DEPARTMENT OF ECOLOGY
State of Washington

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) PERMIT

Issued to:	**Sierra Pacific Industries, Burlington Division**
Facility Name/Location:	**Skagit Lumber Manufacturing Facility Mount Vernon, Washington**
Permit Number:	**PSD No. 05-04, Amendment 3**
Date of Issuance:	**April 23, 2024**
Effective Date:	**April 23, 2024**

This PSD permit is issued under the authority of the Washington State Clean Air Act, Chapter 70.94 Revised Code of Washington; the Washington State Department of Ecology regulations for the Prevention of Significant Deterioration of Air Quality as set forth in Washington Administrative Code 173-400-700 through 750.

PREPARED BY:

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4/23/24

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Date

APPROVED BY:

4/23/24

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Air Quality Deputy Program Manager
Washington Department of Ecology

Date

Project Description

Sierra Pacific Industries (SPI) owns and operates dimensional lumber manufacturing in Skagit County, at 14353 McFarland Road near Mount Vernon, Washington 98273.

For this permit amendment, SPI has requested to revise the Carbon Monoxide (CO) emission limit of the facility's biomass boiler. SPI has stated that the current CO emission limit of 0.35 lb/MMBtu (1-hour average) is not reflective of the achievable CO emissions level for the winter weather conditions in the Pacific Northwest.

Ecology also made additional changes to streamline and update the existing permit conditions.

Ecology has amended the CO emission limit to 0.28 lb/MMBtu, on a 24-hour average, which Ecology finds can be best achieved in practice for the SPI's biomass boiler. See more discussion regarding the changes in the technical support document (TSD) for this amendment.

The emission units affected by this permit are listed below.

Emission Unit Description	Capacity	Control
Biomass boiler	430 MMBtu/hr	ESP & SNCR
Six lumber kilns	400 MMbf/yr	Best practice for VOC
Planner mill	---	Baghouse
Anti-mold spray system	---	Mist eliminator

Section A. General Conditions

1. Approval to Construct or Modify

Approval to construct or modify a major stationary source becomes invalid if construction:

1.1. is not commenced within 18 months of the effective date of the approval,

1.2. is discontinued for a period of 18 months or more, or

1.3. is not completed within a reasonable time.

The time period between the construction of the approved phases of a phased construction project cannot be extended. Each phase must commence construction within 18 months of the projected and approved commencement date.

The PSD permittee may submit a written request for the extension of the PSD permit in accordance with WAC 173-400-730(5)(b).

2. Notification of Begin Actual Construction and Initial Startup

Ecology and the Title V authority with jurisdiction over the source shall be notified in writing of the following:

2.1. date of commencing construction, postmarked within 30 days of such date.

2.2. date of initial startup (as defined in 40 CFR 60.2(o)) of each emission unit, postmarked within 30 days of such date.

3. Adherence to Application

The owner or operator must construct and operate equipment listed in this permit in accordance with the requirements, the permit applications, and supplements to the permit applications on which this permit is based.

4. Right of Entry

Upon presentation of appropriate credentials, for investigating conditions specific to the control, recovery, or release of air contaminants into the atmosphere, personnel from Ecology, or the Title V authority with jurisdiction over the source:

4.1. must have the power to enter at reasonable times; and

4.2. to have access to and to copy any records required to be kept under the terms and conditions of this PSD permit; and

4.3. to inspect any equipment, operation, or method subject to requirements in this PSD permit.

5. Transfer of Ownership

In the event of any changes in control or ownership of the facilities to be constructed, this PSD permit shall be binding on all subsequent owners and operators. The owner or operator shall notify the succeeding owner and operator of the existence of this PSD permit and its conditions by letter, a copy of which shall be forwarded to Ecology and the Title V authority with jurisdiction over the source.

6. Compliance with other Laws and Regulations

Pursuant to 40 CFR 52.21(r)(3), approval to construct shall not relieve the owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan and any other requirements under local, state, or federal law.

7. Enforcement

Any owner or operator who constructs or operates a source or modification, not in accordance with the PSD application submitted or with the terms of any approval to construct, shall be subject to appropriate enforcement action. Ecology or the Title V authority with jurisdiction over the source can conduct enforcement.

The reports required by this permit must be submitted to the Title V authority with jurisdiction over the source unless the permit conditions require the reports to be submitted to Ecology.

