



Oregon

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June 25, 2025

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Sent electronically only

Quinn Burke-Anderson,

DEQ received the submittal of the Cleaner Air Oregon (CAO) Emissions Inventory, Modeling Protocol, Risk Assessment Work Plan, and Level 3 Risk Assessment for reassessment of risk for the Stimson Lumber Company (Stimson) facility in Gaston, OR on April 23, 2025. These CAO materials were submitted concurrently with a Construction ACDP Application for Title V Permit No. 34-2066-TV-01, in which Stimson proposes to expand operations at the facility with the construction of a new sawmill. Stimson's original CAO risk assessment was approved by DEQ on August 5, 2024. Because Stimson has been notified in writing by DEQ that they are required to submit a risk assessment but has not yet been issued a Toxic Air Contaminant Permit Addendum, Stimson is required to revise and update their CAO Risk Assessment materials to include the new or modified Toxics Emissions Units (TEUs) by a date certain. [[Oregon Administrative Rule OAR 340-245-0060\(4\)\(b\)](#)]

In accordance with ([OAR](#)) 340-245-0030(2), DEQ has determined that the following additional information, corrections, and updates are required by **August 9, 2025** to approve the revised Emissions Inventory, Modeling Protocol, Risk Assessment Work Plan, and Risk Assessment.

General Comment

Startup and shutdown emissions are required to be included in the Emissions Inventory and Risk Assessment [[OAR 340-245-0040\(4\)\(b\)\(B\)\(i\)](#)]. Based on discussions between DEQ and Stimson staff on June 16, 2025, Stimson plans to revise the Risk Assessment to include startups and include scenarios that will allow for the operational flexibility needed in permitting. Specific requirements are detailed below. DEQ may include permit conditions that limit operations to the assumptions used in the risk assessment.

Emissions Inventory

1. Update the emissions calculations in Appendix A to the Construction ACDP ("Emissions Calculations Workbook") and the CAO AQ520 form as follows, and incorporate changes into the Risk Assessment as applicable:
 - a. Revise the Emissions Inventory and modeling to include startup and shutdown emissions (see General Comments), and include:
 - i. Consideration of emissions controlled by the scrubber, controlled by the ESP, and emitted uncontrolled through the ESP stack under worst-case potential to emit annual and daily scenarios;
 - ii. Definition and explanation of which types of startups (for example, cold, warm or hot) and shutdowns have been considered in the modeling and why;

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- iii. Consideration of startup stack parameters, if they vary from typical operating conditions;
 - iv. Calculations and supporting information to support all assumptions made; and
 - v. Additional AQ520 forms as needed to represent additional modeled scenarios (a separate AQ520 form for each scenario can facilitate ease of review);
- b. Boiler with scrubber control (TEU H-BLR_SCR):
 - i. Include silver and compounds (CASRN 7440-22-4) using an emission factor of 9.85E-07 pounds per million BTU¹; and
 - ii. Update the hydrochloric acid (CASRN 7647-01-0) emission factor to use either the highest 3-run average from the two most recent source tests (2019 and 2022 MACT test results), or an arithmetic average of the two 3-run averages;
- c. Boiler with ESP control (TEU H-BLR_ESP): include thallium and compounds (CASRN 7440-28-0) – an emission factor of 1.85E-06 pounds per million BTU² may be used as an estimate for ESP control; and
- d. Boiler with scrubber control (TEU H-BLR_SCR) and ESP control (TEU H-BLR_ESP): include PCB-209 [decachlorobiphenyl] (CASRN 2051-24-3) emissions in the total calculated for the “Polychlorinated biphenyls (PCBs)” Toxic Air Contaminant (TAC) category (CASRN 1336-36-3). The risk-based concentration for PCBs should be compared to a straight summed concentration of all 209 PCB congeners in a mixture³;
- e. Hardboard press (TEU H-PVUV_STCK) and Refiner (TEU H-RF12_STK) stacks: formaldehyde (CASRN 50-00-00) and methanol (CASRN 67-56-1) emissions testing was conducted on the hardboard press and unloader vents on June 27-28, 2023, and on the refiner stack (Scrubber H-S5) on August 1, 2023. Update the formaldehyde and methanol emission factors to use the source test results (either the highest or the average of the representative test results), if the source testing indicated emissions higher than used in the previously-approved Inventory.
- f. Fuel Dryer (TEU H-DRY):
 - i. Update daily emissions in Worksheet 3 Column N to use a number of significant digits consistent with the other calculations, or at least with the number of significant digits in the emission factor used; and
 - ii. Update the references in Worksheet 3 Column I to be consistent with the updated references in the Emissions Calculations Workbook (see also Comment 2.c.ii below);
- g. Kilns (TEU LBR-KLN_HL): Update the number of significant digits in the Hemlock emission factors for formaldehyde (CASRN 50-00-00) and methanol (CASRN 67-56-1) to be consistent between the AQ520 form and the Emissions Calculations Workbook;
- h. Resin Tanks (TEUs RESIN1, RESIN2, RESIN3, and RESIN4):
 - i. Provide more specific molecular weight and vapor pressure data for the resin (BK 254A20) and adhesive (BK 276A30), if these are available from the manufacturer;
 - ii. Correct the calculations in the Emissions Calculations Workbook as follows:

