



**Cascade Steel Rolling Mills, Inc.**

3200 North Hwy 99W  
McMinnville, OR 97128

A **Schnitzer**  Company

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October 10, 2022

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

Sent by email only

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

Dear Ms. Degagné:

Cascade Steel Rolling Mills (“CSRM”) is in receipt of your letter dated August 26, 2022 requesting additional information pertaining to our Cleaner Air Oregon Air Toxics Emissions Inventory (“CAO ATEI”) submitted to the Department on May 9, 2022. Below we have repeated the comments and information requests provided in the August 26<sup>th</sup> letter (in italics) and provided our response.

The CSRM team is appreciative of the positive meeting we had with the DEQ team last week. It became clear to us from that meeting that to meet DEQ’s concerns during the CAO process, CSRM must stay in closer contact with DEQ and discuss these emerging technical issues as they arise to reach defensible scientific consensus. We commit to that. We also took DEQ’s admonition to not count future air improvement projects to heart and have removed those projects that are not actively underway from today’s response. Our inventory identifies one project that we are currently implementing.

CSRM also appreciates DEQ’s positivity and openness to work with us on source testing in the event that CSRM can make more specific showings. Your October 3 denial of our request for an extension of time to do source testing also kindly suggests that we “clearly delineate the comment responses that may require further testing from those that would not, [and ]request feedback or clarification from DEQ regarding Inventory requirements.” We appreciate DEQ’s October 3 invitation to perform additional source testing.

CSRSM explained previously that the steel mill is a difficult environment in which to conduct source testing. Because of this, shortly after hearing that we would be in the first group of sources to go through the CAO process, we began discussing internally how to identify our data gaps and how we might be able to design testing campaigns that would provide the sort of accurate, science-based information about emissions from CSRSM that DEQ would want. We spent the time and money to be proactive and proceeded on the assumption that we would be called in in 2019 or early 2020.

With that in mind, we prioritized better characterization of metals from the melt shop roof monitor. This is a difficult testing environment with safety challenges. We anticipated that, to achieve robust, representative data, it would require high volume samplers. Given the relatively low temperatures in the roof monitor space (99.6 – 106.1°F), condensable metals would be expected to have condensed prior to discharge and so were not prioritized. In addition, it is not possible to use high volume samplers in connection with a condensable particulate sampling train. Ultimately, we opted to focus our 2019 testing campaign on the most likely potential source of metal emissions from our facility using the best approach available to characterize that source. The 2019 testing provided a large quantity of data that we used in the ATEI and also provided knowledge regarding the best methods to collect emissions data at our facility.

In preparing our initial ATEI, we anticipated that we would be starting an iterative process involving further testing developed in conjunction with DEQ. This is consistent with how DEQ has approached other sources in the CAO program and is certainly the best way to assure accurate, site-specific data. For example, we are aware that, at other existing sources undergoing CAO review, DEQ has required source testing to address possible data gaps, and that DEQ has been unwilling to allow those sources to rely upon default emission factors or assumptions. For that reason, CSRSM opted to propose testing from the outset of the CAO review process, in search of the site-specific data that DEQ has indicated represents the best, most accurate available data for application to the CAO process.

Needless to say, August 26's DEQ letter was a very unexpected response, and contains measures that are difficult to understand or justify as a matter of administrative law. Despite the request for additional data related to contaminants such as PCBs, dioxins and various PAHs, it rejects the opportunity to do source testing to garner accurate measures of emissions even though DEQ routinely demands such measures and in fact has rejected the use of default emissions factors or assumptions elsewhere. DEQ also fails to account for the actual temperatures at CSRSM, which counter-indicate repeated requests for condensable particulate TAC emissions which should be exempt pursuant to OAR 340-245-0060(3)(a). Multiple sources of guidance, such as from the federal EPA, would require that even where condensable particulates were a true issue, coming

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full circle, without source specific emissions testing, the results are unusable and unjustifiable as a matter of good environmental science.