8. Information Requests

The owner or operator must furnish to the reviewing authority, within a reasonable time, any information that the Ecology or the Title V authority with jurisdiction over the source may request in writing to determine whether cause exists to determine compliance with the permit and PSD rules.

9. Submittal

Any notification, report, or information submitted to Ecology must be sent by certified mail and addressed to:

Department of Ecology
Air Quality Program - PSD
PO Box 47600
Olympia, WA 98504-7600

Section B. Specific Conditions

1. Requirements specified in the following approval conditions for SPI-Burlington to notify or report to or acquire approval or agreement from "Ecology and the Northwest Clean Air Agency" may be satisfied by providing such notification, reporting, or approval request to the Northwest Clean Air Agency (NWCAA) if the approval conditions of this PSD permit have been incorporated in SPI-Burlington's Title V permit (40 CFR Part 70).
2. SPI shall maintain exclusive control over the property described below:

   That portion of New Lot 2 of that certain Boundary Line Adjustment as shown on Record of Survey recorded under Auditor's file number 200905290102, records of Skagit County, Washington, more particularly described as follows:

   Commencing at the Northeast corner of Lot 1, SP No. 94-035, and Southeast corner of Lot 3, SP No. 7-89 of said Boundary Line Adjustment;

   Thence South 0°05'32" West along the East line thereof, a distance of 346.07 feet to the Northeast corner of said Lot 2 and the TRUE POINT OF BEGINNING;

   Thence South 64°44'57" West a distance of 106.24 feet;

   Thence South 32°07'06" West a distance of 76.28 feet;

   Thence South 02°55'39" East a distance of 64.91 feet;

   Thence South 36°39'48" East a distance of 80.70 feet;

   Thence South 78°46'53" East a distance of 86.39 feet to a point on the East line of said Lot 2, which bears South 00°05'32" West from the TRUE POINT OF BEGINNING;

   Thence North 00°05'32" East a distance of 256.37 feet to the TRUE POINT OF BEGINNING.

   Situated in Skagit County, Washington

   AND ALSO INCLUDING

   That portion of vacated Swinomish Avenue contiguous to the South line of Block 9, Plan of Fredonia according to the plat there of recorded in Volume 2 of Plats, page 25, records of Skagit County, said portion lying Northerly of the following described line:

Beginning at the Northwest corner of Block 10 of said Plan of Fredonia as shown on that certain Record of Survey map recorded under Skagit County Auditor's File No. 200006020092;

thence South 0°05'33" West 521.96 feet along the West line of said Plan of Fredonia to the Southwest corner of said Block 9;

thence continue South 0°05'33" West 1.8 feet, more or less, along said West line, to an existing wire fence and the TRUE POINT OF BEGINNING of said line;

thence South 86°23'42" West 29.4 feet from the Northeast corner of the Quit Claim Deed for Boundary Line Adjustment as recorded under Auditor's File number 200009250093, records of Skagit County, Washington;

thence South 45°29'47" East 40.29 feet to the East line of said Quit Claim Deed for Boundary Line Adjustment as recorded under Auditor's File Number 200009250093, records of Skagit County, Washington, at a point that is South 1°18'59" West 26.4 feet from said Northeast corner of the Quit Claim Deed for boundary Line Adjustment, said point being the terminus of said line.

Situated in Skagit County, Washington.

Property boundary as described by this condition shall be fenced to the extent of prohibiting public access.

3. SPI-Burlington shall use only wood preservatives that have been approved by the EPA under the Federal Insecticide, Fungicide, and Rodenticide Act.

4. Startup and shutdown defined:

4.1. Cold startups and shutdowns:

4.1.1. A cold startup starts or resumes feeding fuel of any type when the wood-fired cogeneration unit furnace temperature is 150 degrees Fahrenheit (°F) or lower. A cold startup ends upon the earlier of:

4.1.1.1. Four hours after starting wood fuel fired to the boiler,

4.1.1.2. Dry basis flue gas carbon dioxide concentration has been greater than or equal to 11 percent and less than or equal to 13 percent for one hour while the flue gas CO concentration has simultaneously not exceeded 260 ppmdv,

4.1.1.3. Steam flow exceeded 150,000 pounds over the previous hour, or

4.1.1.4. Twenty-four hours after starting or resuming feeding fuel of any type.

4.1.2. A cold shutdown is one wherein wood fuel feed stops, and the furnace is allowed to cool to 150°F or lower. A cold shutdown ends when:

