



Oregon

Kate Brown, Governor

Department of Environmental Quality
Agency Headquarters
700 NE Multnomah Street, Suite 600
Portland, OR 97232
(503) 229-5696
FAX (503) 229-6124
TTY 711

September 22, 2022

Hollingsworth & Vose Fiber Company
1551 Crystal Lake Drive
Corvallis, OR 97333

Sent via email only

Anita Ragan,

Hollingsworth & Vose Fiber Company (H&V) was called in to Cleaner Air Oregon (CAO) on January 10, 2022, and submitted an initial Emissions Inventory (Inventory) on April 11, 2022. DEQ completed an initial review and, by correspondence dated June 8, 2022, requested that H&V provide additional information and make revisions to the Inventory by July 8, 2022. H&V submitted a revised Inventory on July 8, 2022. DEQ has reviewed the revised Inventory and, in accordance with [Oregon Administrative Rule \(OAR\) 340-245-0030\(2\)](#), has determined that the following additional information, corrections, and updates are required in order to approve the Inventory. DEQ's comments are organized in two sections below: (I) Emissions Inventory and (II) Source Testing.

I. Emissions Inventory

1. DEQ has determined that glass fibers¹ potentially emitted by H&V are classified as glasswool fibers (DEQ SEQ ID 352) for the purposes of this Inventory. According to the Agency for Toxic Substances and Disease Registry's (ATSDR) [Toxicological Profile for Synthetic Vitreous Fibers](#), special purpose fibers (including those produced by flame attenuation) are included in the "glass wool" category of Synthetic Vitreous Fibers. Some glass fibers potentially emitted by H&V may also be classified as Mineral Fibers (DEQ SEQ ID 350); however, H&V may designate all fibers as glasswool fibers (DEQ SEQ ID 352) only, to avoid double-counting of emissions. **By October 24, 2022**, please revise the Inventory to include glasswool fiber emissions from the following Toxics Emissions Units (TEUs):
 - a. Ceramic Filter Unit (CFU) stacks: DEQ recognizes that particles larger than 5 micrometers in length are not likely to travel through the CFU filtration media; however, potential emissions from these TEUs include leakage from ceramic filter seals and voids. In the absence of emissions data specific to glasswool fibers for these TEUs, the following emission factors for glasswool fibers (DEQ SEQ ID 352) may be conservatively assumed, based on filterable particulate matter emissions measured in the 2018 source tests²:
 - i. Flame Blown (TEU FB): 1.04 pounds per ton glass produced;
 - ii. Rotary Fine (TEU RF): 0.508 pounds per ton glass produced;

¹ From the [ATSDR Profile \(page 2\)](#): "Technically, to be counted as a fiber, the particle must be at least 5 micrometers long (1 micrometer equals 1/1,000,000 of a meter and has the symbol μm), and have an aspect ratio of at least 3 to 1 or sometimes 5 to 1."

² Average of measured filterable particulate matter results for each TEU reported in Source Test Reports dated June 29, 2018, August 13, 2018, and November 28, 2018. TEU RC is the maximum of results for Rotary Coarse and Ultra Rotary Coarse tests.

