of spare parts.

Section 4.1: Kilns EU-02 Emission Calculations

49. Monthly kilns EU-02 methanol and VOC emissions (tons) shall be calculated using Equation 4-1 as follows:

Equation 4-1

$$E_X = \sum_{i=1}^{n} lumber_{product\ i} \times EF_{X,product\ i} \times \left(\frac{ton}{2000\ lb}\right); where$$

- "E_X" is monthly emissions of pollutant X (methanol or VOC) in units of "ton/month";
- "$lumber_{product\ i}$" is the volume of lumber for product i dried during the month in units of "mbf/month" determined pursuant to Condition 51;
- "$EF_{X,product\ i}$" is monthly EF for pollutant X (methanol or VOC) for product i in units of "lb/mbf"' determined pursuant to Appendix A to this permit;
- "n" is the number of different products (e.g., ESLP, FL, IHFIR) dried in kilns EU-02 during the month; and
- "$\frac{ton}{2000\ lb}$" is a conversion factor.

Section 4.2: Kilns EU-02 Monitoring and Testing Requirements

50. For kilns EU-02, the Permittee shall install, calibrate, operate, and maintain, in accordance with manufacturer specifications, equipment and procedures necessary to measure, display, calculate and record (including the date and time of measurements or records and, if applicable, the company or entity that performed the analyses and the analytical techniques or methods used) the following for each charge of lumber dried:
    50.1 The lumber products (e.g., ESLP, FL, IHFIR) and associated wood species present;
    50.2 The volume of each lumber product dried (mbf/charge);
    50.3 The dry bulb temperature of the heated air that enters each load of lumber in each zone of the kiln (°F), continuously measured.
        50.3.1 Calculate and record a kiln-wide average "entering air" temperature at least every 15 minutes consistent with the O&M plan required in Condition 48 and monitoring plan required in Condition 19;
    50.4 The estimated moisture content of the lumber (%, dry basis) using the computerized Wellons system consistent with the O&M plan required in Condition 48 and monitoring plan required in Condition 19. Calculate and record the average of valid instantaneous estimates from all available monitoring locations every 15 minutes.
    50.5 At the conclusion of the charge, the average lumber moisture content using a handheld moisture measurement system according to the O&M plan required in Condition 48.

51. For kilns EU-02, the Permittee shall conduct the following monthly monitoring, calculations and recordkeeping:
    51.1 For each product (e.g., ESLP, FL, IHFIR), calculate and record the volume of lumber dried (mbf) counting charges initiated that month; and
    51.2 For each product, the month's highest kiln-wide average instantaneous dry bulb temperature (°F) of air entering a load of lumber for all charges containing that product initiated that month.

Section 5: WRC&PMCS EU-03 Emission Calculations

52. Beginning the month in which the Permittee submits the plan required by Condition 53, but no later than the third calendar month after the month in which the permit becomes effective, monthly WRC&PMCS EU-03 methanol and VOC emissions (tons) shall be calculated using Equation 5-1 as follows:

Equation 5-1

$$E_X = \sum_{i=1}^{n} GWR_{EQPi} \times EF_X \times \left(\frac{ton}{2000\ lb}\right); where$$

- "E_X" is the sum of the emissions of polluntant X across all pieces of equipment (e.g., bin, target box) receiving either green wood residue pneumatically conveyed to it during the month in units of "tons/month";
- *"n"* is the total number of pieces of equipment receiving wood residue pneumatically conveyed to them;
- "GWR_{EQPi}" stands for green wood residue that has not been dried in a kiln and is the mass of the residue conveyed to a piece of equipment during the month in units of

"odt/month" determined pursuant to Condition 53. The term does not include hogged bark;

- "EF_X" is the EF for a single piece of equipment receiving GWR pneumatically conveyed to it. The EF is expressed in units of pounds of pollutant emitted per oven dry tons of green wood residue received. "EF_X" is "0.00122 lb/odt" for methanol and "0.4283 lb/odt" for VOC; and
- "$\frac{ton}{2000\ lb}$" is a conversion factor.

Section 5.1: WRC&PMCS EU-03 Monitoring and Testing Requirements

53. For WRC&PMCS EU-03, no later than the day in which the activity first occurs at the facility, the Permittee shall develop and implement a plan for determining monthly the mass of green wood residue pneumatically conveyed to a piece of equipment that either exhausts to the atmosphere or is open to the atmosphere. The plan shall be updated as necessary and shall include the following, at a minimum:
    53.1 Description of each piece of equipment receiving green wood residue pneumatically;
    53.2 Process flow diagrams of all pneumatic conveyance systems conveying green wood residue;
    53.3 Methodology and associated assumptions for calculating monthly the mass of green wood residue pneumatically conveyed to each piece of equipment that either exhausts to the atmosphere or is open to the atmosphere;
    53.4 Monitoring necessary to implement the methodology; and
    53.5 Recordkeeping procedures.

Appendix A: Calculation of Kilns EU-02 Monthly Methanol & VOC EF

"$EF_{X,product\ i}$" is monthly EF for pollutant X (methanol or VOC) for product i in units of "lb/mbf"' determined as follows:

- For each species in product i, calculate EF_X using the equations in Table A-1 below and using the higher of the following two values for variable "x":
  - 190°F; or
  - The month's highest kiln-wide average instantaneous dry bulb temperature (°F) of air entering a load of lumber of product i.
- $EF_{X,product\ i}$ is the highest EF_X calculated from among the different species in product i.

Table A-1: Equations to Determine EF_X

Species	Methanol[1] (lb/mbf)	VOC[1,2] (lb/mbf)
Non-Resinous Softwood Species		
Western True Firs[3]	0.00465x - 0.73360	0.00817x - 1.02133
Western Hemlock	0.00249x - 0.39750	0.00369x - 0.39197
Species not otherwise listed	0.00465x - 0.73360	0.00817x - 1.02133
Resinous Softwood Species (Non-Pine Family)		
Douglas Fir	0.00114x - 0.16090	0.01460x - 1.77130
Engelmann Spruce	0.00088x - 0.13526	0.1769
Species not otherwise listed	0.00114x - 0.16090	0.01460x - 1.77130
Resinous Softwood Species (Pine Family)		
Lodgepole Pine	0.0550	1.1352
Ponderosa Pine	0.00137x - 0.18979	0.02083x - 1.30029
Species not otherwise listed	0.00137x - 0.18979	0.02083x - 1.30029

[1] Because methanol and VOC emissions are dependent upon maximum drying temperature, a best-fit linear equation with dependent variable maximum temperature of heated air entering the lumber has been generated to model emissions, with a couple of exceptions. For engelmann spruce (VOC) and lodgepole pine (methanol and VOC), a single EF (based upon high-temperature drying) has been generated due to lack of sufficient test data to build a best-fit linear equation.

[2] VOC emissions approximated consistent with OTM-26 underestimate emissions when the mass-to-carbon ratio of unidentified VOC exceeds that of propane. Ethanol and acetic acid are examples of compounds that contribute to lumber drying VOC emissions (for some species more than others), and both have mass-to-carbon ratios exceeding that of propane. Contribution of ethanol and acetic acid to VOC emissions has been quantified here when emissions testing data is available.

[3] Western True Firs consist of the following seven species classified in the same Abies genus: Bristlecone Fir, California Red Fir, Grand Fir, Noble Fir, Pacific Silver Fir, Subalpine Fir and White Fir.