**Key to Identifying Changed Text:**

Inserted text is Blue Underlined

Deleted text is ~~Red Strikethrough~~

Text deleted from one location - and moved to another location

**Note: DEQ is proposing to make the current, temporary colored art glass manufacturing facility rules (included below) permanent. Therefore, there is no deleted, inserted, or removed text.**

**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 is 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 & 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; DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

Colored Art Glass Manufacturing Facility Rules

**340-244-9000**

**Applicability and Jurisdiction**

Notwithstanding OAR 340 Division 246, OAR 340-244-9000 through 9090 apply to all facilities in the state of Oregon that:

(1)(a) Manufacture colored glass from raw materials, or a combination of raw materials and cullet, for use in art, architecture, interior design and other similar decorative applications, or

(b) Manufacture colored glass products from raw materials, or a combination of raw materials and cullet, for use by colored glass manufacturers for use in art, architecture, interior design and other similar decorative applications; and

(2) Manufacture 5 tons per year or more of colored glass using raw materials that contain any of the following glass-making HAPs: arsenic, cadmium, chromium, lead, manganese, nickel, and selenium.

(3) Subject to the requirements in this division and OAR 340-200-0010(3), LRAPA is designated by the EQC to implement OAR 340-244-9000 through 9090 within its area of jurisdiction.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**340-244-9010**

**Definitions**

The definitions in OAR 340-200-0020 and this rule apply to OAR 340-244-9000 through 9090. 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 total chromium.

(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 a glass-making furnace to produce glass. Cullet does not include glass materials that contain glass-making HAPs in amounts that materially affect the color of the finished product and that are used as coloring agents; such materials are considered raw materials. Cullet is not considered to be a raw material.

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

(8) “Frit” means granules of finished glass or other glassified or vitrified material that is not made from finished glass, and which contains a higher proportion of glass-making HAP than would be found in a finished glass. Depending on its content, frit may be a raw material or it may be cullet and not considered a raw material.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*alternate suggestion by gfd, replace above with below

(8) “Frit” means both of the following:

(a) Granules of glassified or vitrified material that is not made from finished glass, and which contains a higher proportion of glass-making HAP than would be found in a finished glass. The purpose of such material includes, but is not limited to, making powdered HAPs safer to handle by combining them with silica or other oxides.

(b) Granules of crushed finished glass.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* don’t forget to renumber below

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

(9) “Glass-making HAP” means arsenic, cadmium, chromium, lead, manganese, nickel or selenium in any form, such as the pure metal or chemical, mixed within compounds, or mixed with other materials.

(10) “Raw material” means:

(a) Substances that are intentionally added to a glass manufacturing batch and melted in glass-making furnace to produce glass, including but not limited to:

(A) Minerals, such as silica sand, limestone, and dolomite;

(B) Inorganic chemical compounds, such as soda ash (sodium carbonate), salt cake (sodium sulfate), and potash (potassium carbonate);

(C) Metal oxides and other metal-based compounds, such as lead oxide, chromium oxide, and sodium antimonate; and

(D) Metal ores, such as chromite and pyrolusite.

(b) Metals that are naturally-occurring trace constituents or contaminants of other substances are not considered to be raw materials.

(c) Raw material includes materials that contain glass-making HAPs in amounts that materially affect the properties of the finished product, such as its color, texture, or bubble content. Such materials may be powdered, glassified, vitrified, frit, or in some other form. Raw materials includes frit as described in paragraph (A), but does not include fB).rit as described in paragraph (B):

 (A) Granules of glassified or vitrified material that is not made from finished glass, and which contains a higher proportion of glass-making HAP than would be found in a finished glass. The purpose of such material includes, but is not limited to, combining powdered glass-making HAPs with silica or other oxides to make a compound that is safer to handle.

(B) Granules of crushed finished glass.