In the absence of an extension of time, today we provide the best available information, and still see site-specific testing as a necessary component of developing an accurate and science-based ATEI for CSRSM. We look forward to completing site-specific testing as developed cooperatively with DEQ. In the interim, and in full recognition of DEQ's rejection of CSRSM's timely and legally-compliant extension requests, our responses to DEQ's questions from the August 26<sup>th</sup> letter are below.

### **General Comments**

*The current Requested Potential to Emit (PTE) operating scenario includes a number of proposed modifications to your facility that represent a proposed, future state, including the installation of a number of new control devices and building modifications to increase the capture and control of Toxic Air Contaminant (TAC) emissions. Based on information conveyed by CSRSM, DEQ's understanding is that planned upgrades are in the design phase and as such, detailed technical documentation is not currently available, nor is the possibility that source testing can occur to verify capture and control efficiencies. Therefore, DEQ will not allow the use of the proposed capture and control efficiencies as submitted in the Requested PTE operating scenario. DEQ requires that you revise the Inventory to reflect CSRSM's current operational state when estimating emissions for Requested PTE activities. As described in DEQ's specific comments for each Toxics Emissions Unit (TEU) below, please remove control and capture efficiencies associated with proposed future upgrades and include current, verifiable capture and control efficiencies and emission points.*

### **Response to General Comments:**

As indicated in your letter, CSRSM included in its ATEI a major control project that it was contemplating for the melt shop and associated slag handling areas. CSRSM believed that this was appropriate as the company was considering this project for operation on or before the time that the CAO permit addendum was issued. DEQ rejected the approach, and the project has been removed from inventory consideration. The attached ATEI therefore only includes those controls that are currently in place or actively in the process of being installed. Consistent with OAR 340-245-0040(4)(a)(B)(i)(II), the achieved and promptly achievable controls, without further additions, define our maximum potential to emit that will be used to calculate the Source Risk Limit that CSRSM will be seeking.

### **Specific Comments**

1. *Please make updates to emissions from the following TEUs to reflect existing conditions, as follows:*
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- a. *Remove control and capture efficiencies associated with proposed future upgrades, including:*
  - i. *the proposed baghouse (“BH01”) to control emissions from the melt shop (TEU EU-1);*
  - ii. *the proposed baghouse (“BH02”) to control emissions from billet cutting at casting (TEU EU-10) and slag handling (TEU EU-5);*
  - iii. *the proposed baghouse (“BH03”) to control emissions from scrap billet cutting (TEU EU-12);*
  - iv. *the proposed enclosures to capture emissions from slag handling (TEU EU-5 and TEU EU-13); and*
  - v. *the proposed scrubber (“WSCRUB”) to control emissions from slag handling (TEU EU-13).*
- b. *Inclusion of current, verifiable capture and control efficiencies and emission points for the following TEUs, as they are described in the current Title V Operating Permit:*
  - i. *TEU EU-1 (including melt shop baghouses BH-1, BH-1A, and BH-2);*
  - ii. *TEU EU-3 (uncontrolled melt shop emissions; please add this TEU to the Inventory);*
  - iii. *TEU EU-5 (uncontrolled slag handling);*
  - iv. *TEU EU-10 (uncontrolled billet cutting at casting); and*
  - v. *TEU EU-12 (uncontrolled scrap billet cutting at the rolling mill).*

#### Response to Specific Comments 1.a.i-v

The control and capture efficiencies for the items listed in 1.a.i-v have been removed in the currently submitted ATEI per DEQ’s August 26 requirement. The revised ATEI reflects a reduction in emissions from scrap billet cutting (EU-12), which is entirely performed in the charge bay of the melt shop and its emissions are controlled by baghouse BH-1. In addition, production billet cutting at the caster has been reconfigured as a promptly achievable control which will shortly be controlled by existing BH-2. This had been an individual component of the overall melt shop improvements reflected in the original ATEI and which you asked to be removed. However, this project is fast-tracked, in process and should be completed promptly. Therefore, while we have removed the proposed changes in 1.a.i through v, we have added billet cutting at casting the caster assumptions into the currently submitted ATEI. This approach is consistent with OAR 340-245-0040(4)(a)(B)(i)(II).

#### Response to Specific Comments 1.b.i-v

We have reviewed the Title V permit descriptions and have made revisions to the ATEI consistent with your comments and this letter.