4.1.2.1. No fuel of any type is being fed, the furnace temperature is 150°F or lower and the FD fan is offline, or

4.1.2.2. Twenty-four hours after wood fuel feed was stopped, whichever comes first.

4.2. Warm startups and shutdowns:

4.2.1. A warm startup starts or resumes feeding fuel of any type when the wood-fired cogeneration unit furnace temperature is higher than 150°F. A warm startup ends upon the earlier of:

4.2.1.1. Four hours after starting the wood fuel feed to the boiler,

4.2.1.2. Dry basis flue gas carbon dioxide concentration has been greater than or equal to 11 percent and less than or equal to 13 percent for one hour while the flue gas CO concentration has simultaneously not exceeded 260 ppmdv,

4.2.1.3. Steam flow exceeded 150,000 pounds over the previous hour, or

4.2.1.4. Eight hours after starting or resuming feeding fuel of any type.

4.2.2. A warm shutdown is one wherein the wood fuel feed stops, but the furnace temperature does not cool to 150°F or lower before the wood fuel feed is resumed. A warm shutdown ends when:

4.2.2.1. Wood fuel feed is resumed,

4.2.2.2. No fuel of any type is being fed, and the furnace temperature is 150°F or lower (at which point the shutdown becomes a "cold shutdown"), or

4.2.2.3. Twenty-four hours after wood fuel feed was stopped, whichever comes first.

5. The wood-fired cogeneration unit may burn natural gas in the wood-fired cogeneration unit only:

5.1. To ignite the wood fuel, or

5.2. To maintain good combustion.

Emission Limits

6. Wood-fired cogeneration unit exhaust stack:

6.1. NO_X emissions shall not exceed the following limits on a calendar day average:

6.1.1. Fifty-six pounds NO_X per hour.

6.1.2. 0.13 lb NO_X/MMBtu based on the heat input value of the fuel.

6.2. CO emissions:

6.2.1. Shall not exceed the following limits:

6.2.1.1. 0.28 lb CO/MMBtu (24-hour rolling average) based on the heat input value of the fuel except during startup and shutdown.

6.2.1.2. 659 tons CO in any consecutive 12-month period including startups and shutdowns.

6.2.1.3. 400 lb CO/hr (1-hour average) during cold startups and shutdowns.

6.2.1.4. 300 lb CO/hr (1-hour average) during warm startups and shutdowns.

6.2.2. CO emissions measurement is to continue at all times when the wood-fired cogeneration unit furnace temperature is above 150°F.

6.3. PM/PM_{10}/$PM_{2.5}$ emissions:

6.3.1. All particulate matter (PM/PM_{10}/$PM_{2.5}$) emissions shall be expressed as PM_{10}.

6.3.2. The sum of filterable and condensable PM/PM_{10}/$PM_{2.5}$ emissions shall not exceed the following limits:

6.3.2.1. 0.02 lb PM_{10}/MMBtu (24-hour average) based on the heat input value of the fuel.

6.3.2.2. 37.7 tons PM_{10} in any consecutive 12-month period.

6.4. SO_2 emissions shall not exceed the following limits:

6.4.1. 0.025 lb SO_2/MMBtu (3-hour average) based on the heat input value of the fuel.

6.4.2. 47.1 tons in any consecutive 12-month period.

6.5. VOC emissions:

6.5.1. VOCs shall be calculated as propane (three carbons per molecule, molecular weight: 44).

6.5.2. VOC emissions shall not exceed the following limits:

6.5.2.1. 0.019 lb VOC/MMBtu (1-hour average) based on the heat input value of the fuel.

6.5.2.2. 35.8 tons in any consecutive 12 months.

7. Planner mill baghouse exhaust stack:

7.1. All particulate matter ($PM/PM_{10}/PM_{2.5}$) emissions shall be expressed as PM_{10}.

7.2. $PM/PM_{10}/PM_{2.5}$ emissions shall not exceed the following limits:

7.2.1. 0.005 gr PM_{10}/dscft (1-hour average).

7.2.2. 9.4 tons PM_{10} in any consecutive 12-month period.

8. Drying kilns:

8.1. $PM/PM_{10}/PM_{2.5}$ emissions:

8.1.1. All particulate matter ($PM/PM_{10}/PM_{2.5}$) emissions shall be expressed as PM_{10}.

8.1.2. $PM/PM_{10}/PM_{2.5}$ emissions from the dry kilns shall not exceed 5.86 tons in any consecutive 12-month period.