 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* alternate suggestion by gfd, replace highlighted above with below

Such materials may be powdered, frit, or in some other form. For the purpose of this definition, frit as described in subsection (8)(a) is a raw material, but frit as described in subsection (8)(b) is not a raw material.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

(d) Cullet and material that is recovered from a glass-making furnace control device for recycling into the glass formulation are not considered to be raw materials.

(11) “Tier 1 CAGM” means a CAGM that produces at least 5 tons per year, but not more than 100 tons per year, of colored art glass in glass-making furnaces that are only electrically heated.

(12) “Tier 2 CAGM” means:

(a) A CAGM that produces 5 tons per year or more of colored art glass in fuel-heated or combination fuel- and electrically-heated glass-making furnaces; or

(b) Produces 100 tons per year or more of colored art glass in any type of glass-making furnace.

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

(14) “Week” means Sunday through Saturday.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**340-244-9015**

**Compliance Extensions**

A Tier 1 CAGM may request, and DEQ may grant, one or more extensions, not to exceed a total of 12 months, to the compliance date for installation of emission control systems if the CAGM cannot meet the compliance date for reasons beyond its reasonable control. A Tier 1 CAGM that has been granted an extension:

(1) Is allowed to operate without the emission control device required by OAR 340-224-9050 until the required emission control device is installed and operational, or the extension expires, whichever is earlier; and

(2) Must comply with OAR 340-244-9020 and 9060(1) as applicable.

**340-244-9020**

**Permit Required**

(1) Not later than December 1, 2016, if located within the Portland AQMA, and not later than April 1, 2017, if located outside the Portland AQMA, 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.

(2) A CAGM that applies for a permit on or before the required date is not in violation of OAR 340-216-0020(3).

(3) CAGMs constructed after September 1, 2016 must obtain a permit prior to construction.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**340-244-9030**

**Requirements That Apply To Tier 2 CAGMs**

(1) Effective September 1, 2016, if located within the Portland AQMA, and April 1, 2017, if located outside the Portland AQMA, Tier 2 CAGMs may not use raw materials containing arsenic, cadmium, chromium, lead, manganese or nickel except in glass-making furnaces that use an emission control device that meets the requirements of OAR 340-244-9070.

(2) Effective January 1, 2017, if located within the Portland AQMA and July 1, 2017, if located outside the Portland AQMA, Tier 2 CAGMs may not use raw materials containing selenium except in glass-making furnaces that use an emission control device that meets the requirements of OAR 340-244-9070.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**The following table is a temporary insertion to aid review of rule 9040 - to be deleted in final - also delete hard page break directly above GFD 9/7/2016 10:00 am**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Inside Portland AQMA** |  | **Outside AQMA** |
|  |  |  |  |
|  | Controls required by Sept 1 |  |  |
| Rules take effect Oct 1 (approx.) |
| **The following in rule 9030** |
| Sept 12016 | may not use the 6 metal HAPs in uncontrolled furnaces | April 12017 | may not use the 6 metal HAPs in uncontrolled furnaces |
| Jan 12016 | may not use Se in uncontrolled furnaces | July 12017 | may not use Se in uncontrolled furnaces |
| **The following in rule 9040** |
| **nla,****deleted** | may not use As, Cd, Cr VI in ***uncontrolled*** furnaces | Oct 12017 | may not use As, Cd, Cr VI in ***uncontrolled*** furnaces |
| **nla,****deleted** | May use Cr III in ***controlled or uncontrolled*** if usage rates approved | Oct 12017 | May use Cr III in ***controlled or uncontrolled*** if usage rates approved |
| EssentiallySept 12016 | May use Cr III in controlled ~~or uncontrolled~~ if usage rates approved(***Uncontrolled*** no longer applies because may not use Cr in uncontrolled per 9030) | April 12017 | May use Cr III in controlled ~~or uncontrolled~~ if usage rates approved(Uncontrolled no longer applies because may not use Cr in uncontrolled) |
|  | Cr may be used in controlled furnaces for testing | Oct 1 | Cr III may be used in ***controlled or uncontrolled*** furnaces for testing |
|  |  | April 1 | Cr may be used in ***controlled*** furnaces for testing |

**340-244-9040**

**Operating Restrictions That Apply To Tier 2 CAGMs**

 (1) A Tier 2 CAGM may use raw materials containing chromium in a controlled glass-making furnace only if DEQ has established annual and daily maximum allowable chromium usage rates that will prevent the source from exceeding the chromium VI source impact levels described in paragraph (3)(b)(C) of this rule.

