Puget Sound Clean Air Agency

Notice of Construction No. **12246**

HEREBY ISSUES AN ORDER OF APPROVAL TO CONSTRUCT, INSTALL, OR ESTABLISH

Registration No. **30402**

Date

Darrington Wood Innovation Center LLC (DWIC) to construct a forest-to housing manufacturing facility in Darrington, WA

The facility will include a debarker, a sawmill, 10 lumber kilns with a total drying capacity of 21,188 thousand-board feet (Mbdft) per year, a 28 MMBtu/hr biomass boiler, six MMBtu per hour emergency diesel -fired boiler, a Glulam Beam and cross laminated timber (CLT) panel assembly process, and a modular unit construction operation. All components will be manufactured onsite from whole log feedstock. CLT panels, pre-fabricated wall and floor panels, and other structural members will be pieced together to create modular units for residential and commercial use.

OWNER

Darrington Wood Innovation Center LLC
Town of Darrington
1005 Cascade St, PO Box 397
Darrington, WA 98241

INSTALLATION ADDRESS

Darrington Wood Innovation Center LLC
1300 Block of SR 530
Darrington, WA 98241

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.

2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

Biomass Boiler

3. The owner/operator shall maintain an O&M Plan per Puget Sound Clean Air Agency Regulation I, Section 5.05. The O&M Plan shall also contain:
    a. Equations, conversion calculations, and any assumptions used to demonstrate compliance and to reasonably assure continuous compliance with emissions standards;
    b. Procedures and blank log forms to record all actions taken in order to prevent visible emissions of fugitive dust in accordance with Puget Sound Clean Air Agency Regulation I, Section 9.15(a).
    c. A site-specific fuel analysis plan for chlorine content as described in paragraphs (b)(2)(i) through (vi) of 40 CFR Section 63.7521. The term "fuel type" shall be taken to mean a new batch of hog fuel, with unknown chlorine content, from a new supplier.

4. All emissions from the biomass boiler shall be sent through an ESP. The Hog Fuel boiler shall not operate if the ESP is offline.
    a. The owner/operator must establish the minimum total secondary electric power (secondary voltage and secondary current) as operating limits determined during the three-run performance stack test required in condition 15.
    b. Maintain the 30-day rolling average total secondary electric power of the electrostatic precipitator at or above the minimum total secondary electric power determined in 4(a).
    c. Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the

electrostatic precipitator.

5. For each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (ESP total secondary electric power input) collected during each startup period to confirm that the control devices are engaged. For the electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

6. Total PM emissions shall be limited to 0.02 gr/dscf @ 7% O_2 as measured by EPA method 5 as modified by PSCAA board resolution 540.

7. Filterable PM emissions shall be limited to 0.07 lb/MMBtu by EPA method 5. These runs shall be at least 120 minutes in duration and a minimum sampling volume of 60 dry standard cubic feet (dscf). The temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

8. The boiler must maintain opacity less than or equal to 20% for all consecutive 6-minute periods and no greater than 5% for any hour average as measured by EPA Method 9.

9. NOx emissions from the biomass boiler shall be limited to 6.16 lb/hr as measured by EPA methods 1, 2,3,4 and 7E.

10. CO emissions from the biomass boiler shall be limited to 20.6 lbs/hr as measured by EPA methods 1, 2, 3, 4 and 10.

11. SO_2 emissions from the biomass boiler shall be limited to 1.2 lb/hr as measured by EPA methods 1, 2, 3, 4 and EPA method 6C.

12. HCl emissions from the biomass boiler shall not exceed 100 ppm on a dry basis, 1-hour average corrected to 7% oxygen or 0.13 lbs/hr or 0.0046 lb HCl/MMBtu as measured by EPA method 26, EPA method 26a or EPA method 321.

13. The Owner/Operator shall develop and implement the following plans prior to plant startup unless otherwise approved in writing by the Control Officer. A site-specific fuel analysis plan for chlorine content as described in paragraphs (b)(2)(i) through (vi) of 40 CFR Section 63.7521. The term “fuel type” shall be taken to mean a new batch of hog fuel, with unknown chlorine content, from a new supplier.

14. Cl_2 emissions from the biomass boiler shall not exceed 0.034 lbs/hr as measured by EPA method 26, or EPA method 26a.