¹ National Council for Air and Stream Improvement, Technical Bulletin 1050 (September 2018), Table 7.4 (“Summary of Trace Element Emissions from Wood Fired Boilers: Wet Scrubbers”)

² National Council for Air and Stream Improvement, Technical Bulletin 1050 (September 2018), Table 7.4 (“Summary of Trace Element Emissions from Wood Fired Boilers: Wet Scrubbers”)

³ See Appendix E of [DEQ’s Recommended Procedures for Toxic Air Contaminant Health Risk Assessments](#) (October 2022)

1. Resin Tank 2: update the calculation in cell P48 (Average Daily Vapor Temperature Range) to use the correct value for the average daily ambient temperature range;
2. Resin Tanks 2, 3, and 4: update the calculations in rows 66 and 70 to use the correct values for minimum and maximum liquid heights;
3. Resin Tanks 2, 3, and 4: update the calculations in rows 65 and 69 to use the correct value for tank diameter;
4. Resin Tanks 2, 3, and 4: update calculations in row 75 (Daily Working Loss) to use the correct values for vapor molecular weight and true vapor pressure;
5. Resin Tanks 2 and 3: update calculations for Maximum Daily emissions (Column AF) to use the correct values for daily total tank routine losses; and
6. Resin Tank 4: update calculation in row 74 (Annual Working Loss) to use the correct value for stock vapor density; and
- iii. In Worksheet 3 of the AQ520 form:
 1. Include emissions for TEU RESIN4;
 2. Correct emissions for RESIN1, RESIN2, RESIN3 – currently formaldehyde (CASRN 50-00-0) and methanol (CASRN 67-56-1) emissions are transposed; and
 3. For RESIN1, RESIN2, and RESIN3: populate the CAS or DEQ ID, Chemical Name, and Control Efficiency columns for methanol;
- i. Existing Planer Mill Cyclone Chipper (TEU S-CYC): in Worksheet 2 of the AQ520, update Max Daily Requested PTE throughput to 371 oven dried tons per day for consistency with the Emissions Calculations Workbook;
- j. Proposed Sawmill Overs Chipper (TEU SM-CHIP): update TEU ID to “SM-CHIP” for consistency with the Modeling Protocol and Risk Assessment Report; and
- k. In Worksheet 3 of the AQ520 form, include maximum daily emission factors in Column G where emission factors are used (even if they are the same as the annual emission factors).
2. Update the documentation in the Emissions Calculations Workbook as follows:
 - a. “Inputs” worksheet: update footnote (a), which currently refers specifically to kilns but is also used in reference to other emission units;
 - b. Update emission factor notes for the following TACs to “(5)” for “NCASI Technical Bulletin 1050 (September 2018). Emission factor for wood-fired boiler”:
 - i. “H-BLR(ESP)-TAC” worksheet: di-n-octylphthalate (CASRN 117-84-0); and
 - ii. “H-BLR(SCR)-TAC” worksheet: all “PCBs & Phthalates” except “Total PCBs”;
 - c. “H-DRY-TAC” worksheet:
 - i. Update the footnote in cell E12 “Uncontrolled Emission Factor” footnote to “(2)” instead of “(1)”;
 - ii. Review the emission factor notes for the following individual TACs and update as needed to reflect the NCASI database – based on DEQ’s information the references should be:
 1. Acetone (CASRN 67-64-1), bromomethane (CASRN 74-83-9), chloromethane (CASRN 74-87-3), methylene chloride (CASRN 75-09-2), and o-Xylene (CASRN 95-47-6): update to footnote “(5)”;
 2. Acrolein (CASRN 107-02-8), phenol (CASRN 108-95-2) and propionaldehyde (CASRN 123-38-6): update to footnote “(6)”.