(2) Chromium may be used in glass-making furnaces that are controlled by an emission control device approved by DEQ for the purpose of conducting the emissions testing under sectionssection (3). Such use must be limited to only the amounts required to perform the testing.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* replace (1) and (2) above with below

(1) The following apply to Tier 2 CAGMs located inside the Portland AQMA:

(a) Raw materials containing chromium may be used in a controlled glass-making furnace only if DEQ has established annual and daily maximum allowable chromium usage rates that will prevent the source from exceeding the chromium VI source impact levels described in paragraph (3)(b)(C) of this rule.

(b) Raw materials containing chromium may be used in controlled glass-making furnaces for the purpose of conducting the emissions testing under sections (3) or (4). Such use must be limited to only the amounts required to perform the testing.

(2) The following apply to Tier 2 CAGMs located outside the Portland AQMA:

(a) Raw materials containing arsenic, cadmium or chromium VI may not be used except in glass-making furnaces that are controlled by an emission control device approved by DEQ.

(b) Prior to April 1, 2017, raw materials containing chromium may be used in controlled or uncontrolled glass-making furnaces only if DEQ has established annual and daily maximum allowable chromium usage rates that will prevent the source from exceeding the chromium VI source impact levels described in paragraph (3)(b)(C) of this rule.

(c) On and after April 1, 2017, raw materials containing chromium may be used in controlled glass-making furnaces only if DEQ has established annual and daily maximum allowable chromium usage rates that will prevent the source from exceeding the chromium VI source impact levels described in paragraph (3)(b)(C) of this rule.

(d) Prior to April 1, 2017, raw materials containing chromium may be used in controlled or uncontrolled glass-making furnaces for the purpose of conducting the emissions testing under sections (3). Such use must be limited to only the amounts required to perform the testing.

(e) On and after April 1, 2017, raw materials containing chromium may be used in controlled glass-making furnaces for the purpose of conducting the emissions testing under sections (3) or (4). Such use must be limited to only the amounts required to perform the testing.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

(3) After DEQ establishes any maximum allowable chromium III or chromium VI usage rate for a CAGM’s glass-making furnace or glass-making furnaces, the CAGM must comply with the rate DEQ establishes. For the purpose of establishing any maximum allowable usage rate for chromium III or chromium VI the following are required:

(a) A source test must be performed as specified below:

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

(B) Test at the outlet of the emission control device on a controlled glass-making furnace;

(C) Test while making a glass that DEQ agrees is made under the most oxidizing combustion conditions and that contains a high percentage of the type of chromium for which a usage rate is being established, as compared to other formulas used by the CAGM;

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

(E) If the testing under this section is done for total chromium only, the CAGM must assume that all chromium emitted is in the form of chromium VI.

(b) The Tier 2 CAGM must perform dispersion modeling, using models and protocols approved by DEQ, to determine the annual average and daily maximum ambient concentrations that result from the Tier 2 CAGM’s air emissions as follows:

(A) Submit a modeling protocol for DEQ approval;

(B) Use the maximum chromium VI emission rate;

(C) Establish a maximum chromium usage rate so that the source impact will not exceed either of the following:

(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 5 nanograms per cubic meter at any off-site modeled receptor.