8.2. VOC emissions:

8.2.1. VOCs shall be calculated as pinene (10 carbons per molecule, molecular weight: 136).

8.2.2. SPI-Burlington will operate the computerized steam management system for the drying kilns to minimize steam demand in accordance with the manufacturer's specifications.

8.2.3. VOC emissions shall not exceed 120 tons in any consecutive 12-month period.

9. Anti-mold spray system:

9.1. Anti-mold spray chamber shall be a "drip-free" design.

9.2. SPI-Burlington will operate and maintain the spray chamber mist eliminator and condensate recycle system in accordance with the manufacturer's specifications.

9.3. VOC emissions shall not exceed nine tons in any consecutive 12-month period.

Compliance Monitoring

10. Compliance demonstration data conversions to a “per MMBtu” basis shall either be determined by:

    10.1. The method outlined in the paragraph in Appendix A, Method 19 of 40 CFR Part 60 titled “Determined F Factors” (in the 2004 version of 40 CFR Part 60: Paragraph 12.3.2), or

    10.2. Factors from table in Appendix A, Method 19 of 40 CFR Part 60 titles, “F Factors for Various Fuels” (in the 2004 version of 40 CFR Part 60: Table 19-2). The factor shall reflect the proportions of wood, bark, and natural gas in the fuel by either:

        10.2.1. Determining the wood and bark proportions of the fuel used during the test based on randomized fuel sampling following the procedure outlined in the corresponding test plan approved by Ecology and NWCAA, or

        10.2.2. A default assumption of equal proportions of wood and bark. Example: a 50:50 wood/bark mixture with no natural gas will have an Fd-factor of 9,420 dscf/MMBtu.

11. NO_X emissions from the wood-fired cogeneration unit exhaust stack:

    11.1. SPI-Burlington will monitor continuing compliance with Condition 6.1:

        11.1.1. Continuous compliance will be monitored by a Continuous Emission Monitoring System (CEMS) that measures and records NO_X emissions from the wood-fired cogeneration unit exhaust stack.

        11.1.2. The CEMS will meet the requirements of Condition 17.1.

        11.1.3. Compliance will be determined from the arithmetic mean of the hours of valid NO_X emissions data in lb NO_X/MMBtu monitored pursuant to Condition 11.1.1.

            11.1.3.1. Data that is "valid" shall be as defined in 40 CFR 60.13(h).

            11.1.3.2. A calendar day used for compliance monitoring shall have at least 18 hours of valid data.

            11.1.3.3. Valid data from any calendar day having fewer than 18 hours of valid data shall be included in either the following or preceding day's data, whichever is contiguous and the 24-hour average calculated using the cumulative hours of the conjoined periods.

12. CO emissions from the wood-fired cogeneration unit exhaust stack:

    12.1. SPI-Burlington will monitor continuing compliance with Condition 6.2.1.1.

12.1.1. Continuous compliance will be determined by a CEMS that measures and records CO emissions from the wood-fired cogeneration unit exhaust stack.

12.1.2. The CEMS will meet the requirements of Condition 17.2.

12.1.3. SPI-Burlington will monitor continuing compliance with Condition 6.2.1.2, 6.2.1.3, and 6.2.1.4 from the arithmetic mean of the emissions data for each corresponding operating scenario and averaging period.

13. $PM/PM_{10}/PM_{2.5}$:

13.1. Emission limits from the wood-fired cogeneration unit exhaust stack:

13.1.1. SPI-Burlington will monitor continuing compliance with Condition 6.3.2.1.

13.1.1.1. SPI-Burlington will have periodic compliance tests conducted by an independent testing vendor:

13.1.1.1.1. At least once every 12 months.

13.1.1.1.2. If all source tests conducted during a consecutive 30-month period (not less than three separate tests) demonstrate emissions are less than 75 percent of the limit in Condition 6.3.2.1, the testing interval shall be changed to not less frequently than once every 24 months.

13.1.1.1.3. If the test frequency described in Condition 13.1.1.1.2 has been enacted, any subsequent source test result greater than 75 percent of the limit in Condition 6.3.2.1 shall require reversion to Condition 13.1.1.1.1 until such time as the provision recurs described in Condition 13.1.1.1.2 and allows its reinstatement.