15. Biomass Boiler Performance Testing
    a. The Owner and/or Operator shall conduct performance tests on the biomass boiler within 60 days after startup of the applicable equipment. The testing deadline may be extended for good cause if pre-approval is obtained in writing by the Agency, but in no case shall the testing deadline extend beyond 180 days after startup of the new applicable equipment.
    b. The Owner and/or Operator shall conduct a performance test of the biofuel boiler while operating at a minimum of 90% of maximum load. If testing occurs at a load less than 90% of maximum load, then the boiler may not be operated at a load higher than the load achieved during the performance test, plus 10%.
    c. The Owner and/or Operator shall measure the concentrations of Total PM, Filterable PM, NO_X, CO, Cl_2 and HCl in the exhaust stream.
    d. Following the initial performance test for this permit, The Owner and/or Operator shall

conduct a performance test every year no more than 14 months from the last respective test for all pollutants listed in conditions 6-12.

e. Testing of sources for compliance with emission standards shall be performed in accordance with Regulation 1, Article 3, Section 3.07. The Owner and/or Operator shall notify the Agency in writing at least 21 days in advance of the actual date and time of each performance test as required by Regulation 1, Section 3.07(b). The Owner and/or Operator shall complete and submit a separate test report for each performance test to the Department within 60 days after the completion of testing in accordance with the requirements specified in Regulation 1, Section 3.07(c)

f. Each performance test shall consist of three separate test runs with each test run being at least 60 minutes in duration unless otherwise specified in the applicable standard. The same test methods shall be conducted for both the inlet and outlet measurements, if applicable and technically feasible, which must be conducted simultaneously. Emissions rates, concentrations, grain loadings, and/or efficiencies shall be determined as the arithmetic average of the values determined for each individual test run. Performance tests may only be stopped for good cause, which includes forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond The Owner and/or Operator's control. Termination of a performance test without good cause after the first test run has commenced shall constitute a failure of the performance test.

g. The following production data must be collected at a minimum of every 15 minutes during the source test period:
    i. Electrostatic Precipitator operating data including secondary electric power data
    ii. Oxygen data
    iii. Boiler load data (fuel feed rate or steam generation data)

Lumber Kilns

16. Annual throughput shall be limited to a 12 month rolling total of 4,240 thousand-board feet (Mbdft) of Western Hemlock and 16,948 Mbdft of other species. Production records shall be maintained for at least 2 years and made available to Puget Sound Clean Air Agency personnel upon request.

17. At no time shall any kiln dry-bulb temperature setpoint or the actual dry-bulb temperature in any dry kiln exceed 200 degrees F. This temperature shall be continuously monitored.

CLT Facility Wood Handling Equipment

18. The baghouse receiving particulate laden exhaust from the CLT Facility Wood Handling Equipment shall be equipped with an operable gauge to indicate the pressure drop across the exhaust filtration system. The acceptable pressure drop range shall be established using the manufacturer's recommendations, specifications, or instruction; or shall be established based on operator experience to maintain filter integrity. The established pressure drop minimum and maximum values must be clearly marked on or nearby the gauge.

19. Once per day the dust collector is in operation, the facility shall record the pressure drop across the exhaust filters and determine if it is in the acceptable range. If the pressure drop is not within the acceptable range, the facility shall shut down the dust collector and the equipment vented to the dust collector upon discovery of the problem until corrective action has been taken.

20. The owner or operator shall conduct visual inspections of the dust collectors and associated ductwork at least once per week when they are used for visible emissions and fallout. Records shall be maintained of these inspections. If visible emissions or fallout are observed, the facility shall either initiate repairs or shut down the dust collector and the equipment vented to the dust collector until corrective action has been taken.

Glue Line

21. Production shall be limited to a 12 month rolling total of 84,894 lb/year of adhesive applied, and adhesives may not exceed 10% volatiles by weight. Within 30 days of the end of each month, the owner or operator shall record the gallons of adhesive used during the previous month. Purchase records may be used as a surrogate for usage.

22. Production shall be limited to a 12 month rolling total of 84,894 lb/year of primer applied. Within 30 days of the end of each month, the owner or operator shall record the gallons of primer used during the previous month. Purchase records may be used as a surrogate for usage.