2. *For melt shop fugitive emissions (TEU EU-3) and billet cutting (TEUs EU-10 and EU-12):*
    - a. *CSRM has provided engineering testing data to support emissions estimates*
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*from the melt shop roof monitor and billet cutting (“2019 Emissions Testing”, Attachment C of the Inventory). Because the condensable portion of particulate TAC emissions was not measured (as described in Item VII(8) in DEQ’s Source Test Review Report Memorandum, included as Attachment A to this letter), update the following emission factors to include estimates of condensable particulate emissions in addition to filterable particulate emissions<sup>1</sup>:*

- i. *Antimony (CASRN 7440-36-0);*
  - ii. *Arsenic (CASRN 7440-38-2);*
  - iii. *Cadmium (CASRN 7440-43-9);*
  - iv. *Chromium VI (CASRN 18540-29-9);*
  - v. *Cobalt (CASRN 7440-48-4);*
  - vi. *Lead (CASRN 7439-92-1);*
  - vii. *Manganese (CASRN 7439-96-5);*
  - viii. *Nickel (DEQ SEQ ID 365);*
  - ix. *Phosphorus (DEQ SEQ ID 504);*
  - x. *Selenium (CASRN 7782-49-2); and*
  - xi. *Zinc (CASRN 7440-66-6).*
- b. *Include emission estimates for the following TACs, which were not included in the 2019 Emissions Testing<sup>1</sup>:*
- i. *Mercury (CASRN 7439-97-6): in the absence of more recent, representative mercury emissions data, assume a filterable fraction equal to 0.00043 percent of total particulate matter for TEU EU-3, as listed in CSRSM’s Permit Review Report (36-5034-TV-01, Page 59); and*
  - ii. *Barium (CASRN 7440-39-3).*
- c. *The information provided with the 2019 Emissions Testing report was insufficient to evaluate the validity of the blank corrections. Use the data set “Filter Only no Blank Subtraction” instead of the “Filter Only Reagent Blank Subtraction” from the 2019 Emissions Testing report to provide a conservative basis for the “Roof Monitor” and “Billet Cutting” TAC emission factors.*

#### Response to Specific Comments 2.a-c

As explained at the outset of this letter, in our initial testing in 2019 CSRSM concluded that condensable particulate emissions were not readily tested using available methods and that metals would have condensed prior to discharge given the relatively low temperatures of our exhaust (99.6-106.1°F at the roof monitor; 126.8°F in the exhaust from billet cutting at the caster). For that reason, condensable testing was not included as part of the 2019 efforts and it will not generate meaningful results now. Given the low temperatures in these exhaust streams, CSRSM requests that, consistent with OAR 340-245-0060(3)(a), the condensable particulate TAC emissions from the melt shop (including billet cutting at the caster) be considered exempt. If this request is not granted, we would gather such data through source testing coordinated with DEQ.

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It is not scientifically justifiable to estimate condensable emissions using default emission factors as there is significant variation in exhaust temperatures, scrap make-up and charging techniques used at mini-mills in different parts of this country and abroad. If our request to classify these emissions as exempt is denied, then an alternate approach of determining site-specific condensable emissions factors is consistent with DEQ's stated preference for developing factors through testing. It is also consistent with the approach that we understand DEQ has taken with the higher priority sources called into CAO before us. We generated a large quantity of information that we anticipate will result in faster and more robust future testing. Therefore, we believe that the most accurate and speedy means to generate accurate emission factors, is for CSRSM to pursue testing in an expeditious manner.

CSRSM is particularly reluctant to propose in its ATEI any emission factors that are not considered accurate because of DEQ's past practice of imposing emission factors as enforceable limits and requiring source testing to demonstrate compliance. We are aware that DEQ has recently done this at other CAO sources. Given this recent precedent, if condensable particulate emissions estimates are necessary, it is critical that CSRSM collect site-specific data. As EPA noted in its 2020 Enforcement Alert, "a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance."<sup>1</sup> CSRSM does not wish to be caught in the situation that EPA warns of in the enforcement alert. Even the RTI International, Emission Estimation Protocol for Iron and Steel Foundries (December, 2012) reference cited by DEQ sets forth an emission estimation methodology ranking for which site-specific source test emissions data is always favored over default emission factors. CSRSM remains prepared to move forward with testing as needed to address these information gaps notwithstanding the significant cost to the facility. However, we are not prepared to present to DEQ, and the public, emissions calculated from factors that we believe to be inaccurate.

