



a Radius Recycling company



March 1, 2024

Ms. Julia DeGagné via email: Julia.degagne@deq.state.or.us

Air Toxics Project Manager
Oregon Department of Environmental Quality
Northwest Region
700 NE Multnomah Street, Suite 600
Portland, OR 97232

**Re: Cascade Steel Rolling Mills, Inc.
CAO Emissions Inventory**

Dear Ms. DeGagné:

The purpose of this letter is to respond to your January 8, 2024 and January 29, 2024 letters requesting more information related to our Cleaner Air Oregon (CAO) Emissions Inventory (Inventory). We are timely submitting that information as well as an update to our Inventory pursuant to your letters.

As you are aware, completion of our Inventory has been affected by the lack of verified methodologies or site-specific information for estimating air emissions from scrap handling activities at our facility. In the absence of such methodologies or site-specific information, DEQ has repeatedly requested that we use the EPA drop equation (AP-42 Section 13.2.4, Equation 1) with an assumed moisture content of 0.25% to estimate air emissions from scrap handling. DEQ has assured us, however, that it will consider revising that approach if representative site-specific information becomes available. In addition, your January 8 letter states that DEQ would accept the application of a control efficiency to the drop equation if CSRSM could install and operate a scrap handling water spray control system.

Since then, as we discussed with you on February 26, 2024, we have conducted an evaluation as to whether use of a scrap handling water spray system would be technically feasible and safe. Our evaluation focused on two other scrap steel facilities that we were able to confirm operate scrap handling water spray control systems. Based on our evaluation, we have concluded that constructing and operating a similar water spray system at CSRSM will be feasible and can be accomplished safely.

Our responses to the information requests about water spray controls presented in your January 8th letter are below. Each request is repeated in italics followed by our response.

1. *Indication of whether or not CSRSM will be installing water sprays to control fugitive emissions from scrap handling;*

Response:

CSRSM plans to install the water spray system described in this letter and during our February 26, 2024 meeting with DEQ.

2. *If water spray controls will be installed, provide:*

- a. A general description of the scope of the proposed system and how it will control fugitive emissions from scrap handling activities, including:
- i. Where the spray controls will be installed; and
 - ii. When spray controls would be utilized;

Response:

The location of the proposed water spray system is shown in Figure 1 below.

The proposed system will include nine watering zones covering three scrap handling areas at CSRМ. Nineteen pole mounted sprinkler heads are planned to cover the nine watering zones. The sprinklers within each zone will be remotely activated by a crane or material handler operator. The spray system within a zone will be activated when an operator sees visible emissions from scrap handling in that zone.

The proposed system is based on the configuration and application of the scrap handling water spray system in use at the Nucor Steel facility in Seattle, Washington. We recently visited that facility to observe its water spray system firsthand. We learned that Nucor activates the water spray system upon initial onset of visible emissions. That approach provides the Nucor Seattle facility with a good level of fugitive emissions control without over-wetting the scrap material. As we have discussed previously, best practice is to avoid wetting non-dust-producing scrap material because over-wetting scrap material generates potentially dangerous conditions, *i.e.*, charging overly wet scrap in the EAF could result in a flash steam explosion.



Figure 1 – Location of Water Spray System

- b. A timeline for submittal of a Notice of Approval for installation of these controls; and

DEQ initially requested that, if we elected to proceed to design and construct a water spray system, that CSRSM complete that installation by June 1, 2024. However, in your January 29, 2024 letter, DEQ acknowledged that meeting that timeline may not be possible depending on the scope of the installation. As discussed, CSRSM is planning to install and operate a water spray system that will cover all scrap handling areas at the facility. Given the scope of that installation, and due to anticipated equipment lead times and construction coordination (based on our consultations with vendors), we believe that September 1, 2024 is the soonest that the water spray system project can be completed. Barring unforeseen delays, we are committed to meeting that schedule, and we anticipate submitting a Notice of Approval to DEQ by March 31, 2024. We aim to complete the water spray system project before the facility is required to submit a CAO Risk Assessment to DEQ.

- c. A specific proposal for incorporating the control into the Inventory. DEQ will accept the use of the drop point equation (AP-42 Section 13.2.4, Equation 1) with an initial assumed moisture content of 0.25 percent, together with the application of documented control efficiencies for dust suppression by water sprays from AP-42 Appendix B.21. If an alternative method is proposed, please provide quantitative justification for the proposed control efficiency; and*

Response:

CSRSM continues to believe the drop point equation is not applicable for estimating emissions from scrap handling activities. However, based on our discussions with your team, CSRSM is adopting the approach described in item c. above. The enclosed Inventory estimates air emissions from scrap handling using the drop point equation (AP-42 Section 13.2.4, Equation 1) with an initial assumed moisture content of 0.25 percent, together with the application of a 72% control efficiency for dust suppression by water sprays as documented in AP-42 Appendix B.2.

- 3. If water spray controls will not be installed, submit a revised Inventory using the unadjusted drop point equation as requested in DEQ's October 3, 2023, letter. As discussed in our meeting on December 13, 2023, DEQ will consider revising the emission factors if representative sampling data becomes available in the future.*

Response:

As discussed, CSRSM is planning to install an industry-standard water spray system to cover the facility's scrap handling areas and is committed to constructing that system on the expeditious timeline set out in this submittal. Accordingly, we have accounted for that system's construction and use in the attached Inventory.

We appreciate DEQ's willingness to consider further revisions to the emission factors presented in this Inventory if representative, site-specific scrap handling data becomes available. As we have discussed with you, CSRSM is currently executing a material handling study to obtain new, representative emissions information for scrap handling activities. We anticipate submitting a revised Inventory for DEQ's consideration once that new information is available, perhaps as soon as May 2024. We note the possibility that our material handling study may generate updated scrap handling emission factors demonstrating scrap handling emissions that might be materially less than those derived by the water spray adjusted drop point equation. If that possibility comes to pass, we request that DEQ remain open to incorporating the new, representative emission factors into a revised Inventory and to revisiting at that time the need for the water spray system.

Please don't hesitate to contact me should you have any questions related to today's submittal.

Sincerely,

A handwritten signature in cursive script that reads "Jim Spahr".

Jim Spahr

CC: Geoff Tichenor
John Browning, P.E.
JR Giska