Agenda

Special meeting of the Oregon Environmental Quality Commission

May 5, 2016
4 p.m.
DEQ headquarters: 811 SW 6th Avenue, Portland
10th floor, room EQC-A

The commission will convene for a one-hour special meeting on May 5, 2016, at 4 p.m.

Note: Materials for item A follow this agenda, there are no materials for item B

Item A: Action item: Proposed temporary rule correction for Air Quality 2016 Temporary Rules for Colored Art Glass Manufacturing

- *Staff will propose a technical rule correction pertaining to required testing methodology for recently-adopted temporary rules for air quality related to colored art glass manufacturing.*

Item B: Informational item: Verbal updates from Interim Director Pete Shepherd

- *Interim Director Pete Shepherd will present a brief verbal update of agency activities and other relevant matters*

The next regular commission meeting is June 8-9, 2016, in John Day.

Oregon Department of Environmental Quality

May 5, 2016

Oregon Environmental Quality Commission special meeting

Temporary rulemaking, Action item: A

Air Quality 2016 Temporary Rules

Colored Art Glass Manufacturing

Explanation for current action

At the Environmental Quality Commission's regular meeting on April 21, 2016, under agenda item I, EQC adopted proposed temporary rules regulating Colored Art Glass Manufacturers, as OAR 340-244-9000 through 9090.

After EQC adopted the temporary rules, DEQ found that the rules included a substantive technical error. DEQ proposes that EQC adopt a correction to the temporary rules to revise only the rule text. DEQ does not propose to alter the effective date or the expiration date of the temporary rules.

OAR 340-244-9000 through 9090 impose requirements on CAGMs. These requirements include requirements for Tier 2 CAGMs to install emission control devices, and requirements for Tier 1 CAGMs to either install emission control devices, demonstrate that the requirements for an exemption from installing emission control devices are met, or to request a permit condition prohibiting the use of certain metal hazardous air pollutants. When emission control devices are installed, the rules also require emission testing to demonstrate that the emission control devices meet 99.0 percent removal efficiency using a specified emission test method. The error is that OAR 340-244-9070 specifies the wrong test method.

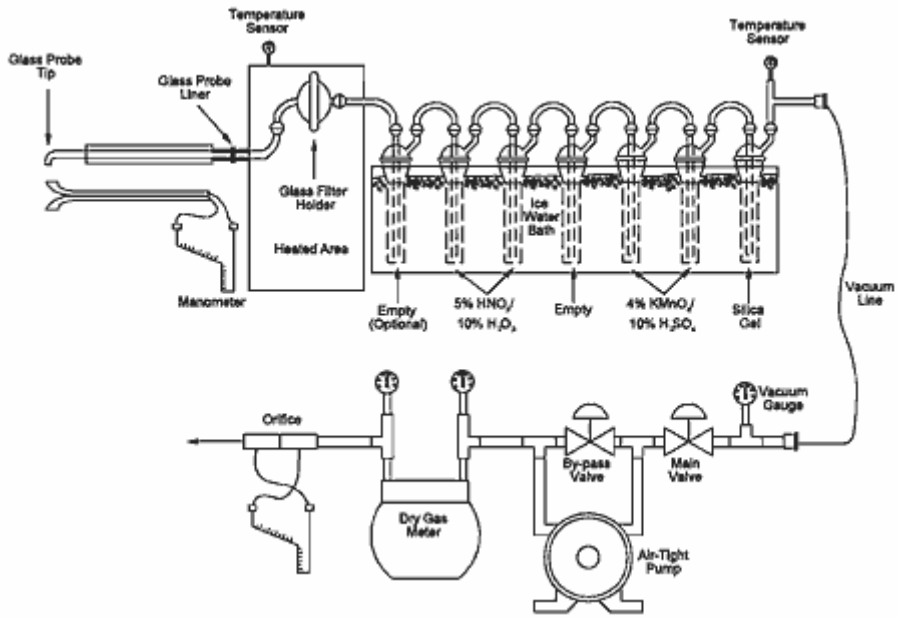
As adopted, this rule specifies using a test method referred to as DEQ Method 5 to demonstrate the removal efficiency. The rule should instead specify EPA Method 5. Both test methods are used to measure particulate matter emissions. But EPA Method 5 tests only for filterable particulate matter while DEQ Method 5 tests for both filterable and condensable particulate matter.