In order to provide the data requested in this question, it is necessary to perform testing designed to address each of DEQ's questions. We are willing to proceed with such testing if DEQ chooses not to consider condensable particulate TACs exempt.

3. *For billet cutting (TEUs EU-10 and EU-12):*
  - d. *The potential for fugitive emissions, in addition to those captured in the 2019 Emissions Testing, must be considered. Please include an estimate of additional fugitive emissions or provide substantiation in the form of test data or design specifications that 100 percent of billet cutting emissions were captured by the 2019 Emissions Testing.*

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<sup>1</sup> EPA Enforcement Alert: *EPA Reminder About Inappropriate Use of AP-42 Emission Factors* (Nov 2020).

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#### Response to Specific Comment 3.d.

As requested, an estimate of fugitive emissions for billet cutting (TEUs EU-10 and EU-12) is provided in the revised emissions inventory.

4. *For the melt shop baghouses (TEU EU-1, baghouses BH-1, BH-1A, and BH-2):*
  - a. *Update the particulate matter emission factor for BH-2 to 0.00028 lb/ton to reflect an average of the 2013 (0.00026 lb/ton) and 2016 (0.0003 lb/ton) source test results, for consistency with method used for Baghouses 1 and 1A.*

#### Response to Specific Comment 4.a

As requested, the emission factor for BH-2 has been updated to 0.00028 lb/ton in the revised emissions inventory.

4. *For the melt shop baghouses (TEU EU-1, baghouses BH-1, BH-1A, and BH-2):*
  - b. *CSRM has provided laboratory analytical data to support TAC speciation for the baghouses (“2013 Filter Testing”, Attachment D of the Inventory). Include emission estimates for the following TACs, which were not included in the 2013 Filter Testing<sup>2</sup>:*
    - i. *Barium (CASRN 7440-39-3);*
    - ii. *Beryllium (CASRN 7440-41-7); and*
    - iii. *Selenium (CASRN 7782-49-2).*
  - c. *The condensable portion of particulate emissions is not accounted for in the particulate matter emission factors or TAC speciation used. Please adjust the following emission factors to include estimates of condensable particulate emissions in addition to filterable particulate emissions<sup>2</sup>:*
    - i. *Cadmium (CASRN 7440-43-9);*
    - ii. *Chromium VI (CASRN 18540-29-9);*
    - iii. *Lead (CASRN 7439-92-1);*
    - iv. *Manganese (CASRN 7439-96-5);*
    - v. *Nickel (DEQ SEQ ID 365); and*
    - vi. *Zinc (CASRN 7440-66-6).*

#### Response to Specific Comment 4.b-c

As noted above, CSRM performed extensive testing in 2019 in order to put itself in position for a more informed CAO process and expedite DEQ’s review and approval of our ATEI.

Notwithstanding our best efforts at being proactive, we did not anticipate all the questions that DEQ might ask and did not include all of the analytes that DEQ is now requesting. We did not expect perfect foresight and we anticipated that additional testing would likely be required after DEQ identified the additional information that it would like to see. That is the stage at which we are now and, as noted above, CSRM stands ready to collect data specific to our site if our

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exemption request is denied. Such site-specific testing is consistent with how DEQ has approached emission inventories with companies called in before us.