13.1.1.2. Compliance will be determined by EPA Reference Methods 5 and 202.

13.1.1.2.1. EPA Reference Method 5 will be conducted in the manner prescribed in 40 CFR 60.46b(d).

13.1.1.2.2. Compliance will be demonstrated from the arithmetic mean of not less than three 2-hour test samples.

13.1.1.2.3. The emission rate expressed in lb PM_{10}/MMBtu will be determined using the procedure described in 40 CFR 60.46b(d)(6).

13.1.2. SPI-Burlington will monitor continuing compliance with Condition 6.3.2.2.

13.1.2.1. Compliance will be monitored from the arithmetic mean of the test results from Condition 13.1.1 in TPY PM_{10} based on monthly average firing rates.

13.2. Emission limits from the planer mill exhaust stack:

13.2.1. SPI-Burlington will monitor continuing compliance with Condition 7.2.1.

13.2.1.1. SPI-Burlington will have periodic compliance tests:

13.2.1.1.1. Conducted by an independent testing vendor.

13.2.1.1.2. Test frequency.

13.2.1.1.2.1. Beginning from the required or actual completion date of the initial performance test, whichever date comes first.

13.2.1.1.2.2. At least once every 12 months unless the provision described in Condition 13.2.1.1.2.3 occurs.

13.2.1.1.2.3. If all source tests conducted during a consecutive 30-month period (not less than three separate tests) show $PM/PM_{10}/PM_{2.5}$ emissions less than or equal to 0.0025 gr/dscft, test frequency may be reduced to once every 36 months.

13.2.1.1.2.4. If the test frequency described in Condition 13.2.1.1.2.3 has been enacted, any subsequent source test results greater than 0.0025 gr/dscft shall require reversion to Condition 13.2.1.1.2.1 until such time as the provision recurs described in Condition 13.2.1.1.2. and allows its reinstatement.

13.2.1.2. Compliance will be determined by EPA Reference Methods 5 and 202.

13.2.1.2.1. Compliance will be demonstrated from the arithmetic mean of not less than three 2-hout test samples.

13.2.1.2.2. Equivalent concentration test methods may be used if approved in advance by Ecology and the NWCAA.

13.2.2. SPI-Burlington will monitor continuing compliance with Condition 7.2.2:

13.2.2.1. Beginning from the date the initial performance test is completed, or is required to be complete, whichever date comes first.

13.2.2.2. Compliance will be monitored from the arithmetic mean of the test results from Condition 13.2.1 and monthly production rates.

13.2.2.2.1. SPI-Burlington will determine an emission factor based on the test results from Condition 13.2.1 and the planer mill production rate maintained during the corresponding tests.

13.2.2.2.2. SPI-Burlington will update the emission factor as soon as the results are available from each compliance monitoring test.

13.2.2.2.3. SPI-Burlington will use the updated emission factor until the next compliance monitoring test results are available.

14. Emission limits from the drying kilns: SPI-Burlington will monitor continuing compliance with Conditions 8.1.2 or 8.1.3, as applicable.

14.1. Beginning with the date of initial startup of the drying kilns.

14.2. For each wood species processed, SPI-Burlington will separately determine drying kiln loading in board feet each day.

14.3. Each month's drying kiln PM/PM_{10} emissions shall be determined based on each specie' emission factor:

14.3.1. Douglas Fir: 0.02 pounds PM/PM_{10}/$PM_{2.5}$/thousand board feet (lb PM/PM_{10}/$PM_{2.5}$/Mbf).

14.3.2. Western Hemlock: 0.02 lb PM/PM_{10}/$PM_{2.5}$/Mbf.

15. SO_2 emissions from the wood-fired cogeneration unit exhaust stack:

15.1. SPI-Burlington will monitor continuing compliance with Condition 6.4.1:

15.1.1. SPI-Burlington will have periodic compliance tests conducted by an independent testing vendor:

15.1.1.1. At least once every 12 months, beginning from the date the initial performance test is completed or is required to be completed, whichever date comes first.

15.1.1.2. If three consecutive tests demonstrate emissions are less than 75 percent of the limits in Condition 6.4.1, the testing interval shall be changed to not less frequently than once every 24 months.

15.1.1.3. If the test frequency described in Condition 15.1.1.2 has been enacted, any subsequent source test result greater than 75 percent of the limit in Condition 6.4.1 shall require reversion to Condition 15.1.1.1 until such time as the provision recurs described in Condition 15.1.1.2 and allows its reinstatement.

