

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 244

OREGON FEDERAL AND STATE HAZARDOUS AIR POLLUTANT PROGRAM

General Provisions for Stationary Sources

340-244-0010

Policy and Purpose

The Environmental Quality Commission finds that certain air contaminants for which there are no ambient air quality standards may cause or contribute to an identifiable and significant increase in mortality or to an increase in serious irreversible or incapacitating reversible illness or to irreversible ecological damage, and are therefore considered to be hazardous air pollutants. It shall be the policy of the Commission that no person may cause, allow, or permit emissions into the ambient air of any hazardous substance in such quantity, concentration, or duration determined by the Commission to be injurious to public health or the environment. The purpose of this Division is to establish emissions limitations on sources of these air contaminants. In order to reduce the release of these hazardous air pollutants and protect public health and the environment, it is the intent of the Commission to adopt by rule within this Division the source category specific requirements that are promulgated by the EPA, and state standards to reduce the release of these hazardous air pollutants. Furthermore, it is hereby declared the policy of the Commission that the standards contained in this Division are considered minimum standards, and as technology advances, protection of public health and the environment warrants, more stringent standards may be adopted and applied.

Stat. Auth.: ORS 468.020 & ORS 468A.310

Stats. Implemented: ORS 468A.025

Hist.: DEQ 13-1993, f. & cert. ef. 9-24-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-032-0100

Colored Art Glass Manufacturing Facility Rules

340-244-9000

Applicability

Notwithstanding OAR 340 Division 246, OAR 340-244-9000 through 9050 apply to facilities located within the Portland Air Quality Maintenance Area that:

(1) Manufacture colored glass for use in art, architecture, interior design and other similar decorative applications; or manufacture colored glass products for use by manufacturers of

colored glass for use in art, architecture, interior design and other similar decorative applications; and

(2) Manufacture 10 tons per year or more of colored glass using raw materials that contain metal compounds.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040

Stats. Implemented: ORS 468A.025, & 468A.040

340-244-9010

Definitions

The definitions in OAR 340-200-0020 and this rule apply to OAR 340-244-9000 through 9050. If the same term is defined in this rule and 340-200-0020, the definition in this rule applies to this division.

(1) “Colored Art Glass Manufacturer” or “CAGM” means a facility that meets the applicability requirements in OAR 340-244-9000 and refers to the owner or operator of such a facility when the context requires.

(2) “Chromium III” means chromium in the +3 oxidation state, also known as trivalent chromium;

(3) “Chromium VI” means chromium in the +6 oxidation state, also known as hexavalent chromium;

(4) “Chromium”, without a following roman numeral, means chromium in any oxidation state;

(5) “Controlled” means the glass-making furnace emissions are treated by an emission control device approved by DEQ;

(6) “Cullet” means recycled glass that is mixed with raw materials and charged to glass melting furnace to produce glass. Cullet is not considered to be a raw material;

(7) “Emission control device” means control device as defined in OAR 340 Division 200.

(8) “Glass-making furnace” means a unit comprising a refractory-lined vessel in which raw materials are charged and melted at high temperature to produce molten glass.

(9) “Raw material” means minerals, such as silica sand, limestone, and dolomite; inorganic chemical compounds, such as soda ash (sodium carbonate), salt cake (sodium sulfate), and potash (potassium carbonate); metal oxides and other metal-based compounds, such as lead oxide, chromium oxide, and sodium antimonate; metal ores, such as chromite and pyrolusite; and other substances that are intentionally added to a glass manufacturing batch and melted in glass melting furnace to produce glass. Metals that are naturally-occurring trace constituents or

contaminants of other substances are not considered to be raw materials. Cullet and material that is recovered from a furnace control device for recycling into the glass formulation are not considered to be raw materials;

(10) “Uncontrolled” means the glass-making furnace emissions are not treated by an emission control device approved by DEQ; and

(11) “Week” means Sunday through Saturday.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040

Stats. Implemented: ORS 468A.025, & 468A.040

340-244-9020

Permit Required

Not later than September 1, 2016, all CAGMs, not otherwise subject to a permitting requirement, must apply for a permit under OAR 340-216-8010 Table 1, Part B, category #84.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040

Stats. Implemented: ORS 468A.025, & 468A.040

340-244-9030

Emission Control Devices

No later than September 1, 2016:

(1) Each CAGM must install one or more emission control devices to control all glass-making furnaces that use raw material containing any of the following metals: arsenic, cadmium, chromium or nickel; and

(2) Each emission control device must meet either of the following requirements: 99.0% removal efficiency for particulate matter as measured by DEQ Method 5 or 0.2 pounds of particulate matter per ton of glass produced as measured by EPA Method 5.

(3) Emission control device requirements:

(a) DEQ must approve the design of all emission control devices before installation.

(b) Each CAGM must submit a Notice of Intent to Construct as OAR 340-210-0205 through 340-210-0250 require no later than 15 days before the date installation begins. If DEQ does not deny or approve the Notice of Intent to Construct within 10 days after receiving the Notice, the Notice will be deemed to be approved.

(c) Emission control devices may control emissions from more than one furnace.

(d) Each emission control device must be equipped with the monitoring device or devices DEQ specified in DEQ's approval of the Notice of Intent to Construct subsection (b) requires.

(e) Each emission control device must be equipped with inlet ducting that provides the following:

(A) Sufficient cooling of exhaust gases to no more than the maximum design inlet temperature under worst-case conditions; and

(B) Provision for inlet emissions testing, including sufficient duct diameter, sample ports, undisturbed flow conditions, and access for testing.

(f) Each emission control device must be equipped with outlet ducting that provides for outlet emissions testing, including sufficient duct diameter, sample ports, undisturbed flow conditions, and access for testing.

