DEQ’s division 208 rules include several rules which are specific to Clackamas, Columbia, Multnomah, and Washington Counties, OAR 340-208-0500 through -0610. These rules are remnants from one of DEQ’s predecessor agencies, the Columbia Willamette Air Pollution Authority (CWAPA). These rules were adopted when CWAPA merged with DEQ in the early 1970s. These rules do not have statewide applicability; they apply only in the four-county area that was covered by CWAPA.

DEQ believes these rules are no longer useful and proposes that they be repealed. Each rule is listed below with the reasons for repealing as well any effects of repealing them.

340-208-0500 Application

OAR 340-208-0510 through 340-208-0610 apply in Clackamas, Columbia, Multnomah, and Washington Counties.

This rule identifies the four-county area in which these rules are applicable.

DEQ proposes repeal of the rules listed in this rule. If they are repealed, there will be no need for this statement of applicability and repeal of OAR 340-208-0500 will have no effect.

340-208-0510 Exclusions

(1) The requirements contained in OAR 340-208-0510 through 340-208-0610 apply to all activities conducted in Clackamas, Columbia, Multnomah, and Washington Counties, other than those for which specific industrial standards have been adopted (divisions 230, 234, 236, and 238), and except for the reduction of animal matter, 340-236-0310(1) and (2).

(2) The requirements outlined in OAR 340-208-0510 through 340-208-0610 do not apply to activities related to a domestic residence of four or fewer family-living units.

DEQ proposes repeal of the rules listed in this rule. If they are repealed, there will be no need to identify exclusions and repeal of OAR 340-208-0510 will have no effect.

340-208-0550 Odor Control Measures

(1) Control apparatus and equipment, using the highest and best practicable treatment currently available, must be installed and operated to reduce to a minimum odor-bearing gases or odor-bearing particulate matter emitted into the atmosphere.

(2) Gas effluents from incineration operations and process after-burners installed under section (1) of this rule must be maintained at a temperature of 1,400° Fahrenheit for at least a 0.5 second residence time, or controlled in another manner determined by the department to be equally or more effective.

At first reading, this rule appears to require the installation and operation of control equipment to control emissions of odorous gases or particulate matter, and specifies the design and operational requirements for afterburners (thermal oxidizers). However, the rule completely lacks details on what sort of facilities is applies to. A simple reading of this rule indicates it applies to *all activities that emit odorous gases or particulate matter* which are not excluded in OAR 340-208-0510 (e.g. all activities other than those for which specific industrial standards have been adopted and activities related to a domestic residence of four or fewer family-living units). This means the rule applies not only to activities with malodorous emissions, but also to activities that emit pleasant or innocuous odors such as bakeries.

If this rule were to be rigorously applied, a very large number of facilities would be required to install odor control measures at costs that would likely put many small businesses out of business. Installation and operation of afterburners (thermal oxidizers) would also result in significant new pollutant emissions from the combustion of natural gas as well as waste a significant amount of energy.

Under the broad applicability of this rule, it would be difficult or impossible to defend selective application of the rule to only certain facilities. In actual practice, DEQ staff is not aware of a single instance in which this rule was used to require the installation or operation of odor control equipment.

DEQ proposes repeal of this rule because its overly broad applicability makes it useless as a practical matter and it is not used in practice. Repeal of this rule will have no effect.

340-208-0570 Ships

While in those portions of the Willamette River and Columbia River that pass through or adjacent to Clackamas, Columbia, and Multnomah Counties, each ship is subject to the emission standards and rules for visible emissions and particulate matter size and must minimize soot emissions. The owner, operator or other responsible party must ensure that these standards and requirements are met.

This rule appears to be potentially useful for minimizing visible and soot emissions from ships in the affected stretches of the Willamette and Columbia Rivers. However, it has no real or practical value. DEQ does not have the ability to inspect or observe ships when they come into the affected stretches of the rivers. DEQ staff occasionally receives complaints about ship emissions, but does not have the ability to directly contact ships and must request the assistance of port authorities to respond to such complaints. Since ships are in port for only a short time, there is no practical way for DEQ to take enforcement action against ship owners. DEQ staff is not aware of any instances in which this rule has been used.