(c) Each Tier 2 CAGM must keep daily records of all glass formulations produced and, until such time as the Tier 2 CAGM has installed all emission control devices required under OAR 340-244-9030, provide to DEQ a weekly report of the daily amount of each glass-making HAP used.

 subsection(5) Tier 2 CAGMs are not restricted on the raw materials that may be used in glass-making furnaces that are controlled by an emission control device approved by DEQ, except that the use of raw materials containing chromium will be subject to maximum usage rates established by DEQ.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**340-244-9050**

**Requirements That Apply To Tier 1 CAGMs**

(1) No later than October 1, 2016, if located within the Portland AQMA, and April 1, 2017, if located outside the Portland AQMA, each Tier 1 CAGM must comply with subsection (a), (b) or (c) for each glass-making furnace or group of glass-making furnaces that use raw material containing arsenic, cadmium, chromium, lead, manganese or nickel:

(a) Install an emission control device that meets the emission control device requirements in OAR 340-244-9070;

(b) Demonstrate that the glass-making furnace or group of glass-making furnaces meets the exemption in section (3) for arsenic, cadmium, chromium, lead, manganese or nickel; or

(c) Request a permit condition that prohibits the use of arsenic, cadmium, chromium, lead, manganese or nickel in the glass-making furnace or group of glass-making furnaces, and comply with that condition.

(2) No later than January 1, 2017, if located within the Portland AQMA, and April 1, 2017, if located outside the Portland AQMA, each Tier 1 CAGM must comply with subsection (a), (b) or (c) for each glass-making furnace or group of glass-making furnaces that use raw material containing selenium:

(a) Install an emission control device that meets the emission control device requirements in OAR 340-244-9070;

(b) Demonstrate that the glass-making furnace or group of glass-making furnaces meets the exemption in section (3) for selenium; or

(c) Request a permit condition that prohibits the use of selenium in the glass-making furnace or group of glass-making furnaces, and comply with that condition.

(3) A Tier 1 CAGM is exempt from the requirement to install emission controls under subsections (1)(a) and (2)(a) on a glass-making furnace or group of glass-making furnaces if that CAGM meets the requirements of subsection (a) for each of the individual glass-making HAPs listed in paragraphs (a)(A) through (a)(G) below. This exemption is not allowed for a glass-making furnace or group of glass-making furnaces that use raw materials containing chromium VI.

(a) The CAGM shows through source testing and dispersion modeling if necessary, following the requirements of subsections (b) and (c), that the glass-making HAP concentrations modeled at the nearest sensitive receptor do not exceed the applicable concentration listed in paragraphs (A) through (G). For chromium VI resulting from the use of chromium III, the CAGM may source test for and model chromium VI, or may source test for and model total chromium in lieu of chromium VI, to demonstrate that the ambient concentration is below the concentration listed in paragraph (C). If the modeled total chromium ambient concentration exceeds the concentration listed in paragraph (C), then the CAGM may conduct an additional source test to measure chromium VI and model to show that the ambient concentration of chromium VI does not exceed the concentration listed in paragraph (C).

(A) Arsenic, 0.2 nanograms per cubic meter annual average;

(B) Cadmium, 0.6 nanograms per cubic meter annual average;

(C) Chromium VI, 0.08 nanograms per cubic meter annual average;

(D) Lead, 15 nanograms per cubic meter annual average;

(E) Manganese, 90 nanograms per cubic meter annual average;

(F) Nickel, 4 nanograms per cubic meter annual average;

(G) Selenium, 710 nanograms per cubic meter 24 hour average.

(b) Source testing for the purpose of demonstrating the exemption in this section must be performed as follows:

(A) Test using DEQ -approved protocols and methods for each glass-making HAP listed in paragraphs (a)(A) through (a)(G) that the Tier 1 CAGM intends to use.

(B) Test for particulate matter using DEQ Method 5 or equivalent; HAPs using EPA Method 29, CARB Method M-436 or an equivalent method approved by DEQ; and if the Tier 1 CAGM chooses, chromium VI using a method approved by DEQ.

(C) Submit a source test plan to DEQ for approval at least 30 days before the test date.

(D) For each glass-making HAP to be tested for, test while making a glass formulation that DEQ agrees has the highest potential emissions of that glass-making HAP. More than one source test may be required if a single glass formulation cannot meet this requirement for all glass-making HAPs to be tested for.

