



# Oregon

Kate Brown, Governor

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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/m<sup>3</sup> 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](mailto: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

26-1876 Owens Brockway

**Table 1. Requested RBC Revisions**

<b>Toxic Air Contaminant</b>	<b>RBC</b>	<b>RBC listed in Work Plan</b>	<b>RBC listed in OAR 340-245-8040 Table 4</b>
Acetaldehyde	Residential Cancer	0.46 µg/m <sup>3</sup>	0.45 µg/m <sup>3</sup>
Hexane	Worker Noncancer	3,000 µg/m <sup>3</sup>	3,100 µg/m <sup>3</sup>
Naphthalene	Non-Residential Child Cancer	0.77 µg/m <sup>3</sup>	0.76 µg/m <sup>3</sup>
Nickel compounds, insoluble	Residential Cancer	Not listed	0.0038 µg/m <sup>3</sup>
Nickel compounds, insoluble	Residential Noncancer	Not listed	0.014 µg/m <sup>3</sup>
Nickel compounds, insoluble	Non-Residential Child Cancer	Not listed	0.10 µg/m <sup>3</sup>
Nickel compounds, insoluble	Non-Residential Child Noncancer	Not listed	0.062 µg/m <sup>3</sup>
Nickel compounds, insoluble	Non-Residential Worker Cancer	Not listed	0.046 µg/m <sup>3</sup>
Nickel compounds, insoluble	Non-Residential Worker Noncancer	Not listed	0.062 µg/m <sup>3</sup>
Nickel compounds, insoluble	Acute	Not listed	0.20 µg/m <sup>3</sup>

**Table 2. Requested Furnace D Amber Glass Emission Factor Revisions**

<b>Toxic Air Contaminant</b>	<b>CAS No.</b>	<b>Emission Factor (lb/ton of glass)</b>
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