Repeating what we discussed above, CSRSM does not believe that it is appropriate to estimate condensable emissions using default emission factors as there is significant variation in the make-up of the scrap used at mini-mills in different parts of this country and abroad. We are also concerned that where DEQ has required other sources to employ default emission factors, it has then imposed those factors as enforceable permit limits. EPA cautioned against this precise practice in its 2020 Enforcement Alert stating “It is also important to understand that there is a great deal of variability in the emissions data that are used to generate [AP-42] emission factors. This variability is not necessarily reflected in the emission factor.” CSRSM does not wish to be caught in the untenable situation that EPA warns of in its alert as a result of DEQ’s predisposition to apply emission factors relied on in the CAO emission inventory process as enforceable permit limits. As we explained above, even the RTI International, Emission Estimation Protocol for Iron and Steel Foundries (December, 2012) reference cited by DEQ sets forth an emission estimation methodology ranking for which site-specific source test emissions data is always favored over default emission factors. EPA echoed this sentiment in the 2020 Enforcement Alert saying, “facility owners/operators should obtain and use the most representative emissions data, which in many cases may be source-specific emissions data when determining applicability, applying for a permit, or demonstrating compliance with permit limits.”

CSRSM believes that condensable particulate TAC emissions are extremely low and should be considered exempt under OAR 340-245-0060(3)(a). However, if DEQ does not agree, CSRSM stands ready to work with DEQ to conduct additional source testing. We believe that this is the only means to address these comments if condensable particulate TAC emissions must be quantified. CSRSM remains prepared to expedite testing if needed to address DEQ’s information gaps notwithstanding the significant cost to the facility.

4. *For the melt shop baghouses (TEU EU-1, baghouses BH-1, BH-1A, and BH-2):*
  - d. *Include emissions (filterable and condensable) for the following TACs, for consistency with detections in the 2013 Filter Testing data (Attachment D of Inventory, page 7 of 18):*
    - i. *Antimony (CASRN 7440-36-0): Antimony was detected in BH-1A, sample Run #3 at 4.9 mg/kg.*
    - ii. *Phosphorus (DEQ ID 504): Phosphorus was detected in BH-1A, sample Run #3 at 50 mg/kg.*

#### Response to Specific Comment 4.d

Consistent with the methodologies used in the ATEI submitted May 9, 2022 the filterable particulate portion of the TACs antimony and phosphorus has been added to the revised ATEI.

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In regards to the condensable fraction, CSRSM is ready to proceed with stack testing to address this data gap if the emissions are not considered exempt.

5. *For melt shop fugitive emissions (TEU EU-3) and melt shop baghouses (TEU EU-1, baghouses BH-1, BH-1A, and BH-2), include emission estimates for the following TACs, which may be emitted from foundries melting scrap metal*
  - a. *Dioxins/furans (various CASRNs);*
  - b. *Polychlorinated biphenyls (PCBs; CASRN 1336-36-3 and various CASRNs); and*
  - c. *Polycyclic Aromatic Hydrocarbons (PAHs; various CASRNs).*

#### Response to Specific Comment 5

As explained at length above, we believe that site-specific source testing is the best approach to evaluate potential emissions of these pollutants. This approach has been emphasized repeatedly by EPA and other agencies, including DEQ, in the past. Particularly in regard to chlorinated organics, which could be generated from melting scrap containing impurities, the references cited by DEQ in comment number 5 cannot be assumed to be representative of CSRSM's operations which have robust protocols to ensure that only clean scrap is introduced to the melting process. We wish to reiterate that CSRSM is committed to a testing program whereby we would work with DEQ to collect site-specific data that would take into account the work practices and unique scrap mix that distinguishes CSRSM's emissions from other mills. CSRSM remains prepared to move forward with testing as needed to address these information gaps notwithstanding the significant cost to the facility.

6. *As discussed in the notes to Table B-2 of the Inventory supporting calculations, CSRSM estimates a 64-fold increase in emissions of chromium VI (CASRN 18540-29-9) during the production of "MMFX" stainless steel. To account for this increase on an annual basis, adjust the annual emissions estimates for the following emission units by a factor of 64, proportional to the maximum requested annual ratio of MMFX to non-stainless steel production rates for the following:*
  - a. *Melt shop fugitive emissions (TEU EU-3);*
  - b. *Melt shop baghouses (TEU EU-1, baghouses BH-1, BH-1A, and BH-2); and*
  - c. *Billet cutting at casting (TEU EU-10).*

#### Response to Specific Comment 6

The revised ATEI has been updated to provide an annual emission estimate associated with production of MMFX as described in comment 6.

