



Oregon

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October 11, 2022

Steven Petrin
Stimson Lumber Company
49800 SW Scoggins Valley Rd
Gaston, OR 97119-9132

RE: Pre-Enforcement Notice
Stimson Lumber Company
PEN - 2022-PEN-7631
34-2066-TV-01

Steven Petrin:

This letter serves as a Pre-Enforcement Notice (PEN) for failure to address all Corrective Actions (CAs) required to finalize the Cleaner Air Oregon (CAO) Emissions Inventory (Inventory) for the Stimson Lumber Company facility (Stimson) in Gaston, Oregon. The CAs were outlined in the Warning Letter with Opportunity to Correct (WLOC) that DEQ issued to Stimson on June 30, 2022, and in the amended WLOC (AWLOC) issued on August 8, 2022. As of the due dates set in the WLOC and AWLOC, Stimson had not submitted an Inventory containing all updates and supplemental information required to satisfy the CAs.

Stimson was called in to the CAO program on July 2, 2020 and submitted an initial Inventory on September 30, 2020. DEQ met with Stimson on January 26, 2021 to discuss the Inventory, and requested additional information via email on January 28, 2021. In response, Stimson provided supplemental information and a revised Inventory to DEQ on April 23, 2021. DEQ met with Stimson on February 1 and February 3, 2022 to discuss outstanding data needs and additional emission estimates required prior to approval of the Inventory. In accordance with Oregon Administrative Rule ([OAR 340-245-0030\(2\)](#)), DEQ issued a written request on March 1, 2022, requiring additional information and a revised inventory to be submitted on April 18, 2022. Stimson submitted information and a revised Inventory on April 18, 2022, and provided a minor revision to the Inventory on April 22, 2022. However, Stimson failed to sufficiently address DEQ's March 1, 2022 request. DEQ completed a review of the Inventory and met with Stimson to discuss updates that remained outstanding on June 1 and June 3, 2022. On June 30, 2022, DEQ issued a WLOC citing Stimson for violation of [OAR 340-245-0040\(1\) and \(4\)](#), and on August 8, DEQ issued an AWLOC, which revised deadlines in response to an extension request from Stimson. Stimson submitted additional information and revised Inventories on August 15, 2022 and August 29, 2022, according to the due dates specified in the AWLOC.

DEQ has completed a review of the revised Inventories and, while Stimson indicated an intent to complete the required CAs in a letter dated August 15, 2022, numerous CAs were not completed in the

34-2066 Stimson Lumber Company

submitted Inventory. Therefore, DEQ has determined that Stimson remains in violation of [OAR 340-245-0040\(1\) and \(4\)](#) for failing to sufficiently address the following CAs, as detailed in the AWLOC issued by DEQ:

1. Submit to DEQ a revised emissions inventory (AQ520 form) and supporting calculations in Excel format including the following updates:
 - a. **CA #1.a.i:** Include an estimate of fugitive emissions from the forming machine (FORMER);
 - b. **CA #1.c.iii:** Update the phenol (CASRN 108-95-2) emission factor for the fuel dryer (FDRYER) to 0.0233 pounds per ODT;
 - c. **CA #1.d.ii:** For the boilers, update the ‘Actual’ BOILER_ESP 2019 activity value to 583,631 MMBtu per year and the BOILER_SCR 2019 activity value to 49,168 MMBtu per year;
 - d. **CA #1.e.ii.3:** For Anti-Blu XP-64 (TEU LSP - MB), update the weight percent of dipropylene glycol monomethyl ether (CASRN 34590-94-8) to match the provided SDS (7-13 percent, which may be reported in the Inventory as an average of 10 percent);
 - e. **CA #1.i.iv.1:** Provide confirmation of Tier certification or manufacturer emissions data to support the use of the particulate matter (PM) emission factor for Diesel Particulate Matter (DEQ ID 200) for the fire pump (TEU FIRE).
 - f. **CA #1.j.ii.2:** For the gasoline tank (G1), update cell J5 of Table 22 from “Storage Tank D2” to “Storage Tank G1”; and
 - g. **CA #4:** Provide laboratory data or other justification for parameters used in WATER9, including but not limited to: biomass concentrations, clarifier percent removal, pH, TSS, temperature, and aeration parameters.