23. Shavings and sand materials that contain glue may not be used as fuel for the Hog Fuel Boiler.

Coating Applications

24. Spray coating operations shall be contained to a spray booth. This booth shall be operated so that all exhaust air passes through a filter system that meets one of the following standards:

    a. A system with a minimum initial overspray arrestance of 98 percent. Overspray arrestance must be determined using the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1 procedure and substituting the synthetic test dust feed with a high solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-HVLP) air-atomized spray gun operating at 40 pounds per square inch (psi) air pressure with an air flow rate across the filter of 150 feet per minute. A system that complies with 40 CFR Part 63, Subpart HHHHHH meets this requirement.

    b. A system that meets a minimum initial efficiency reporting value (MERV) of 13 as determined by ASHRAE Method 52.2.

    c. A system that meets a minimum initial filtration efficiency of 98 percent over the particle diameter range from 0.3 to 10 microns. The particle size dependent filtration efficiencies must be determined using either Environmental Protection Agency (EPA) Method 319 or an Agency approved method.

25. Spray application of any individual material containing methylene chloride, lead, Chrome (VI), nickel, or cadmium is prohibited. If the chemical is not listed on the SDS or other data sheet it will be presumed the coating material does not contain the chemical.

26. All spray application of material must be applied with an air-assisted airless spray gun, electrostatic applicator, or high-volume low-pressure (HVLP) spray gun or the Model 40-25 Easy ASB Airless tested on 3.23.2022. Alternative spray technology must meet a minimum transfer efficiency of 65 percent. The procedure used to demonstrate a spray technology's transfer efficiency must be equivalent to South Coast Air Quality Management District's "Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989" and "Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002." A plan describing the test procedure must be developed and submitted to the Agency 30 days prior to conducting any spray technology transfer efficiency test.

27. The spray areas permitted under this order shall always be operated within the acceptable pressure drop range across the exhaust filter bank. Compliance demonstration with this requirement must at a minimum include daily pressure drop inspections on days when the booths are in operation. Operation of the booths must cease when the pressure drop across the filter bank deviates from the established range and corrective action must be taken prior to operation of the booth.

28. All materials from which VOCs can evaporate to the open air shall be disposed of in closed containers or bags. This includes rags, wipes, paper towels, and absorbents that become laden, soaked, or covered in

VOC-containing material.

29. All containers used for mixing, storing, or disposing VOC-containing materials shall be kept closed at all times except during the following situations:
    a. Cleaning of containers.
    b. Depositing of materials in containers or removing of materials from containers.

30. The spray areas permitted under this order must be equipped with an operable gauge to indicate the pressure drop across the exhaust filtration system. The acceptable pressure drop range shall be established using the manufacturer's recommendations, specifications, or instruction; or shall be established based on operator experience to maintain filter integrity and compliance with Conditions #26. The established pressure drop minimum and maximum values must be clearly marked on or nearby the gauge.

31. The owner or operation shall inspect the spray area at least once per day of operation, with each inspection to include the following:
    a. Check of differential pressure across the filters in the spray area to ensure operation within the acceptable range, and
    b. Visual checks of filter condition and fit to ensure complete coverage over the exhaust plenum.

32. The following records shall be kept onsite and up-to-date, and always made readily available to Agency personnel upon request at all times:
    a. Safety Data Sheets (SDS) and formulation data for each VOC-containing material used inside the booths, including VOC content (minus water and exempt compounds) in pounds per gallon or gram per liter.
    b. Documentation to demonstrate compliance with filter requirements in Condition #24.
    c. Documentation to demonstrate compliance with spray gun requirements in Condition #26.
    d. The Operation and Maintenance (O&M) plan. The O&M plan shall be developed and implemented per Agency's Regulation I. At a minimum, the following shall be included in the O&M plan:
        i. Filter maintenance.
        ii. Filter inspection procedures.
        iii. Procedures to correct operation of the booths when the pressure drop across the filter bank deviates from the established range.

Records

33. Records to be maintained by this Order of Approval shall be kept for at least two years and made available to Puget Sound Clean Air Agency personnel upon request.

Order of Approval for NC No. 12246

APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.

Carl Slimp	John Dawson
Reviewing Engineer	Engineering Manager