15.1.2. At least one source test within any relevant test frequency period is to coincide with the Relative Accuracy Test Audit required for each installed CEMS.

15.1.3. Compliance will be determined by EPA Reference Method 6, 6A, or 6C.

15.1.3.1. Compliance will be demonstrated from the arithmetic mean of not less than three 1-hour test samples.

15.1.3.2. An equivalent concentration test method may be used if approved in advance by Ecology.

15.1.3.3. SO_2 mass emissions will be determined using the procedures outlined in 40 CFR part 60 Appendix A Method 19 and based on the total heat value of the fuel consumed over each operating hour.

15.1.3.4. An equivalent mass emission rate calculation method may be used as an alternative to Condition 15.1.3.3 if approved in advance by Ecology and the NWCAA.

15.1.4. SPI-Burlington will notify Ecology and the NWCAA at least 30 days prior to the scheduled performance testing.

15.2. SPI-Burlington will monitor continuing compliance with Condition 6.4.2.

15.2.1. Beginning from the date the initial performance test is completed, or is required to be complete, whichever date comes first.

15.2.2. Compliance will be monitored from the arithmetic mean of the test results from Condition 17.1 and monthly average firing rates.

15.2.2.1. Mass emission rates will be determined using the appropriate procedures outlined in 40 CFR Part 60 Appendix A Method 19.

15.2.2.2. An equivalent mass emission rate calculation method may be used if approved in advance by Ecology and the NWCAA.

16. VOCs:

16.1. Emission limits from the wood-fired cogeneration unit exhaust stack.

16.1.1. SPI-Burlington will monitor continuing compliance with Condition 6.5.2.1.

16.1.1.1. SPI-Burlington will have periodic compliance tests conducted by an independent testing vendor:

16.1.1.1.1. At least once every 12 months, beginning from the date the initial performance test is completed or is required to be completed, whichever date comes first.

16.1.1.1.2. If three consecutive tests demonstrate emissions are less than 75 percent of the limits in Condition 6.5.2.1, the testing

interval shall be changed to not less frequently than once every 24 months.

16.1.1.1.3. If the test frequency described in Condition 16.1.1.1.2 has been enacted, any subsequent source test result greater than 75 percent of the limit in Condition 6.5.2.1 shall require reversion to Condition 16.1.1.1.1 until such time as the provision recurs described in Condition 16.1.1.1.2 and allows its reinstatement.

16.1.1.2. At least one source test within any 12-month period is to coincide with the Relative Accuracy Test Audit required for each installed CEMS.

16.1.1.3. Compliance will be determined by EPA Reference Method 25, 25A, or 25B.

16.1.1.3.1. Compliance will be demonstrated from the arithmetic mean of not less than three 1-hour test samples.

16.1.1.3.2. An equivalent concentration test method may be used if approved in advance by Ecology.

16.1.1.3.3. VOC mass emissions will be determined using the procedures outlined in 40 CFR part 60 Appendix A Method 19 with indicated calculations modified to apply to VOCs measured as propane and based on the total heat value of the fuel consumed over each operating hour.

16.1.1.3.4. An equivalent mass emission rate calculation method may be used as an alternative to Condition 16.1.1.3.3 if approved in advance by Ecology and the NWCAA.

16.1.1.4. SPI-Burlington will notify Ecology and NWCAA at least 30 days prior to the scheduled performance testing.

16.1.2. SPI-Burlington will monitor continuing compliance with Condition 6.5.2.2.

16.1.2.1. Beginning from the date the initial performance test in Condition 16.1.1 is completed or is required to be completed, whichever date comes first.

16.1.2.2. Compliance will be monitored from the arithmetic mean of the test results from Condition 16.1 and monthly average firing rates.

16.1.2.2.1. Mass emission rates will be determined using the appropriate procedures outlined in 40 CFR Part 60 Appendix A

Method 19 with indicated calculations modified to apply to VOCs measured as propane.

16.1.2.2.2. An equivalent mass emission rate calculation method may be used if approved in advance by Ecology and the NWCAA.

16.2. Emission limits from the drying kilns: SPI-Burlington will monitor continuing compliance with Condition 8.2.3.

16.2.1. Beginning with the date of initial startup of the drying kilns.

16.2.2. For each wood species processed, SPI-Burlington will separately record monthly drying kiln production in board feet.