Based on the Inventories submitted August 15, 2022 and August 29, 2022, DEQ has concluded that Stimson is responsible for the following violations of Oregon environmental law:

VIOLATION:

- (1) Stimson failed to submit a timely and complete emissions inventory as required under [OAR 340-245-0040\(1\) and \(4\)](#). Specifically, Stimson failed to provide DEQ with the requested revisions, corrections, and additional information required by the corrective actions specified in the AWLOC issued on August 8, 2022. This a Class II violation according to [OAR 340-012-0054\(2\)\(i\)](#).

Class I violations are the most serious violations; Class III violations are the least serious.

Corrective Action(s):

By no later than November 1, 2022, Stimson must satisfy the following Corrective Actions:

1. Submit to DEQ a revised emissions inventory (AQ520 form), supporting calculations in Excel format, and Process Flow Diagrams (PFDs) including the following updates:
 - a. **Forming machine (FORMER):**
 - i. designate a new TEU (FORMER_FUG) to include fugitive emissions as proposed in Stimson’s letter to DEQ dated August 15, 2022 (“as 10% of the vacuum table emissions”); and

- ii. update the TEU ID representing the FORMER vacuum system emissions to FORMER_STCK and clarify the emission point for this stack by updating the supporting calculations, AQ520, and PFDs to be consistent with one another; currently, the PFD indicates a distinct emission point for the FORMER with no associated controls, while the AQ520 indicates the emissions vent through the press vent stack (PV_STCK) with wet scrubber control.
- b. Fuel Dryer (FDRYER): update the phenol (CASRN 108-95-2) emission factor for the FDRYER to 0.0233 pounds per ODT for consistency with the NCASI database.
- c. Boilers (BOILER_ESP and BOILER_SCR):
 - i. update the ‘Actual’ BOILER_ESP 2019 activity value to 583,631 MMBtu per year and the BOILER_SCR 2019 activity value to 49,168 MMBtu per year to align with 2019 Annual Report and reported Fuel Heat Input to Steam Output ratio (FHISOR); and
 - ii. update the emissions for BOILER_ESP and BOILER_SCR to include the following emission factors¹:
 - 1. Thallium and compounds (CASRN 7440-28-0): 1.85E-06 lb/MMBtu;
 - 2. 3-Methylcholanthrene (CASRN 56-49-5): 8.68E-09 lb/MMBtu; and
 - 3. 7,12-Dimethylbenz[a]anthracene (CASRN 57-97-6): 4.57E-09 lb/MMBtu.
- d. Surface Coating (MB_SURFACE): update the weight percent of dipropylene glycol monomethyl ether (CASRN 34590-94-8) in Anti-Blu XP-64 to 10 percent (to reflect the average listed in the Safety Data Sheet (SDS) previously provided), or submit a recent SDS that is consistent with the product data in the Inventory.
- e. Storage Tanks:
 - i. for the gasoline tank (G1), update calculations to follow the methodology in AP-42, Section 7.1 for annual working losses and all standing losses, and the Texas Commission on Environmental Quality (TCEQ) methodology for daily working losses², and make minor typographical corrections – specific updates that will satisfy this corrective action have been included as Attachment A;
 - ii. for TEUs G1, D1, and D2:
 - 1. update the temperatures used to calculate Toxic Air Contaminant (TAC) vapor pressures to be consistent with the temperatures used to calculate product vapor pressures, for both annual and maximum daily emissions estimates; and
 - 2. update TAC vapor mole fraction calculations to reflect the product vapor pressure at the maximum daily temperature, for maximum daily emissions estimates;
 - iii. for resin tanks (R1, R2, and R3):
 - 1. confirm the maximum daily liquid surface temperature is not expected to exceed 25 degrees Celsius; and

¹ Source: National Council for Air and Stream Improvement (NCASI), "Compilation of Air Toxics Emissions Data for Pulp and Paper Sources -- Publication Accompanying the 2018 Air Emissions Database (Technical Bulletin 1050), September 2018. As a NCASI Member, Stimson has access to NCASI data and technical bulletins. Note that DEQ inadvertently excluded these TACs from the list provided as Attachment A with our correspondence of June 30 and August 3, 2022.

