



Oregon

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June 5, 2025

PCC Structurals, Inc.
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Sent via email and online only

Brandon Hadzinsky,

PCC Structurals, Inc. Large Parts Campus (PCC) was called in to the Cleaner Air Oregon (CAO) program on October 4, 2019, and submitted an initial Emissions Inventory (Inventory) on January 2, 2020. Since that time, PCC has been working with DEQ to update the Inventory, including submitting a revised Inventory on September 3, 2020, conducting source testing in 2023, and responding to various requests for information.

In a letter dated April 25, 2024, DEQ provided comments on the Inventory and requested PCC submit a proposal for revising the emissions estimate from baghouse-controlled activities; this letter also included requested information and updates that were conditioned on approval of the proposal¹. On June 24, 2024, PCC provided additional information regarding the Inventory². On July 26, 2024, PCC submitted a proposal for revising emission estimates from baghouse controlled activities³ (PCC Proposal) by using 2023 baghouse source testing data and conducting additional baghouse source testing.

DEQ has completed its review and conditionally approves the PCC Proposal with the revisions included below. DEQ has completed its review of the additional information provided by PCC regarding the Inventory and identified additional updates that are needed before approval of the Inventory, which are described below.

In accordance with [OAR 340-245-0030\(4\)\(b\)](#), DEQ is providing PCC with revised deadlines for source testing and submittal of a revised Inventory and supplemental calculations

1. Perform source testing of Baghouse 8901 by September 3, 2025, according to the following:
 - a. The source test must include all methodologies detailed in PCC's April 27, 2023, Source Test Plan⁴, along with additional requirements included in DEQ's conditional approval letter⁵;

¹ DEQ, letter dated April 25, 2024. Available online:

<https://ormswd2.synergycds.com/HPRMWebDrawer/RecordView/6750538>

² PCC, letter dated June 24, 2024. Available online:

<https://ormswd2.synergycds.com/HPRMWebDrawer/RecordView/6801166>

³ PCC, letter dated July 26, 2024. Available online:

<https://ormswd2.synergycds.com/HPRMWebDrawer/RecordView/6801171>

⁴ Mostardi Platt, April 27, 2023, Metal Emissions Test Protocol. Available online:

<https://www.oregon.gov/deq/aq/cao/Documents/PCC-20230427LPCSourceTestingPlan.pdf>

⁵ DEQ, letter dated June 1, 2023, Available online: <https://www.oregon.gov/deq/aq/cao/Documents/PCC-20230601SourceTestPlanapproval.pdf>

- b. ODEQ Method 5, or similar method upon DEQ approval, must be used to sample for filterable and total PM;
- c. Consistent with Section 2.3 of DEQ's Source Sampling Manual⁶, PCC-LPC must provide the source test plan, through [Your DEQ Online](#), at least 45 days before conducting the source test. Please review Sections 2.7 and 2.8 of the Source Sampling Manual when proposing a minimum sample volume for each test method. Consult with DEQ prior to submittal of the test plan if you have any concerns regarding sample volumes and/or analytical detection limits.
- d. Source test results are due to DEQ, through [Your DEQ Online](#), within 60 days of test completion and must include the information required in Appendix A of the Source Sampling Manual.

2. Please submit the information specified below, through Your DEQ Online, by August 4, 2025.

Comments 2.a and 2.b are regarding updates to the Inventory based on previous source testing as detailed in the PCC Proposal³.

- a. Update the Inventory to include the outlet emission factors determined in the source testing conducted on June 28 and 29, 2023 for TEUs controlled by Baghouses 9203⁷ and 9256⁸ as follows:

PCC proposes to use outlet emission factors from the June 2023 source test results for Baghouse 9203 with HEPA after filter (which controls cleaning and cutting emissions from TEU CLN_CUT_S) and Baghouse 9256 with HEPA after filter (which controls air casting and vacuum casting emissions from TEUs AC_ST_P, AC_ST_I, and VC_ST_P_MC1_C). PCC proposes to use a ratio of the nickel emission factor to the metal alloy content to develop emission factors for metals that were below detection limits on the outlet samples only.

DEQ agrees with the proposal for using source test results for Baghouse 9203 and Baghouse 9256 with the following comment: PCC must use the nickel emission factors multiplied by the ratio of the alloy contents of the given metal species to nickel to estimate the aluminum and phosphorus emission factors, as proposed for metals that were below detection limits on the outlet samples, but not inlet samples.