In an exhaust gas stream, some material is present in solid form and some is present in vapor form. A filter captures the solid particles that are called filterable particulate matter. Gases and vapors pass through a filter without being captured but condense to form liquid droplets when cooled to ambient conditions. The term condensable particulate matter refers to the vapors that can condense to liquids but are not captured by a filter. *Total* particulate matter includes both

filterable and condensable particulate matter. But many emissions standards apply only to filterable particulate matter.

DEQ Method 5 measures total particulate matter which includes both filterable and condensable particulate matter. EPA Method 5 measures only filterable particulate matter.

The picture below illustrates the emission sampling system, referred to as the sample train, for DEQ Method 5. At upper left is a glass filter holder, which holds a filter disk. The filter captures the filterable particulate matter. The filter is heated to prevent condensation on the filter. To the right of the filter are a number glass tubes known as impingers, which are placed in an ice bath. The cold impingers are used to condense and capture the condensable particulate matter. After sampling is completed, the amount of particulate matter on the filter and in the impingers is measured.



The sample train for EPA Method 5 is similar but does not include the impingers. It therefore only measures the filterable particulate matter.

One of the primary purposes of OAR 340-244-9000 through 9090 is to control metal hazardous air pollutant emissions from CAGMs. DEQ expects the CAGMs to use baghouses to control these emissions. At the operating temperature of a baghouse, the metal hazardous air pollutants will be in the form of solid particulate matter.

A baghouse is essentially a large air filter and is analogous to the filter in the sample train. Like the filter, a baghouse only captures filterable particulate matter. To properly measure the efficiency of the baghouse, it is appropriate to use a test method that measures only what the baghouse removes, which is filterable particulate matter. For this reason, the rule should specify EPA Method 5 as the test method associated with baghouse removal efficiency, not DEQ Method 5.

One of the other requirements in OAR 340-244-9000 through 9090 is that CAGMs must apply for an air permit. In air permits, DEQ establishes Plant Site Emission Limits, which are limits on the total emissions of criteria pollutants from a facility. Criteria pollutants include particulate matter. For the purpose of PSELs, DEQ counts total (filterable plus condensable) particulate matter. DEQ has an interest in determining the total particulate matter emissions from CAGMs. For this reason, the emission testing that is required for the emission control devices still specifies DEQ Method 5, but only the filterable particulate matter measured in the test will apply to the control device removal efficiency.

DEQ recommendation to the EQC

DEQ recommends that the Environmental Quality Commission:

- Determine that failure to act promptly would result in serious prejudice to the public interest or the interests of the parties concerned as provided under the Justification section of this staff report.

- Adopt TEMPORARY rules as proposed in Attachment A as part of chapter 340 of the Oregon Administrative Rules to be effective on filing with the Oregon Secretary of State.

Overview

Elevated and possibly unsafe levels of metals have been found in the air around two glass manufacturing facilities in Portland. In May 2015, DEQ received the initial results of a study the U.S. Forest Service conducted looking at moss samples as an indicator or screening tool for contaminants in the air. The study's results showed that the moss samples in the areas near two colored art glass manufacturers contained high levels of the heavy metals cadmium and arsenic in Southeast Portland and cadmium in North Portland.

This pilot study prompted DEQ to set up air monitoring systems near a glass company in Southeast Portland. The study collected 24-hour air samples every few days over a 30-day period in October 2015. The results of DEQ's air monitoring confirmed that the glass company was the likely source of metals air emissions. DEQ completed its quality assurance and quality control review of those samples in late January 2016. DEQ then shared its analysis of the findings with the Oregon Health Authority and the Multnomah County Health Department.

The DEQ also identified a second area of concern near a glass company in North Portland. The glass companies were operating in compliance with the current law. One company was operating within its permit and the other company is not required to have a permit.

The U.S. Congress amended the Clean Air Act In 1990 to allow EPA to oversee the control of 188 hazardous air pollutants in order to protect human health. EPA works with local and state governments to implement technologies that control the emission of these chemicals. Benchmarks are Oregon's protective "clean air" goals that DEQ developed to address toxic air pollutants. There are no direct regulatory requirements associated with benchmarks. In 2005, with

EPA funding, DEQ measured concentrations of air toxics, including metals, at six locations in the Portland area, finding levels of many pollutants above clean air benchmarks. DEQ established air toxics benchmarks in 2006 that set guidelines for 52 pollutants.