² <https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/emissrates-tanks6250.pdf>.

- iv. update the temperatures used to calculate TAC vapor pressures to be consistent with the expected average and maximum daily liquid surface temperatures for annual average and maximum daily emissions estimates, respectively; and
- v. Tank calculations for tanks R1, R2, and R3 use different ambient temperature statistics than tank calculations for tanks G1, D1, and D2 – update the average daily maximum and average daily minimum ambient temperatures for all tanks to be consistent with Forest Grove Complex meteorological dataset cited; alternatively, update the references to describe the data source used.
- f. Refiners: update the supporting calculations, the Stack or Fugitive IDs in Tab 2 of the AQ520 form, and the PFD to be consistent with one another with regard to the emission point(s) for RF12. The PFD indicates two emission points (rotary valves venting directly to the atmosphere and the stock chest venting to Scrubber 5), while the AQ520 indicates only one emission point (Point Stack ID RF12).
- g. Hardboard Wastewater: in Table 15 of the supporting calculations, update units in the “WATER9 Model Output” header and the footnotes to be consistent with one another and the model output.
- h. Welding: for the WELD TEU, update emissions as follows:
 - i. include emissions for Cobalt (CASRN 7440-48-4) from the LIN 309L, 332BLUE product in the supporting calculation emissions totals and on the AQ520 form; and
 - ii. report emissions for aluminum oxide as “aluminum and compounds” (CASRN 7429-90-5) rather than aluminum oxide (fibrous forms) (CASRN 1344-28-1); welding emissions are not anticipated to be fibrous.
- i. Update the PFDs to include all TEUs, including but not limited to: the whitewater chest (WHITE), press pit (PRESSP; if applicable), fuel storage tanks (D1, D2, G1), and emergency engines (BGEN and FIRE).
- j. Update the AQ520 form as follows:
 - i. populate the boxed fields in column B of Tab 1 (“Facility Information);
 - ii. if Stimson is not seeking a de minimis source determination for CAO, the activity information listed in the “Annual Capacity” and “Max Daily Capacity” columns on Tab 2 and the Capacity emissions on Tabs 3 and 5 may be removed; alternatively, please update these activities and emissions to reflect the maximum emissions from each TEU under its physical and operational design, per the definition of “capacity” in [OAR 340-200-0020\(19\)](#);
 - iii. on Tabs 2 through 5, update TEU IDs and Unit Descriptions to the “New TEU IDs” and “New TEU Descriptions” as specified in Attachment B;
 - iv. for the TEUs BGEN_DPM and FIRE_DPM, update the emission factors and units in Tab 3 from “grams per kilowatt hour” to “pounds per hour” for consistency with activity units on Tab 2;
 - v. for the TEUs BGEN and FIRE, update “Max Daily” activity values on Tab 2 to reflect the reported units of “thousand gallons” of fuel;
 - vi. for the KILN TEUs (KILN_DF, KILN_HL, KILN_TF), and PRESS TEUs (PRESS_STK and PRESS_FUG), update activity units in Tab 2 to “Mbdft” for consistency with emission factor units on Tab 3 and supporting calculations.
 - vii. update the “CAS or DEQ ID” on Tab 3 for the following TACs:
 - 1. di-n-octylphthalate: DEQ SEQ ID 518 (“phthalates” group, for TEUs BLR_ESP and BLR_SCR);