- b. Update the Inventory for TEUs controlled by the remaining baghouses. PCC proposes to use baghouse catch data and baghouse dust analysis data for estimating TAC emissions. **DEQ has the following comments on PCC's proposal to address emission estimates for TEUs controlled by the remaining baghouses:**
 - i. Baghouse catch itself cannot be used as the activity unit for the Inventory. PCC may use baghouse catch data to estimate captured, uncontrolled PM emissions; however, PCC must update the Inventory to use a process-based activity unit, such as metal processed. PCC may correlate the baghouse catch quantities to pounds of metal processed, as shown in Example 3-4 of the RTI's 2012 Foundry Emissions

⁶ DEQ, latest revision date: November 2018, Source Sampling Manual, Available online: <https://www.oregon.gov/deq/FilterDocs/SSMI.pdf>

⁷ Mostardi platt. Metals Emissions Test Report. December 5, 2023. Available online: <https://ormswd2.synergycds.com/HPRMWebDrawer/RecordView/6633246>

⁸Mostardi platt. Metals Emissions Test Report. December 5, 2023. Available online: <https://ormswd2.synergycds.com/HPRMWebDrawer/RecordView/6633245>

Estimation Guidance⁹ (RTI Guidance) or propose another trackable activity unit that can be correlated to the baghouse catch.

- ii. Annual baghouse dust speciation data may not represent worst case daily metal emissions. Provide justification for the use of baghouse dust data to speciate PM emissions for worst case daily emissions, including consideration of day-to-day variability in alloys processed.
- iii. For air casting TEUs (AC_ST_P and AC_ST_I):
 1. Use alloy data to speciate the PM emission factor, in accordance with the RTI Guidance⁹; and
 2. Source test data used provides an emission factor for filterable PM¹⁰. Include condensable PM in the Inventory for these TEUs.
- iv. For vacuum casting TEUs not controlled by Baghouse 9256 (VC_ST_P_VF3-4, VC_ST_P_MC1_M, VC_ST_I_VMM1, VC_ST_I_VMM2, VC_OP_TP, and VC_DP_TP) update the Inventory to use the following emission factors from the RTI Guidance⁹:
 1. Filterable PM (PM-FIL):
 - a. 1.5 lb/ton metal melted for melting operations – Table 3-3;
 - b. 0.5 lb/ton metal melted for charging and tapping operations – Table 3-3;
 - c. 0.087 lb/ton metal poured for pouring operations –Table 5-4; and
 - d. 0.29 lb/ton metal poured for cooling operations –Table 5-4.
 2. Condensable PM (PM-CON):
 - a. 0.05 lb/ton metal melted for melting operations – Table 3-3;
 - b. 0.01 lb/ton metal melted for charging & tapping operations - Table 3-3;
 - c. 0.23 lb/ton metal poured for pouring operations –Table 5-4; and
 - d. 0.77 lb/ton metal poured for cooling operations –Table 5-4.
- v. For hexavalent chromium (CASRN 18540-29-2) emissions estimates, PCC must update the Inventory to assume an appropriate conversion from total chromium, using Exhibit D-1 of the EPA's National-Scale Air Toxics Assessment documentation¹¹ or Table B-9 of the RTI Guidance⁹.
- vi. PCC may conduct additional source testing of baghouses to determine site-specific baghouse control efficiencies, PM emission factors, or metal specific outlet emission factors. Until additional source testing is completed and approved, PCC must use available data to complete the Inventory.
- vii. Based on information provided to date, DEQ is unable to approve the control efficiencies for the baghouses proposed by PCC in the latest Inventory. Until successful baghouse control efficiency source testing is completed for a baghouse, or

⁹ (RTI Guidance) RTI International, December 2012. Emission Estimation Protocol for Iron and Steel Foundries. Version 1. Available online: <https://www.rti.org/publication/emission-estimation-protocol-iron-steel-foundries-version-1-final>

¹⁰ The Avogadro Group, LLC, May 6, 2015, Source Test Report 2014 Particulate Matter Emissions Tests PRCC Structural, Inc.

¹¹ ICF International, January 31, 2011, An Overview of Methods for EPA's National-Scale Air Toxics Assessment. Available online: <https://www.epa.gov/sites/default/files/2015-10/documents/2005-nata-tmd.pdf>

on a baghouse that DEQ has approved as a representative baghouse (see Comment 3.a.iii), is completed; PCC must update the Inventory to use baghouse control efficiencies in Table B-2 of the RTI guidance.

- viii. Please consult with DEQ and submit a source test plan for approval prior to conducting any source testing for CAO risk assessment purposes.

Comment 2.c is regarding information requested in DEQ's April 25, 2024 letter¹²:

- c. This letter includes DEQ approval of the PCC Proposal for revising emission estimates from baghouse and filter controlled activities. Provide information requested in Comments 11 through 16 of DEQ's April 25, 2024 letter.

Comments 2.d through 2.f are regarding information provided by PCC in the letter dated June 24, 2024³.

