



# Oregon

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May 4, 2023

Cascade Steel Rolling Mills, Inc.  
3200 N Hwy 99W  
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*Sent via email only*

Jim Spahr,

Cascade Steel Rolling Mills, Inc. (CSRSM) was called into the Cleaner Air Oregon (CAO) program on February 7, 2022, and submitted an Emissions Inventory (Inventory) on May 9, 2022. In accordance with Oregon Administrative Rule ([OAR 340-245-0030\(2\)](#)), DEQ issued a written request on August 26, 2022, requiring additional information and a revised Inventory to be submitted by October 10, 2022. CSRSM submitted a revised Inventory on October 10, 2022 but did not provide all of the revisions, corrections, and additional information necessary to approve the Inventory as requested in DEQ's August 26, 2022, letter. DEQ issued CSRSM a Warning Letter with Opportunity to Correct (WLOC) on December 13, 2022, citing CSRSM for violation of [OAR 340-245-0040\(1\)&\(4\)](#) and allowing for corrective actions to be completed by February 13, 2023. CSRSM provided a revised Inventory and supporting documentation on February 13, 2023.

DEQ has reviewed the Inventory and identified additional updates that are needed before approval. In accordance with [OAR 340-245-0030\(4\)\(b\)](#), DEQ is providing CSRSM with a revised deadline for submittal. Please submit the information specified below **by June 5, 2023**.

## **General Comment**

CSRSM is working to obtain site-specific data for hydrogen fluoride (CASRN 7664-39-3) and fluorides (DEQ SEQ ID 239) from the melt shop through source testing in response to an Information Request from DEQ dated January 30, 2023. DEQ may require this information to be incorporated into the Inventory and an updated risk assessment when it becomes available. In the meantime, CSRSM must use conservative emission factors and assumptions to develop emissions estimates (see Specific Comments below). CSRSM should apportion emissions between all potential release points using current knowledge of the facility and engineering judgement.

## **Specific Comments**

1. Submit to DEQ a revised Inventory (AQ520 form), along with all supporting calculations in Excel format, as well as all information required under [OAR 340-245-0040\(4\)](#), including the following updates:

- a. Melt shop (TEUs EU-1 and EU-3):
  - i. Include emissions estimates for hydrogen fluoride (CASRN 7664-39-3) and provide justification – if using emission factors from another facility, include the engineering calculations or source test data used to derive the emission factors.
  - ii. In the absence of site-specific emissions data for fluorides (DEQ SEQ ID 239), update emissions to use the following emission factors:
    1. For TEU EU-1 (BH01, BH01A, and BH02 combined): 0.01 pounds fluoride per ton metal produced, based on DEQ’s review of permits for steel production facilities with similar processes and controls to CSRM<sup>1</sup>; and
    2. For TEU EU-3 (melt shop fugitives (MELTFUG) and roof monitor (RMELT) combined): 0.01 pounds fluoride per ton metal produced, based on the overall capture/control efficiency assumptions proposed by CSRM in Table B-2 of the Inventory supporting calculations; and
  - iii. CSRM should apportion emissions between all potential release points, including baghouses (BH01, BH01A, and BH02), melt shop fugitives (MELTFUG) and the roof monitor (RMELT) using current knowledge of the facility and engineering judgement.
- b. Billet cutting (TEUs EU-10 and EU-12): update the vanadium (CASRN 7440-62-2) emission factor to correct a miscalculation on page 15 of the 2019 Particulate and Trace Metals Emissions Test Report (submitted to DEQ on May 9, 2022):
  - i. In the supporting calculations (“BC Filter No Blank” tab), update the pound per ton emission rates for Runs 5 and 7 to reflect the reported pounds vanadium emitted per hour divided by tons per hour metal produced: 7.07E-7 pounds per ton for Run 5 and 7.14E-7 pounds per ton for Run 7; and
  - ii. Update the emission factor in the AQ520 form to 5.84E-6 pounds per cut.
- c. Scrap handling (TEU EU-09sh\_Main and TEU EU-02sh\_Sec): Use the EPA drop point equation (AP-42 Section 13.2.4, Equation 1) to develop particulate matter emission factors instead of the batch drop emission factor from AP-42 Table 12.5.4<sup>2</sup>:
  - i. Assume wind speeds equal to those used for slag handling (TEU EU-05): 20.85 miles per hour for maximum daily emissions and 6.66 miles per hour for annual average emissions; and
  - ii. If the moisture content of scrap is unknown, moisture content may be assumed 0.25 percent.

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<sup>1</sup> See, for example: Steel Dynamics Title V Permit No. T183-39498-00030, Issued 6/5/2019, Indiana Department of Environmental Management (<https://permits.air.idem.in.gov/39498f.pdf>); and Nucor Title V Permit Modification No. 107-45480-00038, Issued March 30, 2023, Indiana Department of Environmental Management (<https://permits.air.idem.in.gov/45480f.pdf>).