DEQ's work in 2006 and since then has identified levels of some toxic air pollutants that are still above Oregon's air toxics benchmarks. This is a significant problem because toxic air pollutants are connected with serious health effects like cancer, respiratory problems and organ damage. DEQ's air toxics benchmarks are very protective air concentrations that people could breathe for a lifetime without increasing their cancer risk beyond a chance of one in a million.

Air toxics emissions from certain types of industrial businesses like colored art glass manufacturers are not fully regulated under federal requirements. Based on sampling DEQ undertook last October, and in recent weeks, DEQ has concluded that uncontrolled furnaces used in such colored art glass manufacturing are more likely than not to emit potentially unsafe levels of certain metals, including arsenic, cadmium, hexavalent chromium and nickel. The temporary rules that DEQ proposes for EQC adoption are intended to immediately protect the public health and the environment by ensuring the air emissions from colored art glass facilities do not cause unsafe levels of metals in the air nearby.

Statement of need

What need is DEQ trying to address?

As discussed above, the previously adopted temporary rule contains a technical error in specifying a test method.

How would the proposed rule address the need?

If EQC adopts the proposed rule correction, the colored art glass manufacturing rules will prescribe the correct test method to be used under the circumstances described in OAR 340-244-9070.

Justification ORS 183.335(5)

What would the consequences be of not taking immediate action:

The consequence of not taking immediate action is that the rule would continue to specify a test method that is inappropriate for the purpose of testing the removal efficiency of filterable particulate matter. To properly measure the efficiency of a baghouse, it is appropriate to use a test method that measures only what the baghouse removes, which is filterable particulate matter. Because DEQ Method 5 includes condensable particulate matter, DEQ Method 5 will give a biased result that is incompatible with the intent of the rule and which may make it impossible to demonstrate the required removal efficiency. As a result, DEQ will not be able to verify compliance with the rule and therefore the rule's purpose will not be met. This will result in serious prejudice to the public interest because DEQ will not be able to determine whether the rules will have their intended effect of protecting public health.

Who are the affected parties:

The affected parties are colored art glass manufacturers because they will not be able to show compliance with the proposed rules.

How will the temporary rule avoid or mitigate the consequences of not taking immediate action:

The temporary rule will avoid the consequences of not taking immediate action because it will correct the source test method so that colored art glass manufacturers can show compliance and DEQ will be able to verify compliance with the proposed rules.

Rules affected, authorities, supporting documents

Lead division - Operations

Program or activity – Program Operations

Chapter 340 action

Amend OAR 340-244-9070

Statutory authority ORS 468.020, 468A.025, 468A.040, 468A.310
Statute implemented ORS 468A.025, & 468A.040
Documents relied on for rulemaking - None

Housing costs - ORS 183.534

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. DEQ determined the proposed rules could affect the development costs if the homeowner wanted colored art glass installed in the dwelling. The costs for additional permits, emission control or process equipment could be passed through by businesses providing products and services for such development and construction. DEQ cannot quantify the impact at this time because the available information does not indicate whether the costs would be passed on to consumers and any such estimate would be speculative.

EQC Prior Involvement

EQC considered all of the related temporary rules in this division at its meeting on April 21, 2016. At that time, EQC reviewed the technical issues and the justification and need for temporary rules.

Stakeholder and public involvement

At the March 15, 2016, special meeting, EQC granted the public request for two weeks to review the proposed temporary rule. The comment period ended on March 30, 2016, at 5 p.m. DEQ received approximately 1200 comments, about 520 from Oregonians and about 670 from people around the United States and the world.

Summary of comments and DEQ responses

DEQ did not issue the proposed temporary rule correction for public comment.

Implementation

If EQC adopts this proposed temporary rule correction, DEQ will integrate the correct test method into its requirements and procedures and notify affected parties of the change.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 244

OREGON FEDERAL AND STATE HAZARDOUS AIR POLLUTANT PROGRAM

340-244-9070

Emission Control Device Requirements

(1) Each emission control device used to comply with this rule must meet 99.0 percent or more removal efficiency for particulate matter as measured by ~~DEQ~~ EPA Method 5 or an equivalent method approved by DEQ.

(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.

(h) A 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 inlet and outlet 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.

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