291-158-0065
Indebted Funds

(1) An inmate who is indebted to the Department of Corrections for whatever reason shall be permitted to spend on commissary during the calendar month one half of the first $60 (up to $30) of funds that have been received and posted for that inmate during the calendar month.

(a) The remainder of the funds received by the inmate during the calendar month shall be applied to the inmate's debt until such indebtedness is satisfied, in accordance with the procedures provided in these rules.

(b) Any unused funds remaining in an inmate's trust account at the end of the last business day of the calendar month shall be applied to the inmate's indebtedness. Any changes to this scheduled date will be communicated by Central Trust.

(2) Each calendar month, Central Trust shall notify each affected inmate through the monthly statement that the Department has applied some or all of the funds received in the prior calendar month to the inmate's indebtedness. The notice shall advise the inmate that he or she may obtain an administrative review of the proposed collection of debt as indicated in section (3) below.

(3) Administrative Review:

(a) An inmate who has received a notice of proposed collection of debt from the Central Trust Unit may obtain an administrative review by writing to the Central Trust Unit on an Inmate Communication form (CD 214). The request must state the specific reason(s) why the inmate believes an error(s) had occurred in the proposed collection of debt. Requests for administrative review must be received by the Central Trust Unit no later than 30 days after the date of the notice to be valid.

(b) If an inmate submits a timely request for administrative review of the Department's proposed collection of debt, the Central Trust technician shall examine the relevant records maintained by the Department to determine whether the proposed collection of debt is proper. After review of the relevant records, the Central Trust Manager or designee will issue the final decision in writing to either allow or disallow, in whole or in part, the proposed collection of debt within 30 days after receipt of the request for administrative review. A copy of the final decision letter shall be provided to the requesting inmate.

(4) Annual Holiday Period: During one annual holiday period, the Assistant Director of Operations or Institution Administrator may allow a standard increase in the amount of funds an inmate may spend from their trust account designated for the purchase of gifts or other approved items. The standard increase and holiday period will be the same for all functional units and will be exempt from collection for an inmate's Department of Corrections debt. Any unused funds remaining to an inmate's trust account at the end of the designated period will be applied to the inmate's indebtedness.

[ED. NOTE: Forms referenced are available from the agency]

Stat. Auth.: ORS 30.643, 34.365, 34.370, 138.590, 144.335, 179.040, 423.020, 423.030, 423.075

Stats. Implemented: ORS 30.643, 34.365, 34.370, 138.590, 144.335, 179.040, 423.020, 423.030, 423.075

Hist.: CD 6-1985(Temp), f. & ef. 6-17-85; CD 63-1985, f. & ef. 8-16-85; CD 20-1990(Temp), f. 9-28-90, cert. ef. 10-12-90; CD 24-1990(Temp), f. & cert. ef. 11-2-90; CD 9-1991, f. & cert. ef. 4-3-91; CD 10-1991(Temp), f. & cert. ef. 4-22-91; CD 24-1991, f. & cert. ef. 10-8-91; CD 16-1992(Temp), f. 7-31-92, cert. ef. 8-3-92; CD 1-1993, f. 1-25-93, cert. ef. 1-28-93, Renumbered from 291-158-0015(11); DOC 32-2008, f. 12-24-08, cert. ef. 12-26-08

291-158-0075
Receipting, Securing, and Transferring Funds

(1) All receipting, securing, and transferring of inmate funds will be processed in accordance with the provision of the Department of Corrections policy on Receipting, Securing, and Depositing Funds, #30.1.3.

(2) Uniform accounting procedures will be required for all Departments of Corrections employees handling funds.

(3) All money received will be receipted and photocopied, with the photocopy of the remittance retained according to the State Archivists retention schedule.

Stat. Auth.: ORS 179.040, 423.020, 423.030 & 423.075

Stats. Implemented: ORS 179.040, 423.020, 423.030 & 423.075

Hist.: CD 6-1985(Temp), f. & ef. 6-17-85; CD 63-1985, f. & ef. 8-16-85; CD 20-1990(Temp), f. 9-28-90, cert. ef. 10-12-90; CD 24-1990(Temp), f. & cert. ef. 11-2-90; CD 9-1991, f. & cert. ef. 4-3-91; CD 10-1991(Temp), f. & cert. ef. 4-22-91; CD 24-1991, f. & cert. ef. 10-8-91; CD 16-1992(Temp), f. 7-31-92, cert. ef. 8-3-92; CD 1-1993, f. 1-25-93, cert. ef. 1-28-93, Renumbered from 291-158-0015(12); DOC 32-2008, f. 12-24-08, cert. ef. 12-26-08

Department of Environmental Quality
Chapter 340

Rule Caption: Adoption of Federal Air Quality Regulations.

Adm. Order No.: DEQ 15-2008

Filed with Sec. of State: 12-31-2008

Certified to be Effective: 12-31-08

Notice Publication Date: 8-1-2008

Rules Adopted: 340-228-0601, 340-228-0609, 340-228-0611, 340-228-0613, 340-228-0615, 340-228-0617, 340-228-0619, 340-228-0621, 340-228-0623, 340-228-0625, 340-228-0627, 340-228-0629, 340-228-0631, 340-228-0633, 340-228-0635, 340-228-0637, 340-230-0335, 340-230-0359, 340-244-0232, 340-244-0234, 340-244-0236, 340-244-0238, 340-244-0240, 340-244-0242, 340-244-0244, 340-244-0246, 340-244-0248, 340-244-0250, 340-244-0252

Rules Amended: 340-200-0040, 340-216-0020, 340-216-0060, 340-228-0600, 340-228-0602, 340-228-0603, 340-228-0606, 340-230-0300, 340-230-0310, 340-230-0320, 340-230-0330, 340-230-0340, 340-230-0350, 340-238-0040, 340-238-0060, 340-238-0090, 340-242-0520, 340-244-0020, 340-244-0030, 340-244-0100, 340-244-0210, 340-244-0220

Rules Repealed: 340-228-0604, 340-228-0605, 340-228-0608, 340-228-0610, 340-228-0612, 340-228-0614, 340-228-0616, 340-228-0618, 340-228-0620, 340-228-0622, 340-228-0624, 340-228-0626, 340-228-0628, 340-228-0630, 340-228-0632, 340-228-0634, 340-228-0636, 340-228-0638, 340-228-0640, 340-228-0642, 340-228-0644, 340-228-0646, 340-228-0648, 340-228-0650, 340-228-0652, 340-228-0654, 340-228-0656, 340-228-0658, 340-228-0660, 340-228-0662, 340-228-0664, 340-228-0666, 340-228-0668, 340-228-0670, 340-228-0671, 340-228-0672, 340-228-0673, 340-228-0674, 340-228-0676, 340-228-0678, 340-232-0070, 340-238-0050, 340-244-0110, 340-244-0120, 340-244-0130, 340-244-0140, 340-244-0150, 340-244-0160, 340-244-0170, 340-244-0180

Subject: The Oregon Environmental Quality Commission (EQC) adopted standards that implement and in some cases go beyond new and amended federal air quality regulations, The objective of this rulemaking was to ensure that the emissions reductions required under the new and amended federal air quality regulations are made in Oregon, and to go beyond the federal regulations where further reductions are needed to protect Oregonians. The expected result of this rule is the maintenance of Oregon's delegation of the federal standards, the use of low mercury coal and/or mercury controls in Oregon, and the reduction of benzene emissions in Oregon.