7. *The potential for fugitive emissions of organic TACs from TEU EU-1 (emission point "MELTFUG") must be considered. Please provide substantiation in the form of test data or design specifications that 100 percent of these emissions exit the baghouses, or update emissions to include fugitive emission estimates for the following organic TACs:*
    - a. *Benzene (CASRN 71-43-2);*
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- b. *Chlorobenzene (CASRN 108-90-7);*
- c. *Chloromethane (methyl chloride) (CASRN 74-87-3);*
- d. *Ethylbenzene (CASRN 100-41-4);*
- e. *Styrene (CASRN 100-42-5);*
- f. *Toluene (CASRN 108-88-3);*
- g. *Vinyl chloride (CASRN 75-01-4); and*
- h. *Xylene (CASRN 1330-20-7).*

### Response to Specific Comment 7

Emissions of organic TACs were included in the ATEI as originally submitted based on emission factors generated by testing performed at CSRSM in 1995. Emissions of these pollutants are likely much lower than what is estimated in the ATEI, as metal scrap production processes have evolved over time to generate much cleaner scrap than what was used as feedstock in 1995. This evolution of scrap preparation practices is the result of rules that took effect concurrent with, and subsequent to, when the source test deriving these emission factors was conducted. Therefore, we believe that these factors are extremely conservative as compared to today's actual emission rates.

Based on the 1995 testing, we know what level of organics were emitted from the baghouse, but have no basis for estimating what, if any, fugitive emissions occur. We know of no way to determine what percentage of organic TACs are emitted from other emission points at the mill without some sort of study. We look forward to working with you to develop an appropriate methodology for assessing whether any emissions occur other than from the baghouse and whether they are fugitive or non-fugitive.

- 8. *For slag handling (TEU EU-5):*
  - a. *Update emissions for the following TACs, for consistency with the slag analytical report (Attachment F to the Inventory submittal):*
    - i. *Zinc (CASRN 7440-66-6): Update emission factors to reflect the analytical result of 160 mg/kg (currently the analytical result is listed as 16 mg/kg); and*
    - ii. *Phosphorus (DEQ ID 504): Include emissions for this TAC, based on the analytical result of 350 mg/kg.*
  - b. *Update the "Max Daily – Acute" emission factor to use a representative maximum daily average wind speed for unenclosed drop points, rather than the 5-year average wind speed, in the EPA Drop Equation (AP-42 Section 13.2.4, equation 1).*

### Response to Specific Comment 8

The emissions inventory has been updated to include potential emissions of zinc and phosphorus.

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We disagree that a maximum daily average wind speed should be used in the EPA Drop Equation as it represents an unreasonable modeling and risk assessment scenario. The CAO rules require that acute (daily) risk be determined based on the highest 24-hr impact that could occur from a 5-year meteorological dataset. Such an impact will occur during a period of low daily wind speeds. When a maximum daily average wind speed is used in the EPA Drop Equation, this results in a risk assessment scenario whereby both high daily average wind speeds and low daily average wind speeds occur simultaneously on the same day, which is not possible. We have not modified the current ATEI in this regard.

9. *Update the Inventory to more accurately allocate natural gas emissions for TEU EU-4 to emission points, as follows:*
  - a. *Update TEU EU-4 to include only the vertical pre-heater (permitted unit EU-4) – emissions from permitted unit EU-4 vent through a stack on the melt shop roof; and*
  - b. *Designate a new TEU or TEUs to identify other natural gas heaters in the melt shop (identified in the Title V Operating permit as four EAF preheaters, the ladle furnace preheater, four tundish heaters, and two horizontal heaters) – these emissions may be divided between fugitive emissions and baghouse stacks.*

#### Response to Specific Comment 9

The ATEI has been updated to allocate natural gas combustion emissions distinctly to TEU EU-4, the vertical pre-heater. The ATEI has also been updated to allocate emissions from the other natural gas combustion sources to fugitive and stack emission points.