(E) Keep records of the amount of each glass-making HAP regulated under this rule used in the formulations that are produced during the source test runs, as well as other operational parameters identified in the source test plan.

(c) Dispersion modeling for the purpose of demonstrating the exemption in this section is not required for any glass-making HAP that the source testing under subsection (b) shows is not greater than the applicable concentration listed in paragraphs (a)(A) through (a)(F); otherwise, dispersion modeling must be performed as follows:

(A) Submit a modeling protocol for DEQ approval;

(B) Use the EPA-approved model AERSCREEN or other EPA -approved model;

(C) Use the maximum emission rate for each glass-making HAP to be modeled as determined by the source testing required by subsection (b); and

(D) Model the ambient concentration 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.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**340-244-9060**

**Operating Restrictions That Apply To Tier 1 CAGMs**

(1) Tier 1 CAGMs may not use raw materials that contain chromium VI in any uncontrolled glass-making furnace.

(2) Tier 1 CAGMs are not restricted on the raw materials that may be used in glass-making furnaces that are controlled by an emission control device approved by DEQ.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**340-244-9070**

**Emission Control Device Requirements**

(1), CAGMs must comply with the requirements in subsection (a) or (b), as applicable, for each emission control device used to comply with this rule.

(a) At Tier 1 CAGMs the the CAGM must comply with one of the requirements in paragraphs (A), (B) or (C):

(A) Conduct a source test as required under subsectionsection (3) and demonstrate that the emission control device does not emit particulate matter in excess of 0.005 grains per dry standard cubic foot as measured by EPA Method 5 or an equivalent method approved by DEQ.

(B) If the emission control system is a fabric filter (baghouse), install a bag leak detection system that meets the requirements of section (4).

(C) If the emission control system is a fabric filter (baghouse), install an afterfilter that meets the requirements of section (5).

(b) At Tier 2 CAGMs the CAGM must :

(A) Conduct a source test as required under subsectionsection (3) and demonstrate that the emission control device does not emit particulate matter in excess of 0.005 grains per dry standard cubic foot as measured by EPA Method 5 or an equivalent method approved by DEQ; and

(B) If a fabric filter (baghouse) is used, install either ),a bag leak detection system that meets the requirements of section (4) or).

an afterfilter that meets the requirements of section (5).

(2) Emission control device requirements:

(a) A CAGM must obtain DEQ approval of the design of all emission control devices before installation, as provided in this rule.

(b) A CAGM must submit a Notice of Intent to Construct as required by OAR 340-210-0205 through 340-210-0250 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 glass-making furnace.

(d) Each emission control device must be equipped with the following monitoring equipment:

(A) An inlet temperature monitoring device;

(B) A differential pressure monitoring device if the emission control device is a baghouse; and

(C) Any other monitoring device or devices specified in DEQ’s approval of the Notice of Intent to Construct.

(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.

(g) After commencing operation of any emission control device, the CAGM must monitor the emission control device as required by OAR 340-244-9080.

(3) If source testing is conducted under section (1), the CAGM must perform the following source testing on at least one emission control device. Source testing done under OAR 340-244-9040(2) may be used in whole or in part to comply with this requirement.

(a) Within 60 days of commencing operation of the emission control devices, test control device for particulate matter using DEQ Method 5 or equivalent method;

(b) The emission control device to be tested must be approved by DEQ;

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

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

(4) If a bag leak detection system is installed under section (1), the requirements for the bag leak detection system are:

(a) The bag leak detection system must be installed and operational as soon as possible but not more than 90 days after the baghouse becomes operational.

(b) Each bag leak detection system must meet the specifications and requirements in paragraphs (A) through (H).

(A) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(B) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator must continuously record the output from the bag leak detection system using electronic or other means (e.g., using a strip chart recorder or a data logger).

(C) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to subsection (d), and the alarm must be located such that it can be heard by the appropriate plant personnel.