- d. Provide a more detailed process flow diagram for the vacuum casting process not controlled by Baghouse 9256 (TEUs VC_ST_P_VF3-4, VC_ST_P_MC1_M, VC_ST_I_VMM1, VC_ST_I_VMM2, VC_OP_TP, and VC_DP_TP). DEQ acknowledges the narrative description provided by PCC in their December 15, 2021 response¹³; however, this description does not include rationale for the various control efficiencies assumed for the vacuum casting processes. Provide the following regarding the control efficiencies used to estimate the PM emission factor for these units:
- i. Quantitative engineering justification or literature reference for each control efficiency used;
 - ii. Provide the size of the various chambers (primary, mold, and charge or ingot); and
 - iii. Provide information on what happens to the air that enters the enclosure once the enclosure is opened after the melting and pouring activities.
- e. For TEUs INV_T and INV_S, update the notes provided on the Inventory and the supporting calculations for the hydrochloric acid (HCl) emissions to indicate that the HCl emission estimates are based on engineering judgement because the HCl dissociates in the slurry to modulate pH.
- f. Update the Inventory for the following TEUs, using methods described in PCC's letter dated June 24, 2024.
- i. ETCH_T: update calculations and resulting emissions to reflect the tank dimensions;
 - ii. HT_NG_VP_S and HT_NG_AP_S: update the hexavalent chromium (CASRN 18540-29-2) emission factor to represent hexavalent chromium from natural gas combustion. Note that natural gas may not be the only source of hexavalent chromium from these processes and DEQ may request future source testing to confirm these emission estimates;
 - iii. Ammonia Gel Booth: Add this TEU to the Inventory.

¹² DEQ, letter dated April 25, 2024. Available online: <https://ormswd2.synergydcs.com/HPRMWebDrawer/RecordView/6750538>

¹³ PCC, letter dated December 15, 2021. Available online: <https://www.oregon.gov/deq/qa/cao/Documents/PCC-coverletterresponse.pdf>

3. Submit the information specified below, through Your DEQ Online, by 30 days after source test approval:
 - a. Update the Inventory to use updated source test data from Baghouse 8901, with comments below. PCC proposes to re-test Baghouse 8901 with HEPA after filter (which controls emissions from ingot processing operations at TEU ING_FIN_S), using the methods performed in the June 2023 source testing, and adding total particulate matter (total PM) to estimate the control efficiency of the baghouse and after filter.
 - i. DEQ requests that PCC update the Inventory to use metal specific outlet emission factors obtained during the updated source testing using the method similar to that discussed in Comment 2.a, above;
 - ii. If significant concerns remain with the metal specific outlet emission factors from the source test, PCC may use PM control efficiency from the source test, along with PM emission factors and metal speciation methods, to estimate emissions from TEU ING_FIN_S. However, DEQ has concerns that this analysis will not result in usable PM control efficiencies due to the challenges observed with collecting enough mass from the outlets;
 - iii. PCC indicates that there may be some baghouses that control TEUs similar to those controlled by Baghouse 8901 and that PCC may use the control efficiency determined from this source testing for these similar baghouses with after filters. If PCC wants to use the control efficiency determined through testing of Baghouse 8901 for other baghouses on site, include a list of those baghouses and justification as to why their control efficiencies would be equivalent to Baghouse 8901. This list must be pre-approved by DEQ prior to testing of Baghouse 8901. PCC will not be obligated to use the Baghouse 8901 control efficiency at any of the baghouses on the pre-approved list; and
 - iv. DEQ may require additional source testing of any baghouses which use the control efficiency determined for Baghouse 8901 during the permit term to confirm individual baghouse control efficiencies or establish metal specific outlet emission factors.
4. PCC will schedule an onsite meeting with DEQ to review the bench-scale test results of BURNOUT_NW_S and BURNOUT_NW_T by August 4, 2025.

To summarize, the deadlines established in this letter are:

- Comment 1: Perform source testing of Baghouse 8901 by September 3, 2025.
- Comment 2: Submit the information requested in response the following by August 4, 2025:
 - Updates to the Inventory based on previous source testing as detailed in the PCC Proposal;
 - Information and updates requested in DEQ's April 25, 2024 letter that were conditioned on DEQ approval of the PCC Proposal; and,
 - Additional information and updates in response PCC's letter dated June 24, 2024.
- Comment 3: Submit the information requested by 30 days after source test approval.
- Comment 4: Schedule an onsite meeting to review bench-scale test results by August 4, 2025.

DEQ is requesting that you submit additional information to complete your Inventory. If you believe 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 (503-407-7596, heather.kuoppamaki@deq.oregon.gov), and I look forward to your continued assistance with this process.

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Kuoppamaki', with a stylized flourish at the end.

Heather Kuoppamaki, P.E.
Cleaner Air Oregon Project Manager

Cc (email only):

Brian Eagle, MFA
David Graiver, DEQ
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