10. *For the Gasoline Dispensing Facility (TEU EU-15):*
  - a. *Calculate VOC emissions from tank filling, breathing, and emptying using the methodology presented in [AP-42, Section 7.1.3](#);*
  - b. *Calculate daily VOC working losses using the attached methodology from the Texas Commission on Environmental Quality (TCEQ; included as Attachment B) – assume maximum daily emissions are equal to maximum hourly emissions multiplied by the maximum hours of tank filling. Provide justification for the worst-case liquid temperature used, or assume the TCEQ default of 95 degrees F; and*
  - c. *Include a complete set of TACs emitted from the gasoline dispensing facility – in the absence of site-specific gasoline composition data, the TAC speciation percentages provided in Attachment C may be used.*

#### Response to Specific Comment 10

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We are amenable to calculating emissions from the gasoline storage tank based on the methodology presented in AP-42 Section 7.1.3. However, we wish to examine use of the TCEQ guidance document for estimating short term emission rates from fixed roof tanks and the EPA speciate data for gasoline, and need to further evaluate this information to determine if it is appropriate to be used for estimating emissions from the GDF. We will promptly complete this evaluation and then provide a further response on this point by October 24.

11. *All TEUs must be included in the Inventory.4 If TACs are not likely to be emitted from a TEU, justification must be provided for exemption per OAR 340-245-0060(3)(a). Please revise the Inventory to include the following TEUs:*
- a. *Scrap handling (permitted emission unit EU-9);*
  - b. *Wastewater treatment and storage ponds (including potential metal particulate emissions from cooling storage ponds as a result of entrainment or maintenance activities);*
  - c. *Maintenance shops and routine maintenance activities (including incidental welding and miscellaneous chemical usage), if applicable; and*
  - d. *Fugitive dust from unpaved roads.*

#### Response to Specific Comment 11

Scrap handling (permitted emission unit EU-9) is identified in the Title V Operating Permit's Review Report as a source of particulate matter emissions, but not a source of HAP emissions, indicating this source would be an insignificant source of metal TACs. Additional site-specific studies and evaluations would be necessary to determine the potential for TAC emissions from this activity.

We are unaware of "entrainment or maintenance activities" associated with storage ponds that would potentially produce metal particulate emissions. Based on recent discussion with DEQ we believe the letter is referring to "Tank 6" located near the northwest corner of the site. Tank 6 is a rectangular concrete structure that holds recirculating cooling water. There are no aeration or agitation devices associated with the water storage structure and we have no reasonable or rational basis to believe the structure is a source of metal TACs.

Regarding maintenance shops and routine maintenance activities, we have been studying DEQ's Exempt TEU Reporting guidance and would like to discuss its application to our operations with DEQ.

Fugitive dust from unpaved roads is identified in the permit's Review Report as a source of particulate matter emissions, but not a source of HAP emissions indicating this activity would be an insignificant source of metal TACs. We also believe that certain areas of the site that were

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included in the original derivation of unpaved road dust emission are now paved. Additional site survey work and possibly dust speciation work will be required to adequately respond to DEQ's request.

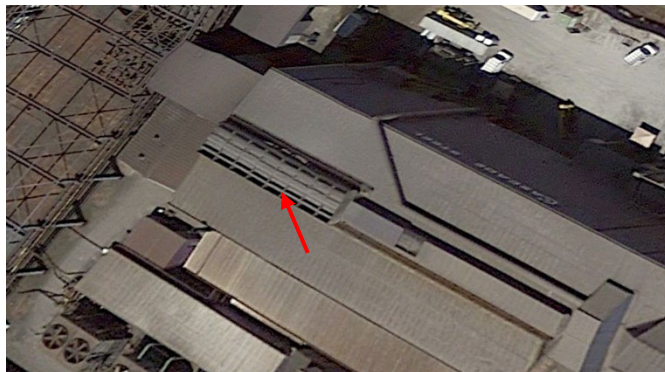
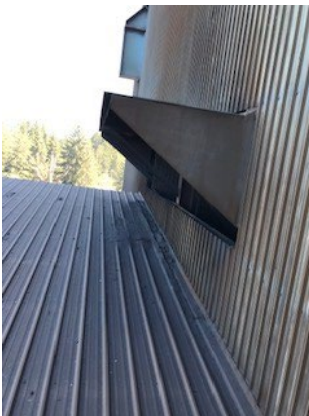
12. *Please provide the following additional documentation to support the emissions inventory:*
- a. *Additional information related to the 2019 source test:*
    - i. *Laboratory analysis data for cadmium (CASRN 7440-43-9) and vanadium (CASRN 7440-62-2);*
    - ii. *Types and quantities of alloys produced during the 2019 Emissions Testing; and*
    - iii. *Photographs or annotated design documents indicating the billet cutting and roof monitor sample locations.*