- d. “LSP-VOC” worksheet:
 - i. Update footnotes (3), (5) and (6) to refer to the Safety Data Sheets for Anti-Blu M3 rather than Anti-Blu M6 solution; and
 - ii. Provide documentation for the density of the AntiBlu M3 Treating Solution; and
- e. “Resin_TAC” worksheet: review and update references as needed, including:
 - i. Ensure footnotes refer to the correct reference numbers;
 - ii. Ensure reference numbers refer to the correct equation numbers in AP-42;
 - iii. Ensure columns in the TAC speciation section include correct footnotes (for example, columns U and AC for vapor mole fraction);
 - iv. Update Reference 34, which refers to "Table 4, Storage Tank Solutions Compositions" – this table doesn't exist in this workbook; and
 - v. Update the assumption in Reference 41 to reflect a maximum daily temperature of 555 degrees Rankine.

Modeling Protocol

- 3. Update the Modeling Protocol as follows and incorporate the updates into the Risk Assessment as applicable:
 - a. In Table 4-1, update the footnote for the "Release Height AGL" column – note (7) refers to diameter;
 - b. In Table 4-2:
 - i. Remove emissions for epichlorohydrin (CASRN 106-89-8) from the Basecoat and Topcoat columns; and
 - ii. Review and update the “RBC?” column to be consistent with [OAR 340-245-8010 Table 2](#) – the following chemicals do have RBCs:
 - 1. DPM (DEQ ID 200); and
 - 2. PAHs (excluding Naphthalene) (DEQ ID 401);
 - c. In Tables 4-2 and 4-3:
 - i. Update the “Facility Total” column in Table 4-2 and 4-3 so that it does not double-count emissions from the resin storage tank and whitewater chest (Model ID WHITE); and
 - ii. Update acetone (CASRN 67-64-1) emissions for TEU MACH to match the emissions in the AQ520 form;
 - d. Exposure Locations (Table 5-9):
 - i. Review and update receptors marked “Risk Not Assessed” to be consistent with Section 7.2.1 of the Modeling Protocol and Risk Assessment Report, which states that risk will not be assessed for “roadways or rail rights-of-way that fall within the 25m and 50m spacing”. Currently some receptors outside that spacing are designated as “Risk Not Assessed”.
 - ii. Update Table 5-9 to include accurate information in the Zoning and Reason for Revision columns; for example, many receptors that are zoned “Exclusive Farm Use” are labeled “Parks and Open Space” in the table;
 - iii. Review and update Table 5-9 or Figures 7-3 and 7-4 so that exposure designations are consistent between the two; for example, the table shows a "worker" designation along Scoggins Valley Road northeast of the facility, but Figure 7-4 shows "acute only" in this area;
 - iv. Review the aerial imagery and ensure that all visible residences are evaluated as residential exposure locations. This includes but is not limited to: houses along

SW Scoggins Valley Road, Old Highway 47/SW Patton Valley Road, SW Dundee Rd, Stimson Mainline Rd., and south of SW Fluke Drive to the east of the facility; and

- v. Update exposure locations that are childcares or schools so that they are evaluated for both worker and child exposure (for schools that are not also residences) *or* for both residential and child (for in-home daycares or grid receptors that are adjacent to residential areas).