DEQ proposes repeal of this rule because it has no practical value, is not practically enforceable and is not used in practice. For the occasional complaint about ship emissions, DEQ staff can still contact port authorities to request their assistance. Repeal of this rule will have no effect.

340-208-0590 Emission Standards -- General

Compliance with any specific emission standard in this Division does not preclude required compliance with any other applicable emission standard or requirement contained in OAR Chapter 340.

This rule states that compliance with OARs 340-208-0550 through -0610 does not preclude required compliance with any other applicable rule.

DEQ proposes repeal of the rules that this rule refers to. If they are repealed, there will be no need for this rule. If OARs 340-208-0550 through -0610 are repealed, repeal of OAR 340-208-0510 will have no effect.

340-208-0600 Visible Air Contaminant Standards

No person may allow any non-fuel-burning-equipment to discharge any air contaminant that is 20 percent opacity or greater into the atmosphere for a period of or periods totaling more than 30 seconds in any one hour.

In the context of this rule, “non-fuel-burning-equipment” essentially means equipment that is not a boiler. This rule therefore has limited applicability to equipment other than boilers located in the four-county area.

In addition to this rule, DEQ has statewide visible air contaminant standards. The statewide standards applicable within Clackamas, Columbia, Multnomah, and Washington Counties are summarized below:

No person may emit any air contaminant for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 20% opacity.

There is an exception for existing fuel burning equipment installed on or before June 1, 1970 utilizing wood wastes, which must comply with the following:

No person may emit any air contaminant for a period or periods aggregating more than three minutes in any one hour which is equal to or greater than 40% opacity.

DEQ is proposing to revise the current statewide visible emission standards to apply on a six-minute average, which will put DEQ’s standards on the same basis as the U.S. EPA’s visible emissions standards.

On the face of it, the visible emissions standard in OAR 340-208-0600 (may not equal 20 percent opacity or greater for a period of or periods totaling more than 30 seconds in any one hour) is more stringent than the current statewide standard. However, this rule has limited applicability as described above. More importantly, emissions standards are only enforceable if there is a defined method for determining compliance with the standard. In the case of the proposed statewide standards, EPA’s Method 9 is the defined method for determining compliance. Using EPA Method 9, visible emissions readings are taken every 15 seconds, and 24 consecutive readings are averaged to determine compliance with the 6-minute standard. However, DEQ does not have a defined method for determining compliance with the 30-second standard in OAR 340-208-0600, and EPA Method 9 does not lend itself to this task because readings are taken every 15 seconds.

The lack of a defined compliance determination method makes the 30-second standard in OAR 340-208-0600 unenforceable as a practical matter. DEQ could devise and propose a compliance method to make this rule enforceable, but DEQ does not believe the level of effort required to do this is justified for a rule that has such limited applicability. DEQ also believes that the statewide standard will be sufficiently protective.

DEQ proposes repeal of this rule because it is not practically enforceable and because the effort required to develop a method to make it enforceable is not justified. Repeal of this rule will have no effect.

340-208-0610 Particulate Matter Weight Standards

Except for equipment burning natural gas and liquefied petroleum gas, the maximum allowable emission of particulate matter from any fuel burning equipment:

(1) Is a function of maximum heat input as determined from Figure 1, except that from existing fuel burning equipment utilizing wood residue, it is 0.2 grain, and from new fuel burning equipment utilizing wood residue, it is 0.1 grain per standard cubic foot of exhaust gas, corrected to 12 percent carbon dioxide;

(2) Must not exceed Smoke Spot #2 for distillate fuel and #4 for residual fuel, measured by ASTM D2156-65, "Standard Method for Test for Smoke Density of the Flue Gases from Distillate Fuels".

In the context of this rule, “fuel burning equipment” essentially means boilers. This rule therefore has limited applicability to boilers located in the four-county area. Section (1) of this rule sets limits on particulate matter emissions, and section (2) sets smoke density limits for boilers burning fuel oil.