Rules Coordinator: Larry McAllister—(503) 229-6412

340-200-0040
State of Oregon Clean Air Act Implementation Plan

(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by the Department of Environmental Quality and is adopted as the state implementation plan (SIP) of the State of Oregon pursuant to the federal Clean Air Act, **42 U.S.C.A 7401 to 7671q**.

(2) Except as provided in section (3), revisions to the SIP will be made pursuant to the Commission's rulemaking procedures in division 11 of this chapter and any other requirements contained in the SIP and will be submitted to the United States Environmental Protection Agency for approval. The State Implementation Plan was last modified by the Commission on December 12, 2008.

(3) Notwithstanding any other requirement contained in the SIP, the Department may:

(a) Submit to the Environmental Protection Agency any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after the Department has complied with the public hearings provisions of 40 CFR 51.102 (July 1, 2002); and

(b) Approve the standards submitted by a regional authority if the regional authority adopts verbatim any standard that the Commission has adopted, and submit the standards to EPA for approval as a SIP revision.

NOTE: Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the United States Environmental Protection Agency. If any provision of the federally approved Implementation Plan conflicts with any provision adopted by the Commission, the Department shall enforce the more stringent provision.

Stat. Auth.: ORS 468.020

Stats. Implemented: ORS 468A.035

Hist.: DEQ 35, f. 2-3-72, ef. 2-15-72; DEQ 54, f. 6-21-73, ef. 7-1-73; DEQ 19-1979, f. & ef. 6-25-79; DEQ 21-1979, f. & ef. 7-2-79; DEQ 22-1980, f. & ef. 9-26-80; DEQ 11-1981, f. & ef. 3-26-81; DEQ 14-1982, f. & ef. 7-21-82; DEQ 21-1982, f. & ef. 10-27-82; DEQ 1-1983, f. & ef. 1-21-83; DEQ 6-1983, f. & ef. 4-18-83; DEQ 18-1984, f. & ef. 10-16-84; DEQ 25-1984, f. & ef. 11-27-84; DEQ 3-1985, f. & ef. 2-1-85; DEQ 12-1985, f. & ef. 9-30-85; DEQ 5-1986, f. & ef. 2-21-86; DEQ 10-1986, f. & ef. 5-9-86; DEQ 20-1986, f. & ef. 11-7-86; DEQ 21-1986, f. & ef. 11-7-86; DEQ 4-1987, f. & ef. 3-2-87; DEQ 5-1987, f. & ef. 3-2-87; DEQ 8-1987, f. & ef. 4-23-87; DEQ 21-1987, f. & ef. 12-16-87; DEQ 31-1988, f. 12-20-88, cert. ef. 12-23-88; DEQ 2-1991, f. & cert. ef. 2-14-91; DEQ 19-1991, f. & cert. ef. 11-13-91; DEQ 20-1991, f. & cert. ef. 11-13-91; DEQ 21-1991, f. & cert. ef. 11-13-91; DEQ 22-1991, f. & cert. ef. 11-13-91; DEQ 23-1991, f. & cert. ef. 11-13-91; DEQ 24-1991, f. & cert. ef. 11-13-91; DEQ 25-1991, f. & cert. ef. 11-13-91; DEQ 1-1992, f. & cert. ef. 2-4-92; DEQ 3-1992, f. & cert. ef. 2-4-92; DEQ 7-1992, f. & cert. ef. 3-30-92; DEQ 19-1992, f. & cert. ef. 8-11-92; DEQ 20-1992, f. & cert. ef. 8-11-92; DEQ 25-1992, f. 10-30-92, cert. ef. 11-1-92; DEQ 26-1992, f. & cert. ef. 11-2-92; DEQ 27-1992, f. & cert. ef. 11-12-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 8-1993, f. & cert. ef. 5-11-93; DEQ 12-1993, f. & cert. ef. 9-24-93; DEQ 15-1993, f. & cert. ef. 11-4-93; DEQ 16-1993, f. & cert. ef. 11-4-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 1-1994, f. & cert. ef. 1-3-94; DEQ 5-1994, f. & cert. ef. 3-21-94; DEQ 14-1994, f. & cert. ef. 5-31-94; DEQ 15-1994, f. 6-8-94, cert. ef. 7-1-94; DEQ 25-1994, f. & cert. ef. 11-2-94; DEQ 9-1995, f. & cert. ef. 5-1-95; DEQ 10-1995, f. & cert. ef. 5-1-95; DEQ 14-1995, f. & cert. ef. 5-25-95; DEQ 17-1995, f. & cert. ef. 7-12-95; DEQ 19-1995, f. & cert. ef. 9-1-95; DEQ 20-1995 (Temp), f. & cert. ef. 9-14-95; DEQ 8-1996(Temp), f. & cert. ef. 6-3-96; DEQ 15-1996, f. & cert. ef. 8-14-96; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ 23-1996, f. & cert. ef. 11-4-96; DEQ 24-1996, f. & cert. ef. 11-26-96; DEQ 10-1998, f. & cert. ef. 6-22-98; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 16-1998, f. & cert. ef. 9-23-98; DEQ 17-1998, f. & cert. ef. 9-23-98; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 21-1998, f. & cert. ef. 10-12-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 5-1999, f. & cert. ef. 3-25-99; DEQ 6-1999, f. & cert. ef. 5-21-99; DEQ 10-1999, f. & cert. ef. 7-1-99; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-020-0047; DEQ 15-1999, f. & cert. ef. 10-22-99; DEQ 2-2000, f. 2-17-00, cert. ef. 6-1-01; DEQ 6-2000, f. & cert. ef. 5-22-00; DEQ 8-2000, f. & cert. ef. 6-6-00; DEQ 13-2000, f. & cert. ef. 7-28-00; DEQ 16-2000, f. & cert. ef. 10-25-00; DEQ 17-2000, f. & cert. ef. 10-25-00; DEQ 20-2000 f. & cert. ef. 12-15-00; DEQ 21-2000, f. & cert. ef. 12-15-00; DEQ 2-2001, f. & cert. ef. 2-5-01; DEQ 4-2001, f. & cert. ef. 3-27-01; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 15-2001, f. & cert. ef. 12-26-01; DEQ 16-2001, f. & cert. ef. 12-26-01; DEQ 17-2001, f. & cert. ef. 12-28-01; DEQ 4-2002, f. & cert. ef. 3-14-02; DEQ 5-2002, f. & cert. ef. 5-3-02; DEQ 11-2002, f. & cert. ef. 10-8-02; DEQ 5-2003, f. & cert. ef. 2-6-03; DEQ 14-2003, f. & cert. ef. 10-24-03; DEQ 19-2003, f. & cert. ef. 12-12-03; DEQ 1-2004, f. & cert. ef. 4-14-04; DEQ 10-2004, f. & cert. ef. 12-15-04; DEQ 1-2005, f. & cert. ef. 1-4-05; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 4-2005, f. 5-13-05, cert. ef. 6-1-05; DEQ 7-2005, f. & cert. ef. 7-12-05; DEQ 9-2005, f. & cert. ef. 9-9-05; DEQ 2-2006, f. & cert. ef. 3-14-06; DEQ 4-2006, f. 3-29-06, cert. ef. 3-31-06; DEQ 3-2007, f. & cert. ef. 4-12-07; DEQ 4-2007, f. & cert. ef. 6-28-07; DEQ 8-2007, f. & cert. ef. 11-8-07; DEQ 5-2008, f. & cert. ef. 3-20-08; DEQ 11-2008, f. & cert. ef. 8-29-08; DEQ 12-2008, f. & cert. ef. 9-17-08; DEQ 14-2008, f. & cert. ef. 11-10-08; DEQ 15-2008, f. & cert. ef 12-31-08

340-216-0020
Applicability

This division applies to all sources referred to in **Table 1**. This division also applies to Oregon Title V Operating Permit program sources when an ACDP is required by OAR 340-218-0020 or 340-224-0010.