- iii. Rotary Coarse/Ultra Rotary Coarse (TEU RC): 0.183 pounds per ton glass produced; and
 - iv. Glass Melt (TEU GM): 0.00348 pounds per ton glass produced; and
 - b. Glass fiber handling areas (please designate a new TEU or TEUs as needed): this includes potential fugitive dust emissions from baling and packaging areas where the final product is transferred from the collecting drums and conveyors to be compressed and baled, and areas where the final product is stored prior to shipment. If Toxic Air Contaminants (TACs) are not likely to be emitted from the TEU(s), provide justification for exemption per [OAR 340-245-0060\(3\)\(a\)](#).
2. **By October 24, 2022**, update the Inventory to include all emissions from TAC-containing raw materials in raw materials handling areas, including the raw material hoppers, weigh hoppers/weigh bin, mixing vessel, feed hoppers, and off-specification bin (additional raw materials handling TEUs may be designated as needed). Because H&V has requested that the information contained in the Safety Data Sheets for these raw materials be protected as confidential and exempt from public disclosure pursuant to [OAR 340-214-0130](#), details related to this item are included as confidential Attachment A.
3. **By October 24, 2022**, update the AQ520 form to include additional line items for TEUs with multiple emission points.³ For these TEUs, designate a separate TEU ID for each stack and fugitive emission point (on Tab 2), and list individual activity information (on Tab 2), emission factor information, and calculated emissions (on Tab 3) for each emission point. Updated TEUs should include, but may not be limited to Raw Material Handling TEUs (RMH_BA, RMH_ZN, and any newly designated raw material handling TEUs).
4. **Within 30 days of DEQ approval of the source testing required by Section II.1 of this letter**, update the Inventory to include revised emission factors for organic TACs from glass plant processes (TEUs RF, RC, FB, and GM), based on the results of the source testing.
5. **Within 30 days of DEQ approval of the source testing required by Section II.2 of this letter**, update the Inventory to include fugitive emissions from the raw materials handling areas (TEUs RMH_BA, RMH_ZN, and any newly designated raw material handling TEUs) as needed, based on the results of the source testing.

II. Source Testing

1. **By December 21, 2022:** Perform source testing of outlet emissions from the glass plant processes (TEUs RF, RC, FB, and GM)⁴ according to the following:
 - a. Test for organic TACs by EPA Method 18, or an alternative method approved by DEQ. H&V should work with DEQ to determine appropriate test methods and analytes;
 - b. Consistent with section 2.3 of the [DEQ Source Sampling Manual](#), H&V must provide the source test plan to DEQ at least **30 days** before conducting the source test. Please review sections 2.7 and 2.8 of the Sampling Manual when proposing minimum sample volumes for each test method. Please consult with DEQ prior to submittal of the test plan if you have any concerns regarding sample volumes and/or analytical detection limits; and
 - c. Source test results are due to DEQ within **45 days** after the test is completed and must include the information required in Appendix A of the Source Sampling Manual.

³ TEUs with a shared emission factor and control efficiency, and which have emissions that are split evenly (or by a consistent percentage of the total TEU emissions) among all emission points may continue to be listed as a single TEU line item.

⁴ In consultation with DEQ, H&V may propose a test plan that includes testing of only certain glass plant TEUs (for example, by identifying and testing the worst-case TEUs and applying resulting emissions factors to other TEUs).

2. **By December 21, 2022:** Perform testing to verify the 100 percent capture efficiency assumed for baghouses and enclosures in raw materials handling areas, according to the following:
 - a. Use EPA Method 204 or an alternative, DEQ-approved method;
 - b. Include the following raw materials handling areas:
 - i. Raw material hoppers (vented through air filters to indoor batch area);
 - ii. Weigh hoppers/weigh bin/mixing vessel (vented to exterior baghouse BBBH);
 - iii. Feed hoppers (vented through baghouses L1B1 and L2B2 to interior of Glass Plant 1);
 - iv. Raw material loading and blending area in Glass Plant 1; and
 - v. Off-specification bin (vented to baghouse BHBH);
 - c. Consistent with section 2.3 of the [DEQ Source Sampling Manual](#), H&V must provide the source test plan to DEQ at least **30 days** before conducting the source test; and
 - d. Source test results are due to DEQ within **45 days** after the test is completed and must include the information required in Appendix A of the Source Sampling Manual.

DEQ is requesting that you submit additional information to complete your Emissions Inventory. If you think 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 the 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 at (503) 866-9643 or Julia.degagne@deq.oregon.gov, and I look forward to your continued assistance with this process.

Sincerely,



Julia DeGagné
Air Toxics Project Manager

Enc: Attachment A: Confidential Business Information - Required Emissions Inventory Updates
Related to Raw Materials Handling

Cc: Chad Darby, Maul Foster Alongi
Amy DeVita-McBride, Maul Foster Alongi
Tom Wood, Stoel Rives
Mike Eisele, DEQ
JR Giska, DEQ
Thomas Rhodes, DEQ
Matt Davis, DEQ
Keith Anderson, DEQ
File