Oregon
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February 17, 2017

Eric Durrin
Bullseye Glass Company
3722 SE 21st Ave
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Thomas Rhodes
Horizon Engineering
13585 NE Whitaker Way
Portland, OR 97230

Re: Bullseye Glass Company
ACDP Permit 26-3135-ST-01
Source Test Plan

Eric Durrin and Thomas Rhodes:

DEQ reviewed the source test plan received on January 25, 2017 for testing at the Bullseye facility located in Portland, Oregon. The plan details the methods and approach to determine the emission rate of particulate matter (PM), arsenic (As), cadmium (Cd), chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), selenium (Se), and cobalt (Co) from the exhaust of the baghouse. Testing will be used to establish emission factors and to show compliance with State and Federal regulations. DEQ understands the emission factor for chromium will be used by Bullseye for modeling work in order to propose a maximum usage rate of chromium. The test plan is approved with the following conditions:

Note 1: Total chromium measured during the source test will be assumed to be hexavalent chromium for the purposes of proposing a maximum chromium usage allowance.

Note 2: The particulate emission limit is 0.005 gr/dscf according to OAR 340-244-9070(1)(b)(A). The test plan incorrectly states the emission limit is 0.0005 gr/dscf.

GENERAL PROCESS CONDITIONS

1.) Only regular operating staff may adjust the production process and emission control parameters during the source performance tests and within two (2) hours prior to the tests. Any operating adjustments made during the source performance tests, which are a result of consultation during the tests with source testing personnel, equipment vendors or consultants, may render the source performance test invalid. Any adjustments made during the test must be recorded and included in the test report.

2.) The DEQ must be notified of any changes in the source test plan and/or the specified methods prior to testing. Significant changes not acknowledged by the DEQ could be the basis for invalidating a test run and potentially the entire testing program. Documentation of any deviations must include an evaluation of the impact of the deviation on the test data.

3.) Method-specific quality assurance/quality control (QA/QC) procedures must be identified and performed to ensure that the data is valid for determining source compliance. Documentation of the procedures and results shall be presented in the source test report for review. Omission of this critical information will result in rejection of the data, requiring a retest.

4.) All documentation of sampling equipment calibrations and analytical results should be maintained for a minimum of five years.

In general, the unanalyzed portions (aliquots) of the source test samples must be preserved up to the maximum holding times as specified by test method. Sample filters gravimetrically analyzed for particulate matter are to be archived for a minimum of 6 months. However, sample archiving specifications pertaining to laboratory glassware is left to the discretion of the analyzing laboratory and the testing contractor.

5.) It is acceptable to postpone a scheduled test or suspend a test in progress if the discontinuation is due to equipment failure beyond the facility's control, construction delays beyond the facility's control, severe meteorological conditions, and situations that would jeopardize the safety of the testing contractors and/or operators. If the test is underway, the permittee should make every effort to complete the test run. All recoverable test information (process & sample data) must be available for DEQ review.

It is unacceptable to postpone or suspend a test run in progress if it is discontinued because the source is not able to comply with an emission limit or verify an emission factor. The permittee must provide DEQ written documentation explaining the reasons for the postponement or stoppage, and any data collected prior to the stoppage.

6.) For showing compliance with 40 CFR Part 63 Subpart SSSSSS you must conduct the performance test while the furnace is producing glass that has the greatest potential to emit the glass manufacturing metal HAP from among the glass formulations that are used in any of the identical furnaces. Each production recipe used for this purpose must be reviewed and approved by DEQ prior to test initiation.

7.) You must conduct the test while the source is operating at the normal maximum production rate.

8.) You must certify in your Notification of Compliance Status that the identical furnaces meet the definition of identical furnaces specified in 63.11459.

9.) You must provide in your Notification of Compliance Status documentation that demonstrates why the tested glass formulation has the greatest potential to emit the glass manufacturing metal HAP.

10.) Testing needs to demonstrate that each furnace emits at a rate less than the rule's limit specified in Subpart SSSSSS. The final report should present the methodology for this determination and make this demonstration as appropriate.

11.) During source testing the following process parameters must be monitored, recorded, and documented in the source test report. The process parameters below are to be reported for each individual test run and averaged for all test runs, if appropriate.