2. phosphorus: DEQ SEQ ID 504 (“phosphorus and compounds” group, for TEUs BLR_ESP and BLR_SCR);
 3. polycyclic aromatic hydrocarbons (PAHs): DEQ SEQ ID 401 (for TEUs BGEN and FIRE);
 4. Diesel Particulate Matter: DEQ SEQ ID 200 (for TEUs BGEN and FIRE); and
 5. Fluorides: DEQ SEQ ID 239 (“fluorides” group, for TEU WELD);
- viii. Update the emission factors and emissions on Tab 3 to include at least as many significant digits as are cited in the emission factor reference source;
 - ix. Update the “Max Daily Actual” emissions on Tab 3 to match the values in the supporting calculation workbook for TEUs HYDRO, SURGE, ABASE, CLAR, PIT, S_POND, E_POND, R_POND and HEAD;
 - x. Update the “Max Daily Requested PTE” emissions on Tab 3 to match the value in the supporting calculation workbook for TEU BPOT;
 - xi. Update the emission factor references on Tab 3 for the following TEUs and TACs:
 1. PRESS (all reported TACs): update to “AP-42 Chapter 10 (October 2002), Table 10.6.4-6. Representative of Hardboard hot press, PF resin”;
 2. FORMER: for phenol (CASRN 108-95-2) and propionaldehyde (CASRN 123-38-6), update to “Source Test Evaluation Report (2007)”;
 3. BGEN: for DPM (DEQ SEQ ID 200), update to “Emission rates from engine manufacturer and provided with emergency generator application submitted to DEQ in June, 2003. Emission rates represent 20% and 52% control by the catalytic converter for PM and THC, respectively”.
 4. BPOT (all reported TACs): update to “PM emission factor with TACs speciated by alloy composition. PM EF from AP-42, Chapter 12.10, Table 12.10-3 "Particulate Emission Factors for Iron Furnaces"; uncontrolled particulate emission factor for melting in an electric induction furnace.”
 5. BLR_SCR:
 - a. for metal TACs with wet scrubber emission factors, update to: “NCASI Technical Bulletin 1050 (September 2018). Emission factor for wood-fired boiler with wet scrubber control.”
 - b. For molybdenum trioxide (CASRN 1313-27-5) and vanadium (CASRN 7440-62-2), update to: “NCASI Technical Bulletin 1050 (September 2018). Emission factor for wood-fired boiler with ESP.”
 - c. For hydrogen fluoride (CASRN 7664-39-3) and hydrochloric acid (CASRN 7647-01-0) , update to: “NCASI Technical Bulletin 1050 (September 2018). Emission factor for wood-fired boiler with wet control device.”
 - d. For emission factors with the reference “NCASI Technical Bulletin 1050 (September 2018). Emission factor for wood-fired boiler with dry control device”, update to: “NCASI Technical Bulletin 1050 (September 2018). Emission factor for wood-fired boiler.”

- xii. for Material Balance Activities on Tab 4 (TEUs PL_BASE, PL_TOP, and LSP – MB):
 - 1. update the “Annual” and “Max Daily” activity values to correctly reflect the total Actual and Requested Potential to Emit (PTE) usage of each material; and
 - 2. review the “Emission Type (e.g. Point or Fugitive)” designation, and update to “fugitive” if emissions do not exit from a designated stack;
 - xiii. for Pollutant Emissions on Tab 5 (TEU LSP – MB), update the following:
 - 1. Daily Requested PTE dipropylene glycol monomethyl ether (CASRN 34590-94-8) emissions for Anti-Blu XP-64, to be consistent with annual requested PTE of zero; and
 - 2. Annual Requested PTE and Capacity dipropylene glycol monomethyl ether (CASRN 34590-94-8) emissions for Mycostat P51 Treating Solution, to be consistent with the supporting calculations;
 - xiv. for storage tank TEUs (D1, D2, G1, R1, R2, and R3), calculate “Annual” and “Max Daily” emission factors in units of pounds TAC emitted per gallon of product throughput and include these on Tab 3;
 - xv. for TEUs with emissions estimated using WATER9 (HYDRO, SURGE, ABASE, CLAR, PIT, S_POND, R_POND, E_POND, WHITE, MACH, and HEAD), calculate “Annual” and “Max Daily” emission factors in units of pounds TAC emitted per gallon of wastewater throughput and include these on Tab 3;
 - xvi. for WELD and BPOT TEUs, calculate emission factors in units of pounds TAC emitted per pound of product throughput and include these on Tab 3 (create additional TEUs as needed to capture emission factors for individual products or processes);
 - xvii. include the WELD and BPOT TEUs and associated information on Tab 2;
 - xviii. include emissions from the PRESS_FUG TEU on Tab 3; and
 - xix. clarify whether TAC emissions have been calculated for the press pit (TEU PRESF), and update the supporting calculations, AQ520, and PFD accordingly – this TEU is listed on Tab 2 of the AQ520, but is not listed in Tab 3 or in the supporting calculations.
2. Provide the following additional information or documentation:
- a. for TEU FIRE, written documentation of EPA Tier 3 certification to support the use of the Tier 3 particulate matter (PM) emission factor for Diesel Particulate Matter (DEQ ID 200);³
 - b. for TEU BGEN, written documentation from the catalytic converter manufacturer to support assumed 20 percent control of PM and 52 percent control of total hydrocarbon emissions by the catalytic converter;
 - c. for all emissions estimates using WATER9 (TEUs HYDRO, SURGE, ABASE, CLAR, PIT, S_POND, R_POND, E_POND, WHITE, MACH, and HEAD):
 - i. laboratory data or other justification for parameters used in WATER9, including but not limited to biomass concentrations, clarifier percent removal, pH, TSS, temperature, and aeration parameters;