16.2.3. Each month's drying kiln VOC emissions shall be determined based on each species' emission factor:

16.2.3.1. Douglas Fir: 0.6 pounds VOC/thousand board feet (lb VOC/Mbf).

16.2.3.2. Western Hemlock: 0.33 lb VOC/Mbf.

16.2.3.3. All other wood species:

16.2.3.3.1. If the proportion of "other wood species" used during the month is less than or equal to 10 percent of the total month's production, SPI-Burlington shall use either 0.6 pounds lb VOC/Mbf or a species-specific emission factor approved in writing by Ecology and the NWCAA.

16.2.3.3.2. If the proportion of "other wood species" used during the month is greater than 10 percent of the total month's production, SPI-Burlington shall use a species-specific emission factor approved in writing by Ecology and the NWCAA.

16.3. Emission limits from the anti-mold spray system: SPI-Burlington will monitor continuing compliance with Condition 9.3.

16.3.1. Beginning with the date of initial startup of the drying kilns.

16.3.2. SPI-Burlington will quantify its consumption of wood treatment materials in the anti-mold spray system each month.

16.3.3. VOCs shall be calculated monthly as the proportion of VOC identified in the wood treatment Material Safety Data (MSD) sheets.

Example: The MSD sheet for NP-1® Plus (Sapstain Control) indicates it is 25 percent VOC by weight. The MSD sheet for Alpha™-700 (Wood Brightener) indicates it is 95 percent VOC by weight.

17. Continuous Emission Monitoring Systems:

17.1. Installation, calibration, maintenance, and operation of the CEMS for NO_x compliance will satisfy the requirements contained in 40 CFR 60.48b(b) through 40 CFR 60.48b(f).

17.2. CEMS for CO will satisfy the requirements contained in 40 CFR, Part 60, Appendix B, Performance Specification 4 and 40 CFR, Part 60, Appendix F, Quality Assurance Procedures.

17.3. Required Relative Accuracy Test Audit for the NO_X and CO CEMS will be performed during the same test periods.

Recordkeeping, Notification, and Reporting

18. SPI-Burlington will notify and report to Ecology and the NWCAA, and maintain related records as follows:

18.1. Notifications and reports will be in written format unless otherwise approved by Ecology.

18.2. The following reports shall be submitted to Ecology and the NWCAA:

18.2.1. Continuing performance monitoring reports required under Condition 18.2.2 shall be submitted for each calendar quarter:

18.2.1.1. Beginning with the quarter that includes the initial startup of the wood-fired cogeneration unit.

18.2.1.2. Postmarked no later than one calendar month after the close of each respective calendar quarter.

18.2.1.3. In the report format approved by Ecology and the NWCAA.

18.2.1.4. Another reporting schedule may be used if approved by Ecology and the NWCAA.

18.2.2. Continuing performance monitoring reports will include, but not necessarily be limited to, the following:

18.2.2.1. Certification by the responsible party for the facility that the relevant equipment was operated and maintained in accordance with the operational parameters and practices developed pursuant to Condition 19.

18.2.2.2. Emissions from the wood-fired cogeneration unit exhaust stack:

18.2.2.2.1. Pursuant to compliance under Condition 6.1, NO_x emissions (lb/MMBtu) since the last report.

18.2.2.2.2. Pursuant to compliance under Condition 6.2.1.1, CO emission (lb/MMBtu) since the last report.

18.2.2.2.3. Pursuant to compliance under Condition 6.2.1.2, for each month since the last report, show the 12-month CO mass emissions ending with that month.

18.2.2.2.4. Pursuant to compliance under Conditions 6.2.1.3 and 6.2.1.4, the times, durations, and average hourly CO mass emissions for any cold or warm startups and shutdowns.

18.2.2.2.5. Pursuant to compliance under Condition 6.3.2.1, results of any required source tests for PM_{10} since the last report.

18.2.2.2.6. Pursuant to compliance under Condition 6.3.2.2, for each month since the last report, show the 12-month PM_{10} mass emissions ending with that month.

18.2.2.2.7. Pursuant to compliance under Conditions 6.4.1 results of any required source tests for SO_2 since the last report.

18.2.2.2.8. Pursuant to compliance under Condition 6.4.2, for each month since the last report, show the 12-month SO_2 mass emissions ending with that month.

