



June 15, 2023

Julia DeGagné  
Oregon Department of Environmental Quality  
700 NE Multnomah Street, Suite 600  
Portland, Oregon 97232

Re: AirArc and Grinding Capture Efficiency Verification Testing, Eagle Foundry Co.

Dear Julia:

On behalf of Eagle Foundry Company (Eagle Foundry), please find attached the U.S. Environmental Protection Agency Method 204 Permanent Total Enclosure (PTE) verification test report for the Grind and AirArc toxics emissions unit (TEU) enclosures.

On April 18, 2023, Bison Engineering conducted a PTE verification test on the existing Grind and AirArc (torch cutting) permanent enclosures installed by the facility to capture potential emissions. The PTE verification test report (test report) was submitted to the Oregon Department of Environmental Quality (DEQ) on May 15, 2023. As stated in the test report, Bison Engineering verified that both enclosures met all PTE criteria except for consistently demonstrating a differential pressure across the enclosure of less than 0.007 inches water column (in. H<sub>2</sub>O). Following the initial PTE verification test, the facility made modifications to both enclosures to improve performance. The attached report summarizes the retest conducted by Bison Engineering on June 1, 2023, on the AirArc enclosure. As detailed in the attached report, the AirArc enclosure now meets all PTE criteria required to assume 100% capture of emissions within the enclosure. Captured emissions inside the AirArc enclosure are routed to the Small Palmer baghouse control device.

Improvements were also made to the Grind enclosure, but preliminary testing conducted by Maul Foster and Alongi, Inc. indicated that results would not warrant a retest by Bison Engineering because some differential pressures measurements were above the 0.007 in. H<sub>2</sub>O threshold. However, the Grind PTE is, in actual practice, capturing 100% of emissions for the following reasons:

1. All pressure differential readings during testing were negative, indicating inward flow.
  2. The overall differential pressure reading average across the entire enclosure is below the 0.007 in. H<sub>2</sub>O threshold.
  3. Each natural draft opening (NDO) location demonstrates observable inward flow over the hour-long test period which was documented with photographs.
  4. If using the average facial velocity method, the velocity would be greater than 200 fpm, as determined by the rating of the baghouse flowrate and the size of the NDOs measured, even with some margin for small leaks throughout the enclosure walls.
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5. Although fumes were visible in the enclosure, no fumes were visible outside the enclosures during the test.
6. Fumes generated inside the enclosure are directed away from any NDO. As a result, the inertia of particulate emissions generated inside the enclosure would not migrate toward an NDO or overcome the NDO inward flow.

Based on the above listed reasons, Eagle Foundry requests that the DEQ recognize that the Grind enclosure is highly efficient at capturing emissions inside the enclosure and directing them to the downstream baghouse control device by assigning a capture efficiency of 95% or greater. Eagle Foundry does not believe that up to 5% of emissions from the Grind enclosure are fugitive, but Eagle Foundry is willing to accept a reasonably conservative capture efficiency estimate for the Grind enclosure for the purposes of moving on to the next steps of the Cleaner Air Oregon permitting program.

Eagle Foundry is asking for the DEQ to consider this request and to respond in time for the facility to incorporate this information into the Cleaner Air Oregon toxic air contaminant emissions inventory that is due within 30 days of the approval of the foundry source test report.

If you have any questions, please don't hesitate to call me at (503) 523-7142 or reach out to Jack Scott (Eagle Foundry) at (503) 637-3048.

Sincerely,



Chad Darby

cc: Thomas Rhodes, DEQ  
Jack Scott, Eagle Foundry