State of Oregon Department of Environmental Quality

Addendum to Air Quality 2016 Temporary Rulemaking, Action item: I
Colored Art Glass Manufacturing

DEQ has proposed new temporary rules for EQC consideration. On further examination, DEQ is recommending several revisions to the proposed rules.

DEQ also recently received clarification from the U.S. Environmental Protection Agency about the applicability of the National Emissions Standards of Hazardous Air Pollutants (NESHAP) for Glass Manufacturing Area Sources, 40 CFR, Part 63, Subpart SSSSSS to facilities with equipment and operations comparable to those at Bullseye Glass and Uroboros. DEQ still finds the temporary rules are necessary to protect public health. Following the suggested revisions to the proposed temporary rules, this document contains an explanation of why the temporary rules are still necessary.

I. Revisions to proposed temporary rules

DEQ is now suggesting proposed amendments to the proposed temporary rules:

1. In OAR 340-244-9040(2), the proposed rule text does not identify the metal that the text refers to. The rule text should refer to chromium VI, and DEQ proposes to revise the text to refer to chromium VI, as follows:

> "…annual acceptable source impact level of 0.08 nanograms per cubic meter of chromium VI and a daily acceptable source impact level of 36 nanograms per cubic meter of chromium VI."

2. In two places in the proposed rules, the rules specify where source impacts must be determined when dispersion modeling is performed. However, DEQ was not consistent and specified two locations in different parts of the rules, as follows:

In OAR 340-244-9040(3)(b)(C), the proposed rule text is:

> "…the source impact will not exceed either of the following at any off-site modeled receptor (underline added):

(i) An annual acceptable source impact level for chromium VI concentration of 0.08 nanograms per cubic meter; and

(ii) A daily acceptable source impact level for chromium VI concentration of 36 nanograms per cubic meter."

In OAR 340-244-9050(2)(c)(D), the proposed rule text is:

"…at the nearest sensitive receptor (underline added) approved by DEQ. Sensitive receptors include, but are not limited to: residences, hospitals, schools, daycare facilities, elderly housing and convalescent facilities."

3. OAR 340-244-9050(2)(c)(D) addresses risks from long-term (chronic) exposure, and defines "sensitive receptors." OAR 340-244-9040(3)(b)(C) addresses risks from both short-term (acute) and long-term (chronic) exposure.

Acute exposure refers to short-duration but high-concentration exposure, with the risk being for health effects that may result from such exposures. Acute exposures could occur anywhere off the emitter's site, including locations such as sidewalks and streets where people are present infrequently and generally for short periods of time.

Long-term exposure refers to long-duration but low-concentration exposure, with the risk being for health effects that may result from lifetime exposure. Chronic exposure is expected to occur at locations where people are present frequently and for long periods, such as residences, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. However, chronic exposure is not expected to occur in locations such as sidewalks and streets where people are present infrequently and generally for short periods of time.

For short-term (acute) exposure, "any off-site receptor" is the appropriate location to specify, since short-duration but high-concentration exposure could occur anywhere off-site. However, for long-term (chronic) exposure, the "the nearest sensitive receptor" is the more appropriate location. DEQ therefore proposes that the new, proposed OAR 340-244-9040(3)(b)(C) be revised as follows:

"…the source impact will not exceed either of the following ~~at any off-site modeled receptor~~:

(i) An annual acceptable source impact level for chromium VI concentration of 0.08 nanograms per cubic meter at the nearest sensitive receptor approved by DEQ. Sensitive receptors include, but are not limited to: residences, hospitals, schools, daycare facilities, elderly housing and convalescent facilities; and

(ii) A daily acceptable source impact level for chromium VI concentration of 36 nanograms per cubic meter at any off-site modeled receptor."

OAR 340-244-9050(2)(c)(D) addresses risks from long-term (chronic) exposure, and correctly specifies the nearest sensitive receptor; no change is proposed.

II. Discussion of Impact of EPA Clarification

DEQ recently requested clarification and interpretation from EPA on the applicability of the National Emissions Standards of Hazardous Air Pollutants (NESHAP) for Glass Manufacturing Area Sources, 40 CFR, Part 63, Subpart SSSSSS to facilities with equipment and operations comparable to those at Bullseye Glass and Uroboros. Subpart SSSSSS controls air emissions from glass manufacturing plants that are area sources that emit hazardous air pollutant metals (arsenic, cadmium, chromium, lead, manganese, and nickel) and that meet the relevant applicability criteria outlined in the rule. DEQ specifically asked for clarification on how EPA defines "continuous furnace" in the NESHAP.

In a letter to DEQ on April 12, EPA clarified that the types of furnaces used by both Bullseye and Uroboros should be considered to be continuously operating even though they go into an "idling" mode when not producing glass. DEQ will require each company to comply with Subpart SSSSSS, and apply for the appropriate permit. The Subpart includes requirements to install pollution control equipment on any subject furnaces.

DEQ is continuing to recommend that the EQC adopt the proposed temporary rules which are more stringent than EPA's rule and that regulate additional facilities and furnaces. The table below illustrates that DEQ's temporary rule will apply to three more facilities than EPA's rule and is both technology and risk-based. The proposed temporary rule also immediately protects public health from hexavalent chromium emissions, in particular, which would not be similarly addressed under Subpart SSSSSS. The public interest would still be prejudiced if the proposed temporary rules are not adopted in light of the clarification of Subpart SSSSSS applicability.

Comparison of EPA and DEQ Rules

	EPA Rule - Subpart SSSSSS	**DEQ Temporary Rule**
Applies to 6 metal HAPs	Yes	Yes
Affected furnace/facility	Each **furnace** that produces at least 50 tons per year of glass containing metal HAP as raw materials	Each **facility** that produces at least 10 tons per year of glass containing metal HAP as raw materials
Affected facilities in Oregon	2	5
Chromium VI regulated	Not directly	Addressed directly
Technology or risk based	technology only	technology and risk

Therefore, DEQ still recommends that EQC adopt the proposed temporary rules for colored art glass manufacturing facilities because uncontrolled furnaces are more likely than not to emit potentially unsafe levels of certain metals. The proposed temporary rules are intended to

immediately protect the public health and the environment by ensuring that air emissions from colored art glass facilities do not cause unsafe levels of metals in the air nearby.