³ If Tier 3 certification is provided, Stimson may query DEQ for less conservative default emission factors, appropriate to newer diesel engines.

- ii. laboratory analytical data or other data sources used to characterize influent for WATER9; and
 - iii. all native WATER9 input files used in the Inventory;
- d. for each “Individual Product” reported in Table 20 of the Inventory supporting calculations (WELD TEU):
 - i. SDS; and
 - ii. welding process types used (e.g., GMAW, SMAW, MIG, TIG);
- e. for the Babbitt pots (BPOT TEU):
 - i. SDS(s) for all Babbiting alloys used; and
 - ii. maximum temperature(s) of Babbiting alloy during melting;
- f. for sawblade maintenance activities, provide estimates of TAC emissions or justification for exemption per [OAR 340-245-0060\(3\)\(a\)](#); and
- g. supporting calculations in a publically-accessible (not password-protected) format.

The updated Inventory, supporting calculations, and all supporting documentation should be sent to julia.degagne@deq.oregon.gov.

DEQ issued this PEN because the violation cited by DEQ reflects Stimson’s failure to include the required emissions data and supporting information for all regulated TAC emissions in its Inventory. Emissions of TACs such as acetaldehyde, acrolein, formaldehyde, methanol, and propionaldehyde can pose health risks to the surrounding community, and are emitted by the hardboard production and wastewater treatment processes. Acetaldehyde and formaldehyde are regulated for their cancer-causing potential and potential to cause acute and chronic noncancer health effects. Acrolein, methanol, and propionaldehyde are regulated for their noncancer health risk potential.

Stimson has failed to satisfy all Corrective Actions required by the WLOC and AWLOC, and a complete Inventory is still outstanding. We are therefore referring the matter cited in the WLOC and AWLOC to DEQ’s Office of Compliance and Enforcement for formal enforcement action, which may include assessment of civil penalties and/or issuance of a Department order. A formal enforcement action may include a civil penalty assessment for each day of violation. Your timely and responsive action on these items will be taken into consideration in any civil penalty assessment issued by DEQ.

If you believe any of the facts in this PEN are in error, you may provide written information to me at julia.degagne@deq.oregon.gov. DEQ will consider new information you submit and take appropriate action.

DEQ endeavors to assist you in your compliance efforts. Should you have any questions about compliance or about the content of this letter, you may contact me at (503) 866-9643 or the email address listed above.

Sincerely,



Julia DeGagné
Air Toxics Project Manager

Enc: Attachment A: Tank Emission Calculations for Gasoline Tank G1 (sent via email only)
Attachment B: Required Updates to TEU IDs

Cc: Brian Bartlett, Stimson Lumber Company
Andrew Rogers, Maul Foster and Alongi
Patty Jacobs, DEQ
JR Giska, DEQ
Josh Alexander, DEQ
Matt Davis, DEQ
File