DEQ has statewide standards for particulate matter emissions on a grain per standard cubic foot basis that are similar to the limits in section (1) of this rule. However, the particulate matter limit in section (1) varies with the heat input rating of the boiler. For boilers with maximum heat input ratings of more than 10 million Btu per hour, the limits in section (1) are more stringent than the statewide standards; however, as described below, the more stringent limits only affect boilers that burn fuels other than natural gas or wood (e.g. fuel oil).

This rule has an exception for boilers burning natural gas and liquefied petroleum gas, and is therefore less stringent than the statewide standards with respect to boilers using natural gas and liquefied petroleum gas in the four-county area. Natural gas is the most commonly-used boiler fuel, and boilers that are able to burn both natural gas and fuel oil preferentially burn natural gas because of lower fuel cost and reduced maintenance requirements. Therefore, this rule does not apply to most of the boilers most of the time in the four-county area.

The limits in this rule apply to boilers burning wood fuel, and when applied to wood-fueled boilers, are on a grains per dry standard cubic foot basis. The limits in this rule for wood-fueled boilers are the same as the statewide limits for particulate matter emissions on a grain per standard cubic foot basis. Therefore this rule is no more stringent than the statewide standards with respect to wood-fueled boilers in the four-county area.

As described above, this rule is no more stringent than the statewide standards for boilers burning natural gas or wood. However, it is more stringent for other fuels, which essentially means fuel oil. Fuel oil used in boilers is typically available in two grades, no. 2 distillate fuel oil (diesel fuel) and a heavier grade known as no. 6 residual fuel oil. Of these, no. 6 residual fuel oil is the “dirtier” fuel because of its higher ash and sulfur content, both of which lead to higher particulate matter emissions compared to no. 2 fuel oil and natural gas. The limits in this rule, when applied to fuel oil, are on a pounds per million Btu (lb/MMBtu) basis.

A 1940s-vintage boiler at a paper mill in the four-county area was tested while burning no. 6 fuel oil with the following results:

1999 test: 0.12 lb/MMBtu[[1]](#footnote-1)

2007 test: 0.071 lb/MMBtu1

These results were well below the limit of 0.36 lb/MMBtu that applies to this boiler.

Another 1940s-vintage boiler at a different paper mill in the four-county area was tested while burning no. 2 fuel oil with the following results:

2003 test: 0.041 lb/MMBtu[[2]](#footnote-2)

This result was well below the limit of 0.40 lb/MMBtu that applies to this boiler.

Although this is limited data, it suggests that boilers burning fuel oil normally operate well below the limits in this rule and that this rule therefore has little, if any, practical effect in the limited number of cases where it applies.

In addition to the particulate matter limits, this rule includes Smoke Spot limits. There are no Smoke Spot limits in the rest of the state. Smoke Spot testing involves drawing a sample of the flue gas through a filter paper and then comparing the resulting spot on the filter paper with a series of standards. This test is used primarily for boiler tuning. Smoke Spot test results are not correlated with flue gas opacity and are not a substitute for visible emissions monitoring for compliance with visible emissions (opacity) limits. In addition, the rule is only applicable to boilers in the four-county area burning fuel oil.

DEQ proposes repeal of this rule because it is only applicable in the four-county area, and within that area, it is no more stringent than the statewide standards for most boilers most of the time. Although the rule is more stringent than the statewide standards in the case of boilers burning fuel oil, there is evidence that boilers burning fuel oil have no difficulty complying with the limits. Finally, the rule requires compliance with flue gas density limits that are not correlated with visible emissions (opacity) standards and are not used elsewhere in the state.

Repeal of this rule will have no effect on most boilers most of the time, and will have no noticeable effect on the remaining boilers in the four-county area.

1. With an assumed fuel heat content of 150,000 Btu per gallon [↑](#footnote-ref-1)
2. With an assumed fuel heat content of 140,000 Btu per gallon [↑](#footnote-ref-2)