(1) No person may construct, install, establish, develop or operate any air contaminant source which is referred to in Table 1 without first obtaining an Air Contaminant Discharge Permit (ACDP) from the Department or Regional Authority. No person may continue to operate an air contaminant source if the ACDP expires, or is terminated or revoked; except as provided in OAR 340-216-0082.

(a) For portable sources, a single permit may be issued for operating at any area of the state if the permit includes the requirements from both the Department and Regional Authorities.

(b) The Department or Regional Authority where the portable source's Corporate offices are located will be responsible for issuing the permit. If the corporate office of a portable source is located outside of the state, the Department will be responsible for issuing the permit.

(2) No person may construct, install, establish, or develop any source that will be subject to the Oregon Title V Operating Permit program without first obtaining an ACDP from the Department or Regional Authority.

(3) No person may modify any source that has been issued an ACDP without first complying with the requirements of OAR 340-210-0205 through 340-210-0250.

(4) No person may modify any source required to have an ACDP such that the source becomes subject to the Oregon Title V Operating Permit program without complying with the requirements of OAR 340-210-0205 through 340-210-0250.

(5) No person may increase emissions above the PSEL by more than the de minimis levels specified in OAR 340-200-0020 without first applying for and obtaining a modified ACDP.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-211-0040.

[ED. NOTE: Tables referenced are available from the agency.]

Stat. Auth.: ORS 468.020

Stats. Implemented: ORS 468A

Hist.: DEQ 47, f. 8-31-72, ef. 9-15-72; DEQ 63, f. 12-20-73, ef. 1-11-74; DEQ 107, f. & ef. 1-6-76; Renumbered from 340-020-0033; DEQ 125, f. & ef. 12-16-76; DEQ 20-1979, f. & ef. 6-29-79; DEQ 23-1980, f. & ef. 9-26-80; DEQ 13-1981, f. 5-6-81, ef. 7-1-81; DEQ 11-1983, f. & ef. 5-31-83; DEQ 3-1986, f. & ef. 2-12-86; DEQ 12-1987, f. & ef. 6-15-87; DEQ 27-1991, f. & cert. ef. 11-29-91; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 12-1993, f. & cert. ef. 9-24-93, Renumbered from 340-020-0155; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 22-1994, f. & cert. ef. 10-4-94; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1720; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 4-2002, f. & cert. ef. 3-14-02; DEQ 7-2007, f. & cert. ef. 10-18-07; DEQ 8-2007, f. & cert. ef. 11-8-07; DEQ 15-2008, f. & cert. ef 12-31-08

340-216-0060
General Air Contaminant Discharge Permits

(1) Applicability.

(a) The Commission may issue a General ACDP under the following circumstances:

(A) There are several sources that involve the same or substantially similar types of operations;

(B) All requirements applicable to the sources can be contained in a General ACDP;

(C) The emission limitations, monitoring, recordkeeping, reporting and other enforceable conditions are the same for all sources covered by the General ACDP; and

(D) The pollutants emitted are of the same type for all covered sources.

(b) Permit content. Each General ACDP must include the following:

(A) All relevant requirements;

(B) Generic PSELs for all pollutants emitted at more than the deminimis level in accordance with OAR 340, division 222;

(C) Testing, monitoring, recordkeeping, and reporting requirements necessary to ensure compliance with the PSEL and other applicable emissions limits and standards; and

(D) A permit duration not to exceed 10 years.

(c) Permit issuance procedures: A General ACDP requires public notice and opportunity for comment in accordance with ORS 183.325 to 183.410. All General ACDPs are on file and available for review at the Department's headquarters.

(2) Source assignment:

(a) Application requirements. Any person requesting that a source be assigned to a General ACDP must submit a written application in accordance with OAR 340-216-0040 that includes the information in OAR 340-216-0040(1), specifies the General ACDP source category, and shows that the source qualifies for the General ACDP.

(b) Fees. Applicants must pay the fees set forth in **Table 2** of OAR 340-216-0020.

(c) Source assignment procedures:

(A) Assignment of a source to a General ACDP is a Category I permit action and is subject to the Category I public notice requirements in accordance with OAR 340, division 209.

(B) A person is not a permittee under the General ACDP until the Department assigns the General ACDP to the person.

(C) Assignments to General ACDPs terminate when the General ACDP expires or is modified, terminated or revoked.

(3) Commission Initiated Modification. If the Commission determines that the conditions have changed such that a General ACDP for a category needs to be modified, the Commission may issue a new General ACDP for that category and the Department may assign all existing General ACDP permit holders to the new General ACDP.

(4) Rescission. In addition to OAR 340-216-0082 (Termination or Revocation of an ACDP), the Department may rescind an individual source's assignment to a General ACDP if the source no longer meets the requirements of this rule or the conditions of the permit, including, but not limited to the source having an ongoing, reoccurring or serious compliance problem. Upon rescinding a source's assignment to a General ACDP the Department will place the source on a Simple or Standard ACDP. The Commission may also revoke a General ACDP if conditions, standards or rules have changed so the permit no longer meets the requirements of this rule.

(5) General ACDPs adopted by reference. The following General ACDPs are adopted by this reference and incorporated herein:

(a) AQGP-001, Hard chrome platers (February 3, 2006)3;

(b) AQGP-002, Decorative chrome platers (February 3, 2006)2;

(c) AQGP-003, Halogenated solvent degreasers — batch cold (August 10, 2001)2;

(d) AQGP-004, Halogenated solvent degreasers — batch vapor and in-line (December 12, 2008)2;

(e) AQGP-005, Halogenated solvent degreasers — batch cold, batch vapor, and in-line (December 12, 2008)2;

(f) AQGP-006, Dry cleaners (August 10, 2001)1;

(g) AQGP-007, Asphalt plants (October 17, 2007)3;

(h) AQGP-008, Rock crushers (October 17, 2007)2;

(i) AQGP-009, Ready-mix concrete (October 17, 2007)1;

(j) AQGP-010, Sawmills, planing mills, millwork, plywood manufacturing and veneer drying (October 17, 2007)3;

(k) AQGP-011, Boilers (October 17, 2007)2;

(l) AQGP-012, Crematories (October 17, 2007)2;

(m) AQGP-013, Grain elevators (August 10, 2001)1;

(n) AQGP-014, Prepared feeds, flour, and cereal (August 10, 2001)1;

(o) AQGP-015, Seed cleaning (August 10, 2001)1;

(p) AQGP-016, Coffee roasters (August 10, 2001)1;

(q) AQGP-017, Bulk gasoline plants (December 12, 2008)1;

(r) AQGP-018, Electric power generators (August 10, 2001)2;

(s) AQGP-019, Clay ceramics (December 12, 2008)1;

(t) AQGP-020, Hospital sterilizers (December 12, 2008)4;

(u) AQGP-021, Secondary nonferrous metals (December 12, 2008)1;

(v) AQGP-022, Gasoline dispensing facilities — stage I (December 12, 2008)5;

(w) AQGP-023, Gasoline dispensing facilities — stage II (December 12, 2008)4;

(z) AQGP-024, Wood preserving — (December 12, 2008)4.

NOTES: [1] The referenced General ACDPs specify that they are Fee Class One under OAR 340-216-0020, Table 2. [2] The referenced General ACDPs specify that they are Fee Class Two under OAR 340-216-0020, Table 2. [3] The referenced General ACDPs specify that they are Fee Class Three under OAR 340-216-0020, Table 2.