(D) In the initial adjustment of the bag leak detection system, the CAGM must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(E) Following initial adjustment, the CAGM may not adjust the averaging period, alarm set point, or alarm delay time without approval from DEQ except as provided in paragraph (F).

(F) Once per quarter, the CAGM may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by OAR 340-224-9080(4).

(G) The CAGM must install the bag leak detection sensor downstream of the fabric filter.

(H) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

(5) If an afterfilter is installed under section (1), the requirements for the afterfilter are:

(a) The afterfilter must be installed and operational as soon as possible but not more than 120 days after the baghouse becomes operational;

(b) The afterfilter must filter the entire exhaust flow from the fabric filter (baghouse); and

(c) The afterfilter must be equipped with:

(A) High efficiency particulate arrestance (HEPA) filters that have a Minimum Efficiency Reporting Value of 17 (MERV 17) or higher per American National Standards Institute (ANSI) Standard 52.2; and

(B) A differential pressure monitoring device.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16; DEQ 6-2016(Temp), f. & cert. ef. 5-6-16 thru 10-17-16

**340-244-9080**

**Emission Control Device Monitoring**

(1) Each Tier 1 CAGM must perform the following monitoring on each emission control device it uses to comply with this rule:

(a) At least once each week, observe and record the inlet temperature and the fabric filter (baghouse) or afterfilter differential pressure (as applicable); and

(b) At least once every 12 months:

(A) Inspect the ductwork and emission control device housing for leakage;

(B) Inspect the interior of the emission control device for structural integrity and, if a fabric filter (baghouse) is used, to determine the condition of the fabric filter; and

(C) Record the date, time and results of the inspection.

(2) Each Tier 2 CAGM must perform the following monitoring on each emission control device used to comply with this rule:

(a) At least once each day, observe and record the inlet temperature and the fabric filter (baghouse) or afterfilter differential pressure (as applicable); and

(b) At least once every 12 months:

(A) Inspect the ductwork and emission control device housing for leakage;

(B) Inspect the interior of the emission control device for structural integrity and, and if a fabric filter (baghouse) is used, to determine the condition of the fabric filter; and

(C) Record the date, time and results of the inspection.

(3) CAGMs must observe and record any parameters specified in a DEQ approval of the Notice of Intent to Construct applicable to a control device.

(4) If a bag leak detection system is used, the CAGM must develop and submit to the Administrator or delegated authority for approval a site-specific monitoring plan for each bag leak detection system. The CAGM must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in subsections (a) through (f).

(a) Installation of the bag leak detection system;

(b) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(c) Operation of the bag leak detection system, including quality assurance procedures;

(d) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(e) How the bag leak detection system output will be recorded and stored; and

(f) Corrective action procedures as specified in section (5). In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(5) For each bag leak detection system, the CAGM must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in subsection (f), the CAGM must alleviate the cause of the alarm within 3 hours of the alarm by taking all necessary corrective actions. Corrective actions may include, but are not limited to the following:

(a) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(b) Sealing off defective bags or filter media;

(c) Replacing defective bags or filter media or otherwise repairing the control device;

(d) Sealing off a defective fabric filter compartment;

(e) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; and

(f) Shutting down the process producing the PM emissions.

(6) For each bag leak detection system, the CAGM must keep the following records:

(a) Records of the bag leak detection system output;

(b) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(c) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the alarm was alleviated within 3 hours of the alarm.

Stat. Auth.: ORS 468.020, 468A.025, & 468A.040
Stats. Implemented: ORS 468A.025, & 468A.040
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16

**340-244-9090**

**Other HAPs**

(1) If DEQ determines that ambient concentrations of any HAP in the area of a CAGM pose an unacceptable risk to human health and that emissions from a glass-making furnace at a CAGM are a contributing factor, then DEQ must set a limit on the CAGM’s use of the HAP of concern in uncontrolled glass-making 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
Hist.: DEQ 4-2016(Temp), f. & cert. ef. 4-21-16 thru 10-17-16