- Amount and type of metal HAP in each batch (lbs)
- Type and quantity of material being processed
- Oxygen usages (quantity used, hourly minimum)
- Natural gas usages (quantity used, hourly minimum)
- Temperature of the furnaces (°F, hourly minimum)
- Baghouse pressure drop (inches of water column, twice per test run)
- Weight of charges during each batch (lbs)
- Times at which each furnace is charged with raw material (hr:min)
- Weight of finished products (lbs)
- Duration of the charging periods (hrs)
- Duration of refining periods (hrs)
- All other normally recorded information

FLOW RATE AND MOISTURE (EPA METHODS 1, 2, 3A & 4) CONDITIONS

12.) The exhaust duct configurations and flow measurements must meet the EPA Methods 1 & 2 criteria. Documentation including clear diagrams must be provided in the source test report.

13.) The sample locations must be checked for cyclonic flow. Documentation of this must be provided in the test report.

14.) Ensure that the manometer used to record pressure readings meets the criteria of EPA Method 2 Section 6.2.

15.) Each EPA Method 3A sampling system must be leak-checked before and after the testing program (before the first run and after the last run). Results of the leak check are to be documented within the test report.

16.) Moisture content of the exhaust stack gas must be determined by EPA Method 4 for each test run. In addition, Section 12.1.7 of EPA Method 4 states "In saturated or moisture droplet-laden gas streams, two calculations of the moisture content of the stack gas shall be made, one using a value based upon the saturated conditions (alternate method) and one based upon the results of the impinger analysis (EPA Method 4). If this is the case, then ODEQ Method 4 (wet bulb/dry bulb) shall be used as the alternative method. At a minimum, two measurements of moisture content using ODEQ Method 4 shall be made for each run and averaged for the run. The lower of the two values as determined by EPA Method 4 and ODEQ Method 4 shall be considered correct for each run.

PARTICULATE MATTER (EPA/ ODEQ METHOD 5) CONDITIONS

17.) Consider performing EPA Method 5I instead of EPA Method 5. EPA Method 5I is can more accurately measure low concentrations of particulate matter.

18.) During sampling, make sure other equipment is not interfering with isokinetic sampling.

19.) Additional (i.e., empty) impingers may be added between the second and fourth impinger to collect condensate from the flue gas.

20.) Sample as much volume as possible to lower the methods detection limit.

21.) Provide filterable, condensable and total PM test results. The results must be reported as follows for each test run and averaged for all three test runs. Complete hand calculations must be provided for at least one test run.
- gr/dscf
- lb/hour
- lb/ton of glass produced

EPA METHOD 29 CONDITIONS

22.) Sample as much volume as possible to lower the methods detection limit.

23.) During sampling, make sure other sampling equipment is not interfering with isokinetic sampling.

24.) Results of each of the metals are to be reported in the following units. Example calculations should be provided for at least one test run.
- mg/dscm
- lb/hr
- lb/ton of glass produced
- lb total metal HAPS/ton of glass produced

25.) An audit sample must be obtained from an EPA approved audit sample provider before testing begins.

GENERAL TESTING CONDITIONS

26.) The ODEQ must be notified of any changes in the source test plan and/or the specified methods prior to testing. Significant changes not acknowledged by the DEQ could be basis for invalidating an entire test run and potentially the entire testing program. Documentation of any deviations must include an evaluation of the impact of the deviation on the test data. Deviations may result in rejection of the data, requiring a retest.

27.) Method-specific quality assurance/quality control (QA/QC) procedures must be performed to ensure that the data is valid. Documentation of the procedures and results shall be presented in the source test report for review. Omission of this critical information will result in rejection of the data, requiring a retest.

28.) A copy of a completed Source Test Audit Report (STAR) for all applicable Methods performed must accompany the submittal of the Source Test Report. A copy of the STAR forms is available electronically from the regional source test coordinator.

29.) In an attempt to conserve natural resources and to minimize storage space requirements, the test report should be printed on both sides of each page within the document. DEQ recognizes this may not be feasible for some supporting documentation (i.e. figures, maps, etc.).

30.) The source test report shall be submitted to the DEQ within 45 days following the completion of the source test.

DEQ understands that the source test is scheduled for March 26-29, 2016. Contact me with any schedule adjustments as soon as possible. If you have any questions, please contact me at (503) 378-5070.

Sincerely,

Mike Eisele, PE
AQ Source Test Coordinator
Western Region-Salem

cc: Dave Kauth, DEQ: NWR-AQ File