NOTE: Except for OAR 340-216-0060(5), this rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.

[ED. NOTE: Tables referenced in this rule are available from the agency.]

Stat. Auth.: ORS 468 & 468A

Stats. Implemented: ORS 468.020 & 468A.025

Hist.: DEQ 14-1998, f. & cert. ef. 9-14-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-028-1725; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 10-2001, f. & cert. ef. 8-30-01; DEQ 4-2002, f. & cert. ef. 3-14-02; DEQ 2-2006, f. & cert. ef. 3-14-06; DEQ 8-2007, f. & cert. ef. 11-8-07; DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0600
Purpose

This rule establishes the mandatory reduction levels and monitoring provisions for the Utility Mercury Rule, as a means of reducing mercury (Hg) emissions in Oregon.

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

Stats. Implemented: ORS 468A.025

Hist.: DEQ 13-2006, f. & cert. ef. 12-22-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0601
Applicability

(1) Except as provided in section (2) of this rule:

(a) The following units in the State shall be coal-fired electric generating units subject to the requirements of OAR 340-228-0600 through 0637: Any stationary, coal-fired boiler or stationary, coal-fired combustion turbine serving at any time, since the later of November 15, 1990 or the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 MWe producing electricity for sale.

(b) If a stationary boiler or stationary combustion turbine that, under subsection (1)(a) of this rule, is not a coal-fired electric generating unit begins to combust coal or coal-derived fuel or to serve a generator with nameplate capacity of more than 25 MWe producing electricity for sale, the unit shall become a coal-fired electric generating unit as provided in subsection (1)(a) of this rule on the first date on which it both combusts coal or coal-derived fuel and serves such generator.

(2) The units in the State that meet the requirements set forth in paragraph (2)(a)(A) or subsection (2)(b) of this rule are not coal-fired electric generating units:

(a) Any unit that is a coal-fired electric generating unit under subsection (1)(a) or (b) of this rule:

(A) Qualifying as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity and continuing to qualify as a cogeneration unit; and not serving at any time, since the later of November 15, 1990 or the start-up of the unit's combustion chamber, a generator with nameplate capacity of more than 25 MWe supplying in any calendar year more than one-third of the unit's potential electric output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale.

(B) If a unit qualifies as a cogeneration unit during the 12-month period starting on the date the unit first produces electricity and meets the requirements of paragraph (2)(a)(A) of this rule for at least one calendar year, but subsequently no longer meets all such requirements, the unit shall become a coal-fired electric generating unit starting on the earlier of January 1 after the first calendar year during which the unit first no longer qualifies as a cogeneration unit or January 1 after the first calendar year during which the unit no longer meets the requirements of paragraph (2)(a)(A) of this rule.

(b) Any unit that is a coal-fired electric generating unit under subsection (1)(a) or (b) of this rule, is a solid waste incineration unit combusting municipal waste, and is subject to the requirements of:

(A) A State Plan approved by the Administrator of the EPA in accordance with 40 CFR part 60 subpart Cb (emissions guidelines and compliance times for certain large municipal waste combustors);

(B) 40 CFR part 60 subpart Eb (standards of performance for certain large municipal waste combustors);

(C) 40 CFR part 60 subpart AAAA (standards of performance for certain small municipal waste combustors);

(D) A State Plan approved by the Administrator of the EPA in accordance with 40 CFR part 60 subpart BBBB (emission guidelines and compliance times for certain small municipal waste combustion units);

(E) 40 CFR part 62 subpart FFF (Federal Plan requirements for certain large municipal waste combustors); or

(F) 40 CFR part 62 subpart JJJ (Federal Plan requirements for certain small municipal waste combustion units).

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

Stats. Implemented: ORS 468A.025

Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0602
Definitions

(1) "Acid rain emissions limitation" means a limitation on emissions of sulfur dioxide or nitrogen oxides under the Acid Rain Program.

(2) "Acid Rain Program" means a multi-state sulfur dioxide and nitrogen oxides air pollution control and emission reduction program established by the Administrator under title IV of the CAA and 40 CFR parts 72 through 78.

(3) "Automated data acquisition and handling system or DAHS" means that component of the continuous emission monitoring system (CEMS), or other emissions monitoring system approved for use under OAR 340-228-0609 though 0637, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required OAR 340-228-0609 through 0637.

(4) "Biomass" means:

(a) Any organic material grown for the purpose of being converted to energy;

(b) Any organic byproduct of agriculture that can be converted into energy; or

(c) Any material that can be converted into energy and is nonmerchantable for other purposes, that is segregated from other nonmerchantable material, and that is;

(A) A forest-related organic resource, including mill residues, precommercial thinnings, slash, brush, or byproduct from conversion of trees to merchantable material; or

(B) A wood material, including pallets, crates, dunnage, manufacturing and construction materials (other than pressure-treated, chemically-treated, or painted wood products), and landscape or right-of-way tree trimmings.

(5) "Boiler" means an enclosed fossil-or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

(6) "Bottoming-cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.

(7) "Coal" means any solid fuel classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials (ASTM) Standard Specification for Classification of Coals by Rank D388-77, 90, 91, 95, 98a, or 99 (Reapproved 2004) & epsiv; (incorporated by reference, see 40 CFR 60.17).

(8) "Coal-derived fuel" means any fuel (whether in a solid, liquid, or gaseous state) produced by the mechanical, thermal, or chemical processing of coal.

(9) "Coal-fired" means combusting any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel, during any year.

(10) "Cogeneration unit" means a stationary, coal-fired boiler or stationary, coal-fired combustion turbine:

(a) Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating, or cooling purposes through the sequential use of energy; and

(b) Producing during the 12-month period starting on the date the unit first produces electricity and during any calendar year after which the unit first produces electricity:

(A) For a topping-cycle cogeneration unit,

(i) Useful thermal energy not less than 5 percent of total energy output; and

(ii) Useful power that, when added to one-half of useful thermal energy produced, is not less then 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output, or not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output.

(B) For a bottoming-cycle cogeneration unit, useful power not less than 45 percent of total energy input.

(11) “Combustion turbine” means:

(a) An enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and

(b) If the enclosed device under paragraph (a) of this definition is combined cycle, any associated heat recovery steam generator and steam turbine.

(12) “Commence commercial operation” means, with regard to a unit serving a generator:

(a) To have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation.

(A) For a unit that is a coal-fired electric generating unit under OAR 340-228-0601 on the date the unit commences commercial operation as defined in paragraph (a) of this definition and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date shall remain the unit’s date of commencement of commercial operation.

(B) For a unit that is a coal-fired electric generating unit under OAR 340-228-0601 on the date the unit commences commercial operation as defined in paragraph (a) of this definition and that is subsequently replaced by a unit at the same source (e.g., repowered), the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in paragraph (a) or (b) of this definition as appropriate.

(b) Notwithstanding paragraph (a) of this definition, for a unit that is not a coal-fired electric generating unit under OAR 340-228-0601 on the date the unit commences commercial operation as defined in paragraph (a) of this definition, the unit’s date for commencement of commercial operation shall be the date on which the unit becomes a coal-fired electric generating unit under OAR 340-228-0601.

(A) For a unit with a date for commencement of commercial operation as defined in paragraph (b) of this definition and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date remains the unit’s date of commencement of commercial operation.

(B) For a unit with a date for commencement of commercial operation as defined in paragraph (b) of this definition and that is subsequently replaced by a unit at the same source (e.g., repowered), the replacement unit shall be treated as a separate unit with a separate date for commencement of commercial operation as defined in paragraph (a) or (b) of this definition as appropriate.

