



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

October 23, 2020

Dennis Buenger
Owens-Brockway Glass Container
9710 NE Glass Plant Rd.
Portland, OR 97220

Mr. Buenger,

DEQ received the revised Cleaner Air Oregon emissions inventory, modeling protocol, and risk assessment work plan on August 12, 2020 for the Owens-Brockway Glass Container Inc. facility (Owens) in Portland. DEQ has completed our review of these submittals and in accordance with Oregon Administrative Rule (OAR) 340-245-0030(2), DEQ requests that you submit a revised emissions inventory and risk assessment work plan by **November 13, 2020** that include the revisions requested in this letter. DEQ's comments are organized in two sections below: (I) Emissions Inventory and (II) Risk Assessment Work Plan.

I. Emissions Inventory

1. Footnote (b) of OAR 340-245-8020 Table 2 states that “Inorganic chemicals designated with ‘and compounds’ should be reported as the sum of all forms of the chemical, expressed as the inorganic element.”
 - a. Clearly designate nickel emissions from all welding activities as “*Nickel and compounds*” (CAS No. 7440-02-0) in the emissions inventory.
 - b. Clearly designate manganese emissions from all welding activities as “*Manganese and compounds*” (CAS No. 7439-96-5) in the emissions inventory.
2. Clearly designate hexavalent chromium emissions from all welding activities as “*Chromium VI, chromate and dichromate particulate*” (CAS No. 18540-29-9) in the emissions inventory.
3. DEQ approves of the calculation method used to estimate respirable silica emissions. However, DEQ seeks clarification around assumptions used in emissions estimates.
 - a. The Final Exposure Assessment Report dated September 7, 2016 reported multiple respirable silica concentrations; please substantiate the use of 0.075 mg/m³ for silica emissions estimates from EU1.
 - b. Please provide justification for assuming the following parameters in the silica emissions calculations:
 - i. Airflow from wind pressure:
 1. Vent opening effectiveness: the least conservative vent opening effectiveness factor of 0.25.
 2. Wind speed: An annual average wind speed of four (4) miles per hour was used, as opposed to the average wind speed for the Portland area of eight (8) miles per hour.

- ii. Airflow from temperature difference:
 1. Vent opening effectiveness factor: the maximum effectiveness factor of 0.65.
4. Revise Furnace D amber glass emission factors to match the emission factors calculated using Furnace D source testing data submitted by Owens dated October 2, 2020. DEQ approved emission factors are summarized in Table 2, attached.

II. Risk Assessment Work Plan

1. In Table 2-1, specify all nickel emissions as “*Nickel compounds, insoluble*” (CAS No. 7440-02-0). Footnote (f) in OAR 340-245-8040 Table 4 provides examples of compounds in each category.
2. In Table 2-2, revise the Risk-Based Concentrations (RBCs) listed in Table 1, attached, to match those cited in OAR 340-245-8040 Table 4.

Confidential or trade secret information submitted to DEQ

DEQ is requesting that you submit additional information to complete your toxic air contaminant 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.

Submittal Deadlines

Please submit your revised emissions inventory and risk assessment work plan by **November 13, 2020**. Please communicate any questions or clarifications regarding the above comments proactively in order to provide timely submittals. DEQ remains available during this timeframe to discuss the submittal with you and answer any questions you may have. Failure to provide additional information or corrections required by DEQ by this date may result in a violation of OAR 340-245-0030(1) and OAR 340-245-0040(1).

Please contact me directly at 503.229.5247, billings.kenzie@deq.state.or.us, and we look forward to your continued assistance with this process.

Sincerely,

Kenzie Billings
DEQ CAO Project Manager

Attachment: Table 1. Requested RBC Revisions
Table 2. Requested Furnace D Amber Glass Emission Factor Revisions

Cc: Keith Johnson, DEQ
Thomas Rhodes, DEQ
Steve Dietrich, DEQ
George Yun, DEQ

Table 1. Requested RBC Revisions

| Toxic Air Contaminant | RBC | RBC listed in Work Plan | RBC listed in OAR 340-245-8040 Table 4 |
|------------------------------|----------------------------------|--------------------------------|---|
| Acetaldehyde | Residential Cancer | 0.46 $\mu\text{g}/\text{m}^3$ | 0.45 $\mu\text{g}/\text{m}^3$ |
| Hexane | Worker Noncancer | 3,000 $\mu\text{g}/\text{m}^3$ | 3,100 $\mu\text{g}/\text{m}^3$ |
| Naphthalene | Non-Residential Child Cancer | 0.77 $\mu\text{g}/\text{m}^3$ | 0.76 $\mu\text{g}/\text{m}^3$ |
| Nickel compounds, insoluble | Residential Cancer | Not listed | 0.0038 $\mu\text{g}/\text{m}^3$ |
| Nickel compounds, insoluble | Residential Noncancer | Not listed | 0.014 $\mu\text{g}/\text{m}^3$ |
| Nickel compounds, insoluble | Non-Residential Child Cancer | Not listed | 0.10 $\mu\text{g}/\text{m}^3$ |
| Nickel compounds, insoluble | Non-Residential Child Noncancer | Not listed | 0.062 $\mu\text{g}/\text{m}^3$ |
| Nickel compounds, insoluble | Non-Residential Worker Cancer | Not listed | 0.046 $\mu\text{g}/\text{m}^3$ |
| Nickel compounds, insoluble | Non-Residential Worker Noncancer | Not listed | 0.062 $\mu\text{g}/\text{m}^3$ |
| Nickel compounds, insoluble | Acute | Not listed | 0.20 $\mu\text{g}/\text{m}^3$ |

Table 2. Requested Furnace D Amber Glass Emission Factor Revisions

| Toxic Air Contaminant | CAS No. | Emission Factor (lb/ton of glass) |
|--|----------------|--|
| Antimony and compounds | 7440-36-0 | 1.61E-05 |
| Arsenic and compounds | 7440-38-2 | 3.95E-04 |
| Beryllium and compounds | 7440-41-7 | 1.07E-07 |
| Cadmium and compounds | 7440-43-9 | 4.83E-05 |
| Cobalt and compounds | 7440-48-4 | 1.06E-06 |
| Copper and compounds | 7440-50-8 | 8.77E-05 |
| Lead and compounds | 7439-92-1 | 5.20E-03 |
| Manganese and compounds | 7439-96-5 | 1.29E-05 |
| Mercury and compounds | 7439-97-6 | 9.07E-06 |
| Nickel and compounds | 7440-02-0 | 2.09E-05 |
| Selenium and compounds | 7782-49-2 | 2.78E-04 |
| Chromium VI, chromate and dichromate particulate | 18540-29-9 | 4.78E-07 |