Risk Assessment Work Plan

- 4. Update the Risk Assessment Work Plan as follows and incorporate the updates into the Risk Assessment as applicable:
 - a. In Section 7.1 update the statements “All TEUs will be classified as Significant TEUs” and “A Level 3 Risk Assessment will be conducted that includes all facility TEUs” to reflect that Stimson does have Exempt TEUs (TEUs TANK_DSL1 and TANK_DSL2) which are identified in the AQ520 but are not modeled;
 - b. In Section 7.2.1, update reference for the “crosswalk-of-receptors” to Table 5-9;
 - c. In Table 7-1, include cancer Risk-Based Concentrations for nickel metal (CASRN 7440-02-0). Nickel metal emitted in particulate form is generally considered an insoluble nickel compound (DEQ ID 365); and
 - d. In Section 7.4, clarify or remove the second bullet under “Cancer and Chronic Noncancer Assessments”, which states “*The excess cancer risk and chronic noncancer risk assessments were performed assuming that all TEUs operate for the course of the calendar year at their potential to emit levels. It is physically impossible that the facility could operate several of the facility TEUs at maximum potential to emit for an entire year without shutdown time for maintenance and cleaning, such as the boilers.*” The annual Requested Potential to Emit modeled in the risk assessment is lower than physical capacity for the risk driving TEUs (kilns and boilers), so it is unclear why this rate of emissions would overestimate risk.

Risk Assessment

- 5. Update the Risk Assessment report as follows:
 - a. In Table 1.2, update the significant digits shown in the risk results to be consistent with rule requirements in [OAR 340-245-0200\(4\)](#); for example, reported worker cancer risk should be reported as 1.6 (rounded to one decimal place for comparison to the Source Permit Level);
 - b. In Section 8.2, update the sentence “*As shown in Table 1-2 and Table 8-3, the maximum predicted excess child cancer risk, child and chronic and acute noncancer hazard indices ...*” to “*As shown in Table 1-2 and Table 8-3, the maximum predicted excess cancer risk and chronic and acute noncancer hazard indices...*”;
 - c. In Section 8.2, update the sentence “*the proposed project will not result in an increase of facility-wide risk beyond any RAL that was identified as part of the CAO permitting program*” to clarify that risk has not increased above any Risk Action Level that was applicable in the previously-approved Risk Assessment – risk does exceed some CAO Risk Action Levels; and
 - d. In Table 8-2, update the acute maximum risk location to Receptor ID 2423 and UTM coordinates 485,305 (Easting) and 5,035,012 (Northing) for consistency with the modeling outputs.

DEQ requests that you submit additional information to complete your Risk Assessment. If you think that any of that information is confidential, trade secret or otherwise exempt from disclosure, in whole or in part, you must comply with the requirements in [OAR 340-214-0130](#) to identify this information. This includes clearly marking each page of the writing with a request for exemption from disclosure and stating the specific statutory provision under which you claim exemption. Emissions data is not exempt from disclosure.

DEQ remains available to discuss this information request and answer any questions you may have. Failure to provide additional information, corrections, or updates to DEQ by the deadlines in this letter may result in a violation of [OAR 340-245-0030\(2\)](#).

If you have any questions regarding this letter please contact me directly at (503) 866-9643 or julia.degagne@deq.oregon.gov. I look forward to your continued assistance with this process.

Sincerely,

A handwritten signature in cursive script that reads "Julia DeGagne".

Julia DeGagné
Cleaner Air Oregon Project Engineer

Cc: Patty Jacobs, DEQ
J.R. Giska, DEQ
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