(13) “Commence operation” means:

(a) To have begun any mechanical, chemical, or electronic process, including, with regard to a unit, start-up of a unit’s combustion chamber.

(A) For a unit that is a coal-fired electric generating unit under OAR 340-228-0601 on the date the unit commences operation as defined in paragraph (a) of this definition and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date shall remain the unit’s date of commencement of operation.

(B) For a unit that is a coal-fired electric generating unit under OAR 340-228-0601 on the date the unit commences operation as defined in paragraph (a) of this definition and that is subsequently replaced by a unit at the same source (e.g., repowered), the replacement unit shall be treated as a separate unit with a separate date for commencement of operation as defined in paragraph (a) or (b) of this definition as appropriate.

(b) Notwithstanding paragraph (a) of this definition, for a unit that is not a coal-fired electric generating unit under OAR 340-228-0601 on the date the unit commences operation as defined in paragraph (a) of this definition, the unit’s date for commencement of operation shall be the date on which the unit becomes a coal-fired electric generating unit under OAR 340-228-0601.

(A) For a unit with a date for commencement of operation as defined in paragraph (b) of this definition and that subsequently undergoes a physical change (other than replacement of the unit by a unit at the same source), such date shall remain the unit’s date of commencement of operation.

(B) For a unit with a date for commencement of operation as defined in paragraph (b) of this definition and that is subsequently replaced by a unit at the same source (e.g., repowered), the replacement unit shall be treated as a separate unit with a separate date for commencement of operation as defined in paragraph (a) or (b) of this definition as appropriate.

(14) “Common stack” means a single flue through which emissions from 2 or more units are exhausted.

(15) “Continuous emission monitoring system” or “CEMS” means the equipment required under OAR 340-228-0609 through 0637 to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated data acquisition and handling system (DAHS)), a permanent record of Hg emissions, stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration (as applicable), in a manner consistent with 40 CFR part 75 and OAR 340-228-0609 through 0637. The following systems are the principal types of CEMS required under OAR 340-228-0609 through 0637:

(a) A flow monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in units of standard cubic feet per hour (scfh);

(b) A Hg concentration monitoring system, consisting of a Hg pollutant concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of Hg emissions in units of micrograms per dry standard cubic meter (µg/dscm);

(c) A moisture monitoring system, as defined in 40 CFR 75.11(b)(2) and providing a permanent, continuous record of the stack gas moisture content, in percent H2O.

(d) A carbon dioxide monitoring system, consisting of a CO2 concentration monitor (or an oxygen monitor plus suitable mathematical equations from which the CO2 concentration is derived) and an automated data acquisition and handling system and providing a permanent, continuous record of CO2 emissions, in percent CO2; and

(e) An oxygen monitoring system, consisting of an O2 concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O2, in percent O2.

(16) “Emissions” means air pollutants exhausted from a unit or source into the atmosphere, as measured, recorded, and reported to the Department by the owner or operator and as determined by the Department in accordance with OAR 340-228-0609 through 0637.

(17) “Generator” means a device that produces electricity.

(18) “Heat input” means, with regard to a specified period of time, the product (in MMBtu/time) of the gross calorific value of the fuel (in Btu/lb) divided by 1,000,000 Btu/MMBtu and multiplied by the fuel feed rate into a combustion device (in lb of fuel/time), as measured, recorded, and reported to the Department by the owner or operator and determined by the Department in accordance with OAR 340-228-0609 through 0637 and excluding the heat derived from preheated combustion air, recirculated flue gases, or exhaust from other sources.

(19) “Heat input rate” means the amount of heat input (in MMBtu) divided by unit operating time (in hr) or, with regard to a specific fuel, the amount of heat input attributed to the fuel (in MMBtu) divided by the unit operating time (in hr) during which the unit combusts the fuel.

(20) “Hg CEMS” means a Hg pollutant concentration monitor and an automated DAHS. A Hg CEMS provides a permanent, continuous record of Hg emissions in units of micrograms per standard cubic meter (µg/m3).

(21) “Life-of-the-unit, firm power contractual arrangement” means a unit participation power sales agreement under which a utility or industrial customer reserves, or is entitled to receive, a specified amount or percentage of nameplate capacity and associated energy generated by any specified unit and pays its proportional amount of such unit’s total costs, pursuant to a contract:

(a) For the life of the unit;

(b) For a cumulative term of no less than 30 years, including contracts that permit an election for early termination; or

(c) For a period no less than 25 years or 70 percent of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

(22) "Lignite" means coal that is classified as lignite A or B according to the American Society of Testing and Materials (ASTM) Standard Specification for Classification of Coals by Rank D338-77, 90, 91, 95, 98a, or 99 (Reapproved 2004) & epsiv; (incorporated by reference, see 40 CFR 60.17).

(23) "Maximum design heat input" means, starting from the initial installation of a unit, the maximum amount of fuel per hour (in Btu/hr) that a unit is capable of combusting on a steady-state basis as specified by the manufacturer of the unit, or, starting from the completion of any subsequent physical change in the unit resulting in a decrease in the maximum amount of fuel per hour (in Btu/hr) that a unit is capable of combusting on a steady-state basis, such decreased maximum amount as specified by the person conducting the physical change.

(24) "Maximum expected Hg concentration (MEC)" means, the maximum expected Hg concentration (MEC) during normal, stable operation of the unit and emission controls. To calculate the MEC, substitute the MPC value from section (25) of this rule into Equation A–2 in section 2.1.1.2 of appendix A to 40 CFR part 75. Base the percent removal efficiency on design engineering calculations.

(25) "Maximum potential Hg concentration (MPC)" means the following:

(a) The maximum potential concentration depends upon the type of coal combusted. For the initial MPC determination, the MPC is one of the following:

(A) The MPC is one of the following default values: 9 µg/m3 for bituminous coal; 10 µg/m3 for sub-bituminous coal; 16 µg/m3 for lignite, and 1 µg/m3 for waste coal. If different coals are blended, the MPC is the highest MPC for any fuel in the blend; or

(B) The MPC may be based on the results of site-specific emission testing using one of the Hg reference methods in section (33) of this rule or in 40 CFR 75.22, if the unit does not have add-on Hg emission controls, or if testing upstream of these control devices. A minimum of 3 test runs are required, at the normal operating load. The highest total Hg concentration obtained in any of the tests may be used as the MPC; or

(C) The MPC is based on the maximum potential Hg concentration on 720 or more hours of historical CEMS data or data from a sorbent trap monitoring system, if the unit does not have add-on Hg emission controls (or if the CEMS or sorbent trap system is located upstream of the control device) and if the Hg CEMS or sorbent trap system has been tested for relative accuracy against one of the Hg reference methods in section (33) of this rule or in 40 CFR 75.22 and has met a relative accuracy specification of 20.0% or less.

(b) For the purposes of missing data substitution, the fuel-specific or site-specific MPC values defined in subsection (25)(a) of this rule apply to units using sorbent trap monitoring systems.

(26) "Monitoring system" means any monitoring system that meets the requirements of OAR 340-228-0609 through 0637, including a continuous emissions monitoring system or an alternative monitoring system under 40 CFR part 75.

(27) "Nameplate capacity" means, starting from the initial installation of a generator, the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings) as specified by the manufacturer of the generator or, starting from the completion of any subsequent physical change in the generator resulting in an increase in the maximum electrical generating output (in MWe) that the generator is capable of producing on a steady-state basis and during continuous operation (when not restricted by seasonal or other deratings), such increased maximum amount as specified by the person conducting the physical change.