18.2.2.2.9. Pursuant to compliance under Condition 6.5.2.1 results of any required source tests for VOCs since the last report.

18.2.2.2.10. Pursuant to compliance under Condition 6.5.2.2, for each month since the last report, show the 12-month VOC mass emissions ending with that month.

18.2.2.3. Emissions from the planer mill bag house exhaust stack:

18.2.2.3.1. Pursuant to compliance under Condition 7.2.1, PM/PM_{10} emissionsBuxton? (gr PM/PM10/dscft) since the last report.

18.2.2.3.2. Pursuant to compliance under Condition 7.2.2, for each month since the last report, show the 12-month total PM/PM_{10} mass emissions ending with that month.

18.2.2.4. Emissions from the drying kilns:

18.2.2.4.1. Pursuant to compliance under Conditions 8.1.2 and 8.1.3, for each month since the last report, show the 12-month total PM/PM_{10} mass emissions ending with that month.

18.2.2.4.2. Pursuant to compliance under Condition 8.2.3, for each month since the last report, show the 12-month total VOC mass emissions ending with that month.

18.2.2.5. Emissions from the anti-mold spray system: Pursuant to compliance under Condition 9.3, for each month since the last

report, show the 12-month total VOC mass emissions ending with that month.

18.2.2.6. The duration and nature of any CEMS downtime excluding zero and span checks.

18.2.2.7. Results of any CEMS audits or accuracy checks.

18.2.3. Each occurrence of monitored emissions measured in excess of the limits shall be reported in writing to Ecology and the NWCAA after the respective exceedance in accordance with WAC 173-400-107(3). Such reports shall, as a minimum, include:

18.2.3.1. The time of the occurrence.

18.2.3.2. Magnitude of excess from the emission limit.

18.2.3.3. The duration of the excess.

18.2.3.4. The probable cause.

18.2.3.5. Corrective actions taken or planned.

18.2.3.6. Any other agency contacted.

18.3. SPI-Burlington will maintain monitoring, source test, CEM audit tests, and process records:

18.3.1. At the Skagit County facility.

18.3.2. For at least five years.

18.3.3. Records of the times and quantity of natural gas used in the wood-fired cogeneration unit.

18.3.4. SPI-Burlington will provide Ecology and the NWCAA with the monitoring and process records for any period within the five-year archive, within 10 working days of request.

19. Operation and maintenance (O&M) manual for the facility:

19.1. Within 90 days of startup, SPI-Burlington will identify operational parameters and practices for the planer mill bag house, drying kilns, anti-mold spray system, and wood-fired cogeneration unit.

19.2. The operational parameters and practices will constitute proper operation relative to compliance with the emission limitation conditions of this permit.

19.3. SPI-Burlington will include these operational parameters and practices in the planer mill bag house, the drying kilns, the anti-mold spray system, and the wood-fired cogeneration unit O&M manuals. As a minimum, and to the extent they relate to the emission limitations specified in the conditions of this PSD permit, these will include:

19.3.1. Inspection and maintenance procedures and schedule.

19.3.2. Prescribed acceptable ranges for operation based on manufacturer recommendations.

19.3.3. Section specifying maintenance and calibration of all required monitors used to assure compliance with the terms and conditions of this PSD permit.

19.4. SPI-Burlington will keep the operational parameters and practices in the O&M manuals up to date to reflect any modifications of the equipment or its operating procedures.

19.5. SPI-Burlington will keep the O&M manuals readily available at the facility for review by state, federal, and local agencies.

19.6. Within 30 days of request from Ecology, SPI-Burlington shall submit the O&M manual to Ecology and the NWCAA for approval within the scope of Condition 19.2.

Section C. Acronyms and Abbreviations

BACT	Best Available Control Technology
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	carbon monoxide
Ecology	Washington Department of Ecology
EPA	Environmental Protection Agency
FGS	Fredonia Generating Station
H_2SO_4	Sulfuric acid
NO_X	Nitrogen oxides
NSPS	New Source Performance Standard
NWCAA	Northwest Clean Air Agency
OAC	Order of Approval Condition
PM	particulate matter
PM_{10}	particulate matter less than 10 micrometers in diameter
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
PSD	Prevention of Significant Deterioration
SO_X	oxides of sulfur
SPI-Burlington	Sierra Pacific Industries, Burlington Division
TPY	tons per year
VOC	volatile organic compound
WAC	Washington Administrative Code