<sup>2</sup> From AP-42 Section 12.5: "Because the predictive equations [in Section 13.2] allow for emission factor adjustment to specific source conditions, the equations should be used in place of the factors in Table 12.5-4, if emission estimates for sources in a specific iron and steel facility are needed."

- d. Welding (TEU EU-17, all welding rod types): Use the San Diego Air Pollution Control District’s Welding Operations methodology to develop emissions estimates for all Toxic Air Contaminants (TACs) present in welding products.<sup>3</sup>
- e. Raw materials handling: Raw materials handling must be included as a TEU or TEUs in the Inventory, as follows:
  - i. Bulk lime: bulk lime handling in the lime storage silo may be considered an exempt TEU under [OAR 340-245-0060\(3\)\(a\)](#), based on emissions estimates DEQ has developed from information provided by CSRM on February 13, 2023. Please confirm the accuracy and completeness of the calculations provided in Attachment A, or provide a revised emissions estimate; and
  - ii. Other materials: Provide emissions estimates for handling of all materials used which contain TACs; alternatively, provide justification for classifying handling of the materials as an exempt TEU under [OAR 340-245-0060\(3\)\(a\)](#).<sup>4</sup> Materials must include but are not limited to the list provided in Attachment A.
- f. GDF (TEU EU-15): To avoid double-counting, CSRM may remove emissions for “xylene (mixture), including m-xylene, o-xylene, p-xylene” (CASRN 1330-20-7) from the Inventory – these emissions are also reported as individual isomers (m-, p-, and o-xylene).
- g. Revise the AQ520 form as follows:
  - i. On Tab 2 and Tab 3, include separate TEU IDs (line items) for each applicable “Stack or Fugitive ID” (BH01, BH01A, BH02, RMELT, and MELTFUG, WSCALE, Scrap1, Scrap2, Scrap3, and Nroad) for the following TEUs<sup>5</sup>:
    - 1. EU-09sp;
    - 2. EU-09ng;
    - 3. EU-1
    - 4. EU-16ng;
    - 5. EU-12;
    - 6. EU-12ng; and
    - 7. EU-11;
  - ii. On Tab 2, include maintenance shop chemical usage and cooling towers as TEUs. These may be considered exempt TEUs under [OAR 340-245-0060\(3\)\(a\)](#); exempt TEUs must be included in the Inventory but emissions do not need to be quantified or included on Tab 3; and

<sup>3</sup> San Diego Air Pollution Control District, Welding Operations, Revised July 11, 2022. Available at: <https://www.sdapcd.org/content/dam/sdapcd/documents/permits/emissions-calculation/welding/APCD-Welding-Operations.pdf> [Accessed April 21, 2023].

<sup>4</sup> For example, demonstrate that the TEU is not likely to materially contribute risk by providing a list of work practices that ensure materials are kept in sealed bags outside of the melt shop.

<sup>5</sup> Individual line items will not necessarily be designated as separate TEUs for permitting purposes. Breaking out the release points on the AQ520 form is intended to help verify consistency between the emission rates and “Stack or Fugitive ID” in the Emissions Inventory and those provided in the subsequent Modeling Protocol and Risk Assessment. TEU IDs may be listed in the format “[TEU Name]\_[Stack or Fugitive ID]” to indicate that a single TEU has multiple emission points which are separated for clarity on the AQ520 form.

- iii. Update following line items in the “Reference/Notes” column on Tab 3:
  1. TEU EU-3\_RM: for mercury (CASRN 7439-97-6): “Title V Review Report 36-5034-TV-01: page 59 (mercury), page 29 (PM10), and page 28 (PM)”;
  2. TEU EU-10ng: for benzene: (CASRN 71-43-2): "Oregon DEQ 2020 ATEI Combustion EF Tool"; and
  3. TEU EU-11: For PCDDs and PCDFs (DEQ SEQ ID 646) and PCBs TEQ (DEQ SEQ ID 645): “AP 42, Chapter 13.2.2 and Remus et al., 2013 (BAT Reference Document for Iron and Steel Production) for slag composition. Control efficiency from DEQ permit Review Report pg. 29 and this control efficiency is included in the emission factor provided.”
2. Provide SDSs for the following materials:
  - a. Welding materials;
  - b. Slag wetting oxidizer; and
  - c. Chemicals used in the cooling towers.

DEQ is requesting that you submit additional information to complete your Inventory. 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 with you and answer any questions you may have. Failure to provide additional information, corrections, or updates to DEQ by the deadlines above may result in a violation of [OAR 340-245-0030\(1\)](#).

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

Sincerely,



Julia DeGagné  
Air Toxics Project Manager

Enc: Attachment A – Raw Materials: Proposed Lime Silo TAC Emission Calculations and Other Materials List

Cc: Daniel Lee, CSR  
Tim Sturdavant, CSR  
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Tom Wood, Steel Rives  
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File