(28) "NIST traceable elemental Hg standards" means either:

(a) Compressed gas cylinders having known concentrations of elemental Hg, which have been prepared according to the "EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards"; or

(b) Calibration gases having known concentrations of elemental Hg, produced by a generator that fully meets the performance requirements of the "EPA Traceability Protocol for Qualification and Certification of Elemental Mercury Gas Generators".

(29) "NIST traceable source of oxidized Hg" means a generator that: Is capable of providing known concentrations of vapor phase mercuric chloride (HgCl2), and that fully meets the performance requirements of the "EPA Traceability Protocol for Qualification and Certification of Oxidized Mercury Gas Generators".

(30) "Operator" means any person who operates, controls, or supervises a coal-fired electric generating unit and shall include, but not be limited to, any holding company, utility system, or plant manager of such a unit or source.

(31) "Owner" means any of the following persons:

(a) Any holder of any portion of the legal or equitable title in a coal-fired electric generating unit;

(b) Any holder of a leasehold interest in a coal-fired electric generating unit; or

(c) Any purchaser of power from a coal-fired electric generating unit under a life-of-the-unit, firm power contractual arrangement; provided that, unless expressly provided for in a leasehold agreement, owner shall not include a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based (either directly or indirectly) on the revenues or income from such coal-fired electric generating unit.

(32) "Potential electrical output capacity" means 33 percent of a unit's maximum design heat input, divided by 3,413 Btu/kWh, divided by 1,000 kWh/MWh, and multiplied by 8,760 hr/yr.

(33) "Reference method" means any direct test method of sampling and analyzing for an air pollutant as follows or as specified in 40 CFR 75.22.

(a) ASTM D6784–02, "Standard Test Method for Elemental, Oxidized, Particle-Bound, and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources" (Ontario Hydro Method) is the reference method for determining Hg concentration.

(b) Method 29 (40 CFR Part 60, Appendix A-8) for determining Hg concentration.

(c) Method 30A (40 CFR Part 60, Appendix A), "Determination of Total Vapor Phase Mercury Emissions from Stationary Sources (Instrumental Analyzer Procedure)" for determining Hg concentration.

(d) Method 30B (40 CFR Part 60, Appendix A), "Determination of Total Vapor Phase Mercury Emissions from Coal-Fired Combustion Sources Using Carbon Sorbent Traps" for determining Hg concentration.

(e) Method 29 (40 CFR Part 60, Appendix A-8) may be used with these caveats: The procedures for preparation of Hg standards and sample analysis in sections 13.4.1.1 through 13.4.1.3 ASTM D6784–02 must be followed instead of the procedures in sections 7.5.33 and 11.1.3 of Method 29, and the QA/QC procedures in section 13.4.2 of ASTM D6784–02 must be performed instead of the procedures in section 9.2.3 of Method 29. The tester may also opt to use the sample recovery and preparation procedures in ASTM D6784–02 instead of the Method 29 procedures, as follows: sections 8.2.8 and 8.2.9.1 of Method 29 may be replaced with sections 13.2.9.1 through 13.2.9.3 of ASTM D6784–02; sections 8.2.9.2 and 8.2.9.3 of Method 29 may be replaced with sections 13.2.10.1 through 13.2.10.4 of ASTM D6784–02; section 8.3.4 of Method 29 may be replaced with section 13.3.4 or 13.3.6 of ASTM D6784–02 (as appropriate); and section 8.3.5 of Method 29 may be replaced with section 13.3.5 or 13.3.6 of ASTM D6784–02 (as appropriate).

(f) Whenever ASTM D6784–02 or Method 29 is used, paired sampling trains are required. To validate a RATA run or an emission test run, the relative deviation (RD), calculated according to OAR 340-228-0627(12)(g), must not exceed 10 percent, when the average concentration is greater than 1.0 µg/m3. If the average concentration is ≤1.0 µg/m3, the RD must not exceed 20 percent. The RD results are also acceptable if the absolute difference between the Hg concentrations measured by the paired trains does not exceed 0.03 µg/m3. If the RD criterion is met, the run is valid. For each valid run, average the Hg concentrations measured by the two trains (vapor phase, only).

(g) When Method 29 or ASTM D6784–02 is used for the Hg emission testing required under OAR 340-228-0613(3) and (4), locate the reference method test points according to section 8.1 of Method 30A, and if Hg stratification testing is part of the test protocol, follow the procedures in sections 8.1.3 through 8.1.3.5 of Method 30A.

(34) "Repowered" means, with regard to a unit, replacement of a coal-fired boiler with one of the following coal-fired technologies at the same source as the coal-fired boiler:

(a) Atmospheric or pressurized fluidized bed combustion;

(b) Integrated gasification combined cycle;

(c) Magnetohydrodynamics;

(d) Direct and indirect coal-fired turbines;

(e) Integrated gasification fuel cells; or

(f) As determined by the Department in consultation with the Secretary of Energy, a derivative of one or more of the technologies under paragraphs (a) through (e) of this definition and any other coal-fired technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of January 1, 2005.

(35) "Sequential use of energy" means:

(a) For a topping-cycle cogeneration unit, the use of reject heat from electricity production in a useful thermal energy application or process; or

(b) For a bottoming-cycle cogeneration unit, the use of reject heat from useful thermal energy application or process in electricity production.

(36) "Sorbent trap monitoring system" means the equipment required for the continuous monitoring of Hg emissions, using paired sorbent traps containing iodinized charcoal (IC) or other suitable reagent(s). This excepted monitoring system consists of a probe, the paired sorbent traps, a heated umbilical line, moisture removal components, an airtight sample pump, a dry gas meter, and an automated data acquisition and handling system. The monitoring system samples the stack gas at a rate proportional to the stack gas volumetric flow rate. The sampling is a batch process. Using the sample volume measured by the dry gas meter and the results of the analyses of the sorbent traps, the average Hg concentration in the stack gas for the sampling period is determined, in units of micrograms per dry standard cubic meter (µg/dscm). Mercury mass emissions for each hour in the sampling period are calculated using the average Hg concentration for that period, in conjunction with contemporaneous hourly measurements of the stack gas flow rate, corrected for the stack gas moisture content.

(37) "Subbituminous" means coal that is classified as subbituminous A, B, or C, according to the American Society of Testing and Materials (ASTM) Standard Specification for Classification of Coals by Rank D388-77, 90, 91, 95, 98a, or 99 (Reapproved 2004) (incorporated by reference, see 40 CFR 60.17).

(38) "Submit or serve" means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation:

(a) In person;

(b) By United States Postal Service; or

(c) By other means of dispatch or transmission and delivery. Compliance with any ''submission'' or ''service'' deadline shall be determined by the date of dispatch, transmission, or mailing and not the date of receipt.

(39) "Title V operating permit" means a permit issued under title V of the CAA and 40 CFR part 70 or 71.

(40) "Title V operating permit regulations" means the regulations that the Administrator has approved or issued as meeting the requirements of title V of the CAA and 40 CFR part 70 or 71.

(41) "Topping-cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful power, including electricity, and at least some of the reject heat from the electricity production is then used to provide useful thermal energy.

(42) "Total energy input" means, with regard to a cogeneration unit, total energy of all forms supplied to the cogeneration unit, excluding energy produced by the cogeneration unit itself. Each form of energy supplied shall be measured by the lower heating value of that form of energy calculated as follows:

$$LHV = HHV - 10.55(W + 9H)$$

Where:
LHV = lower heating value of fuel in Btu/lb,
HHV = higher heating value of fuel in Btu/lb,
W = Weight % of moisture in fuel, and
H = Weight % of hydrogen in fuel.