(A) After commencing operation of any emission control device, each CAGM must observe and record the parameters DEQ specified in DEQ's approval of the Notice of Intent to Construct, that subsection (b) requires.

(B) Each CAGM must perform the following source testing on at least one controlled glass-making furnace DEQ approved to demonstrate compliance with either requirement in section (2). Source testing done under OAR 340-244-9040(4) may be used in whole or in part to comply with this paragraph.

(i) Within 60 days of commencing operation of the emission control devices, test control device inlet and outlet for particulate matter using DEQ Method 5 or comparable method;

(ii) A source test plan must be submitted at least 30 days before conducting the source test; and

(iii) The source test plan must be approved by DEQ before conducting the source test.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040

Stats. Implemented: ORS 468A.025, & 468A.040

340-244-9040

Operating Restrictions

(1) CAGMs may not use arsenic, cadmium or chromium VI in raw materials in any glass-making furnace that is not controlled by an emission control device DEQ approved.

(2) Each CAGM must comply with either section (3) (Option 1) or section (4) (Option 2), and may comply with both, but is not required to comply with both.

(3) Option 1: The CAGM may not use chromium III in uncontrolled glass-making furnaces until DEQ establishes a maximum allowable chromium III usage rate for uncontrolled glass-making furnaces that will not result in ambient concentrations that exceed 1.6 ng/m³ of chromium VI. Thereafter, the CAGM must comply with the maximum allowable chromium III usage rate for uncontrolled glass-making furnaces DEQ established. For the purpose of establishing a maximum allowable chromium III usage rate, the following are required:

(a) Performing a source test in an uncontrolled furnace or at the inlet of an emission control device as specified below:

(A) Test using DEQ--approved protocols and methods for total chromium and chromium VI and submit a source test plan detailing the approach to DEQ for approval;

(B) Test while making a glass that DEQ agrees is made under the most oxidizing combustion conditions and that contains a high percentage of chromium III as compared to other formulas the CAGM uses;

(C) Keep records of the amount of chromium III used in the batches that are produced during the source test runs, as well as other operational parameters identified in the source test plan; and

(D) Prior to the source test, clean the furnace stack in a manner that DEQ has approved and that complies with applicable OSHA standards, or replace the furnace stack to be tested.

(b) Performing dispersion modeling to determine the ambient concentrations of the CAGM's air emissions at nearby and adjacent receptors as follows:

(A) Submit a modeling protocol for DEQ approval;

(B) Use the maximum chromium VI emission rate;

(C) Determine the impact at receptors DEQ approved; and

(D) Establish a maximum chromium III usage so as not to exceed an ambient concentration of 1.6 ng/m³ of chromium VI.

(c) The CAGM must keep daily records of all batches produced and provide to DEQ, each week, the daily amount of arsenic, beryllium, cadmium, chromium III, chromium VI, cobalt, lead, manganese, nickel, and selenium used.

(4) Option 2: The CAGM may not use chromium III in controlled or uncontrolled glass-making furnaces until DEQ establishes maximum allowable chromium III usage rates for uncontrolled or controlled glass-making furnaces that will not result in ambient concentrations that exceed 1.6 ng/m³ of chromium VI. After DEQ establishes the maximum allowable chromium III usage rates for uncontrolled or controlled glass-making furnaces, the CAGM must comply with the rates DEQ establishes. For the purpose of establishing maximum allowable chromium III usage rates, the following are required:

(a) Performing a source test as specified below:

(A) Test using DEQ--approved protocols and methods for total chromium, chromium VI, and particulate matter (DEQ Method 5) and submit a source test plan detailing the approach to DEQ for approval;

(B) Test for chromium and chromium VI at the outlet of the emission control device, and test for particulate matter at both the inlet and the outlet of the emission control device;

(C) Test while making a glass that DEQ agrees is made under the most oxidizing combustion conditions and that contains a high percentage of chromium III as compared to other formulas used by the CAGM;

(D) Keep records of the amount of chromium III used in the batches that are produced during the source test runs, as well as other operational parameters identified in the source test plan; and

(b) Performing dispersion modeling to determine the ambient concentrations of the CAGM's air emissions at nearby and adjacent receptors as follows:

(A) Submit a modeling protocol for DEQ approval;

(B) Use the maximum chromium VI emission rate;

(C) Determine the impact at receptors DEQ approved; and

(D) Establish a maximum chromium III usage so as not to exceed an ambient concentration of 1.6 ng/m³ of chromium VI.

(c) The CAGM must keep daily records of all batches produced and provide to DEQ, each week, the daily amount of arsenic, beryllium, cadmium, chromium III, chromium VI, cobalt, lead, manganese, nickel, and selenium used.

(5) CAGMs may apply source testing protocols equivalent to those in section (4) to the use of chromium VI in a glass-making furnace to establish maximum usage rates for chromium VI in controlled glass-making furnaces that will not result in ambient concentrations that exceed 1.6 ng/m³ of chromium VI.

(6) CAGMs are not restricted on the raw materials that may be used in glass-making furnaces that are controlled by an emission control device DEQ approved, except that the use of chromium III and chromium VI will be subject to maximum usage rates determined by DEQ.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040

340-244-9050

Other Metals

(1) If DEQ determines that ambient concentrations of a metal in the area of a CAGM pose an unacceptable risk to human health and that emissions from an uncontrolled furnace at the CAGM are a contributing factor, then DEQ must limit the CAGM's use of the metal of concern in uncontrolled furnaces, by agreement or in a permit, to reduce such risk. DEQ must consult with the Oregon Health Authority when applying this rule.

(2) Exceeding the limits established under the authority of this rule is a violation of this rule.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040

Stats. Implemented: ORS 468A.025, & 468A.040