Response to Specific Comment 12.a.i-iii

The laboratory analysis data from the 2019 source test for cadmium and vanadium has been located and is being provided with this submission.

CSRSM produces carbon steel products (primarily rebar) by melting and refining ferrous scrap metal. We are including with this response the specifications for carbon steel and MMFX steel, the two products that we make.

Specific sample locations were provided in Appendix B of the 2019 source test. A photo of the billet cutting vent and an aerial of the roof monitor are provided below.



12. *Please provide the following additional documentation to support the emissions inventory:*
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- b. *A list of alloys produced or potentially produced at CSRM, including the following:*
  - i. *TAC constituent weight percentages for each alloy;*
  - ii. *Maximum amount (tons) of each alloy potentially produced on a daily basis; and*
  - iii. *Maximum amount (tons) of each alloy potentially produced on an annual basis.*

#### Response to Specific Comment 12.b.i-iii

In our response to Question 12.a.i-iii, we have provided the specifications for the two steel products manufactured by the mill. The maximum daily and annual production of these two products produced on a daily and annual basis is provided in the revised inventory.

12. *Please provide the following additional documentation to support the emissions inventory:*

- c. *Justification for the assumption listed in the Notes to Table B-2 that 60 percent of melt shop emissions (TEU EU-1) are from the electric arc furnace and 40 percent are from other sources.*

#### Response to Specific Comment 12.c

The assumption is based on flow rate information provided in the 2013 source test.

Baghouse BH-1 primarily controls emissions from the EAF.

Table 1 of the 2013 source test indicated that 83.3% of the inlet flow exhausts through BH-1 and 16.7% flows through BH1-A. On this basis it was assumed 60% of the melt shop emissions are from the EAF. Additional source testing and/or flow evaluations would be necessary to refine this assumption.

12. *Please provide the following additional documentation to support the emissions inventory:*

- d. *Quantitative justification for the assumption that the condensable fraction of mercury (CASRN 7439-97-6) emissions from the baghouses (BH-1, BH-1A and BH-2) is equal to the measured filterable fraction.*

#### Response to Specific Comment 12.d

As noted above, CSRM requests that the condensable particulate TAC emissions be considered exempt pursuant to OAR 340-245-0060(3)(a). However, if DEQ does not agree, CSRM believes quantitative justification can only be evaluated by conducting a source test.

12. *Please provide the following additional documentation to support the emissions inventory:*

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- e. *The “1995 Source Test” report used to derive the organic TAC emission factors for TEU EU-1.*

Response to Specific Comment 12.e

CSRM is unable to locate the 1995 source test at this time.

\* \* \*

CSRM hopes that this information assists DEQ in reviewing our ATEI. We have made every effort to fully respond to the questions with the information we have at this time. However, we continue to maintain that it is impossible to accurately respond to all of the questions without first determining what emissions are exempt, those which may not, and having the requisite time to perform site-specific emissions testing to obtain accurate and science-based data as requested in our previous entreaties for extension of time. CSRM has seen how other CAO sources have completed site-specific testing to develop robust, verifiable data for use in their emission inventories. CSRM is proposing to do just that, as expeditiously as possible. This approach is far superior to the use of default emission factors that were derived from tests on or information from different sources.

We appreciate maintaining a productive dialog as we work with DEQ to enhance responses to ATEI questions using the best data and science.

Sincerely,



Daniel Lee

cc: Jim Spahr  
Tim Sturdavant  
Scott Sloan  
Brian Lewallen  
Stanley N. Alpert  
Tom Wood  
John Browning