(43) "Total energy output" means, with regard to a cogeneration unit, the sum of useful power and useful thermal energy produced by the cogeneration unit.

(44) "Unit" means a stationary coal-fired boiler or a stationary coal-fired combustion turbine.

(45) "Unit operating day" means a calendar day in which a unit combusts any fuel.

(46) "Unit operating hour" or "hour of unit operation" means an hour in which a unit combusts any fuel.

(47) "Useful power" means, with regard to a cogeneration unit, electricity or mechanical energy made available for use, excluding any such energy used in the power production process (which process includes, but is not limited to, any on-site processing or treatment of fuel combusted at the unit and any on-site emission controls).

(48) "Useful thermal energy" means, with regard to a cogeneration unit, thermal energy that is:

(a) Made available to an industrial or commercial process (not a power production process), excluding any heat contained in condensate return or makeup water;

(b) Used in a heat application (e.g., space heating or domestic hot water heating); or

(c) Used in a space cooling application (i.e., thermal energy used by an absorption chiller).

(49) "Utility power distribution system" means the portion of an electricity grid owned or operated by a utility and dedicated to delivering electricity to customers.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 13-2006, f. & cert. ef. 12-22-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0603
Untitled

Measurements, abbreviations, and acronyms used in this part are defined as follows:

(1) Btu-British thermal unit.
(2) CO2-carbon dioxide.
(3) dscm-dry standard cubic meter.
(4) H2O-water.
(5) Hg-mercury.
(6) hr-hour.
(7) kW-kilowatt electrical.
(8) kWh-kilowatt hour.
(9) lb-pound.
(10) m3-standard cubic meter.
(11) MMBtu-million Btu.
(12) MWe-megawatt electrical.
(13) MWh-megawatt hour.
(14) NOX-nitrogen oxides.
(15) O2-oxygen.
(16) ppm-parts per million.
(17) scf-standard cubic foot.
(18) scfh-standard cubic feet per hour.
(19) SO2-sulfur dioxide.
(20) μg-micrograms.
(21) wscm-wet standard cubic meter.
(22) yr-year.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 13-2006, f. & cert. ef. 12-22-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0606
Hg Emission Standards

(1) Mercury reduction plan. By July 1, 2009 or 1-year prior to commencement of commercial operation, whichever is later, the owner or operator of each coal-fired electric generating unit must develop and submit for Department approval a mercury reduction plan for each coal-fired electric generating unit. The plan must propose a control strategy for mercury that is most likely to result in the capture of at least 90 percent of the mercury emitted from the unit or that will limit mercury emissions to 0.60 pounds per trillion BTU of heat input. The owner or operator must demonstrate that the plan reflects technology that could reasonably be expected to meet the limits in this section if the technology operates as anticipated by the manufacturer. The plan must provide a timeframe for implementation of the selected control strategy including major milestones, installation and operation requirements, and work practice standards for the selected technology. The owner and operator of the coal-fired electric generating unit may proceed with the plan within 60 days of submittal unless, within the 60 day period, the Department notifies the owner or operator of the coal-fired electric generating unit that the plan must be revised.

(2) Mercury emission standards. On and after July 1, 2012 or at commencement of commercial startup, whichever is later, except as allowed under section (3) of this rule, each coal-fired electric generating unit must have implemented the approved control strategy projected to achieve at least 90 percent mercury capture or that will limit mercury emissions to 0.60 pounds per trillion BTU of heat input.

(3) Compliance extension. Up to a 1-year extension of the requirement to implement the approved control strategy may be granted by the Department if the owner or operator of a coal-fired electric generating unit demonstrates that it is not practical to install mercury control equipment by July 1, 2012 due to supply limitations or other extenuating circumstances that are beyond the control of the owner or operator.

(4) Compliance demonstration. Commencing in July 2013 or 12 months after commercial startup or 12 months after expiration of the extension granted under section (3) of this rule, whichever is later, each coal-fired electric generating unit must thereafter demonstrate compliance with one of the standards in subsections (4)(a) or (4)(b) of this rule for each compliance period, except as allowed under sections (5) and (6) of this rule. A compliance period consists of twelve months. Each month commencing

with June 2013 or the twelfth month after commencement of commercial operation or twelfth month after expiration of the extension granted under section (3) of this rule, whichever is later, is the end of a compliance period consisting of that month and the previous 11 months.

(a) A mercury emission standard of 0.60 pounds per trillion BTU of heat input calculated by dividing the Hg mass emissions determined using a mercury CEMS or sorbent trap monitoring system by heat input as determined according to 40 CFR part 75, appendix F (procedure 5); or

(b) A minimum 90 percent capture of inlet mercury determined as follows:

(A) Inlet mercury must be determined as specified in subparagraph (4)(b)(A)(i) or (4)(b)(A)(ii) of this rule:

(i) Coal sampling and analysis. To demonstrate compliance by coal sampling and analysis, the owner or operator of a coal-fired electric generating unit must test its coal for mercury consistent with a coal sampling and analysis plan. The coal sampling and analysis plan must be consistent with the requirements of 40 CFR 63.7521.

(ii) Hg mass emissions prior to any control device(s). To demonstrate compliance by measuring Hg mass emissions, the owner or operator of a coal-fired electric generating unit must measure mercury emissions prior to any control device(s) using a Hg CEMS or sorbent trap.

(B) The mercury capture efficiency must be calculated using the Hg emissions determined using a mercury CEMS or sorbent trap monitoring system and the inlet mercury determined using the coal mercury content data obtained in accordance with subparagraph (4)(b)(A)(i) of this rule or the measured inlet mercury data obtained in accordance with subparagraph (4)(b)(A)(ii) of this rule and a calculation methodology approved by the Department.

(5) Temporary compliance alternative. If the owner or operator of a coal-fired electric generating unit properly implements the approved control strategy and the strategy fails to achieve at least 90 percent mercury capture or limit mercury emissions to 0.60 pounds per trillion BTU of heat input:

(a) The owner or operator must notify the Department of the failure within 30 days of the end of the initial compliance period; and

(b) The owner or operator must file an application with the Department for a permit or permit modification in accordance with OAR 340 division 216 to establish a temporary alternative mercury emission limit. The application must be filed within 60 days of the end of the initial compliance period, and must include a continual program of mercury control progression able to achieve at least 90 percent mercury capture or to limit mercury emissions to 0.60 pounds per trillion BTU of heat input and all monitoring and operating data for the coal-fired electric generating unit.

(c) The Department may establish a temporary alternative mercury emission limit only if the owner or operator applies for a permit or permit modification, that includes a control strategy that the Department determines constitutes a continual program of mercury control progression able to achieve at least 90 percent mercury capture or to limit mercury emissions to 0.60 pounds per trillion BTU of heat input.

(d) Establishment of a temporary alternative mercury emission limit requires public notice in accordance with OAR 340 division 209 for Category III permit actions

(e) If the owner or operator files an application under subsection (5)(b) of this rule, the coal-fired electric generating unit must operate according to the temporary alternative mercury emission limit proposed in the permit or permit modification application until the Department either denies the application or issues the permit or permit modification. Compliance with the proposed temporary alternative mercury emission limit prior to final Department action on the application shall constitute compliance with the limits in section (2) of this rule.

(f) A temporary alternative mercury emission limit established in a permit expires July 1, 2015 or within 2 years of commencement of commercial operation, whichever is later.

(6) Permanent compliance alternative. If the owner or operator of a coal-fired electric generating unit is unable to achieve at least 90 percent mercury capture or an emission level of 0.60 pounds per trillion BTU of heat input by July 1, 2015 or within 2 years of commencement of commercial operation, whichever is later, despite properly implementing the continual program of mercury progression required in section (5) of this rule:

(a) The owner or operator of the coal-fired electric generating unit may file an application with the Department for a permit modification in accordance with OAR 340 division 216 to establish a permanent alternative mercury emission limit that comes as near as technically possible to achieving 90 percent mercury capture or an emission level of 0.60 pounds per trillion BTU of heat input.

(b) The Department may establish a permanent alternative mercury emission limit only if the owner or operator applies for a permit modification, that proposes an alternative mercury emission limit that the Department determines comes as near as technically possible to achieving 90 percent mercury capture or an emission level of 0.60 pounds per trillion BTU of heat input.

(c) Establishment of a permanent alternative mercury emission limit requires public notice in accordance with OAR 340 division 209 for Category IV permit actions.

(d) If the owner or operator files an application under subsection (6)(a) of this rule, the coal-fired electric generating unit must operate according to the permanent alternative mercury emission limit proposed in the permit modification application until the Department either denies the application or modifies the permit. Compliance with the proposed permanent alternative mercury emission limit prior to final Department action on the application shall constitute compliance with the limits in section (4) of this rule.

(7) Emission Caps. Beginning in calendar year 2018, the following coal-fired electric generating unit specific emission caps shall apply.

(a) Existing Boardman coal-fired electric generating unit cap. The existing coal-fired electric generating unit in Boardman shall emit no more than:

(A) 60 pounds of mercury in any calendar year in which there are no new coal-fired electric generating units operated in Oregon.

(B) 35 pounds of mercury in any calendar year in which there are new coal-fired electric generating units operated in Oregon.

(b) New coal-fired electric generating unit cap:

(A) New coal-fired electric generating units, in aggregate, shall emit no more than:

(i) 25 pounds of mercury in any calendar year in which the existing coal-fired electric generating unit in Boardman is operated.

(ii) 60 pounds of mercury in any calendar year in which the existing coal-fired electric generating unit in Boardman is not operated.

(B) The owner or operator of each new coal-fired electric generating unit must submit to the Department a request, in a format specified by the Department, to receive a portion of the new coal-fired electric generating unit cap. The request may not be submitted until the new coal-fired electric generating unit has received its Site Certification from the Facility Siting Council, or if the new coal-fired electric generating unit is not required to obtain a Site Certificate, all governmental approvals necessary to commence construction.

(C) The Department will allocate the new coal-fired electric generating unit cap in order of receipt of requests and, once allocated, the new coal-fired electric generating unit shall be entitled to receive an equal allocation in future years unless the new coal-fired electric generating unit permanently ceases operations.

(D) Each individual new coal-fired electric generating unit shall emit no more than the lesser of:

(i) An amount of mercury determined by multiplying the design heat input in TBtu of such coal-fired electric generating unit by 0.60 pounds per TBtu rounded to the nearest pound as appropriate, or

(ii) The amount of the emission cap under (7)(b) less the amount of the emission cap under (7)(b) that has been allocated to other new coal-fired electric generating units.

(c) Compliance demonstration. Each coal-fired electric generating unit must demonstrate compliance with the applicable calendar year emission cap in subsection (7)(a) or (7)(b) of this rule using a mercury CEMS or sorbent trap monitoring system.

(5) Recordkeeping and reporting requirements.

(a) Unless otherwise provided, the owners and operators of the Hg Budget source and each Hg Budget unit at the source must keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Department or the Administrator.

(A) The certificate of representation under OAR 340-228-0618 for the Hg designated representative for the source and each Hg Budget unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents are retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under OAR 340-228-0618 changing the Hg designated representative.

(B) All emissions monitoring information, in accordance with OAR 340-228-0658 through 0670, provided that to the extent that OAR 340-228-

0658 through 0670 provides for a 3-year period for recordkeeping, the 3-year period applies.

(C) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Hg Budget Trading Program.

(D) Copies of all documents used to complete a Hg Budget permit application and any other submission under the Hg Budget Trading Program or to demonstrate compliance with the requirements of the Hg Budget Trading Program.

(b) The Hg designated representative of a Hg Budget source and each Hg Budget unit at the source must submit the reports required under the Hg Budget Trading Program, including those under OAR 340-228-0658 through 0670.

(6) Liability.

(a) Each Hg Budget source and each Hg Budget unit must meet the requirements of the Hg Budget Trading Program for the control periods of 2010 through 2017.

(b) Any provision of the Hg Budget Trading Program that applies to a Hg Budget source or the Hg designated representative of a Hg Budget source also applies to the owners and operators of such source and of the Hg Budget units at the source.

(c) Any provision of the Hg Budget Trading Program that applies to a Hg Budget unit or the Hg designated representative of a Hg Budget unit also applies to the owners and operators of such unit.

(7) Effect on other authorities. No provision of the Hg Budget Trading Program, a Hg Budget permit application, a Hg Budget permit, or an exemption under OAR 340-228-0605 must be construed as exempting or excluding the owners and operators, and the Hg designated representative, of a Hg Budget source or Hg Budget unit from compliance with any other provision of the applicable, approved State implementation plan, a Federally enforceable permit, or the CAA.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 13-2006, f. & cert. ef. 12-22-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0609
General Requirements

The owners and operators of a coal-fired electric generating unit must comply with the monitoring, recordkeeping, and reporting requirements as provided in this rule and OAR 340-228-0611 through 0637. For purposes of complying with such requirements, the definitions in OAR 340-228-0602 and in 40 CFR 72.2 shall apply, and the terms “affected unit” and “designated representative” in 40 CFR part 75 shall be deemed to refer to the terms “coal-fired electric generating unit” and “owner or operator” respectively, as defined in OAR 340-228-0602. The owner or operator of a unit that is not a coal-fired electric generating unit but that is monitored under OAR 340-228-0615(2)(a) must comply with the same monitoring, recordkeeping, and reporting requirements as a coal-fired electric generating unit.

(1) Requirements for installation, certification, and data accounting. The owner or operator of each coal-fired electric generating unit must:

(a) Install all applicable monitoring systems required under this rule and OAR 340-228-0611 through 0637 for monitoring Hg mass emissions, inlet Hg (if applicable), and individual unit heat input (including all systems required to monitor Hg concentration, stack gas moisture content, stack gas flow rate, and CO2 or O2 concentration, as applicable).

(b) Successfully complete all certification tests required under OAR 340-228-0621 and meet all other requirements of this rule and OAR 340-228-0611 through 0637 applicable to the monitoring systems under subsection (1)(a) of this rule.

(c) The owner or operator must reduce all volumetric flow, CO2 concentration or O2 concentration, as applicable, and Hg concentration data collected by the monitors to hourly averages.

(d) Record, report, and quality-assure the data from the monitoring systems under subsection (1)(a) of this rule.

(e) Failure of a CO2 or O2 emissions concentration monitor, Hg concentration monitor, flow monitor, or moisture monitor to acquire the minimum number of data points for calculation of an hourly average shall result in the failure to obtain a valid hour of data and the loss of such component data for the entire hour.

(2) Compliance deadlines. The owner or operator must meet the monitoring system certification and other requirements of section (1) of this rule on or before the following dates. The owner or operator must record, report, and quality-assure the data from the monitoring systems under subsection (1)(a) of this rule on and after the following dates.

(a) Outlet Hg.

(A) For the owner or operator of a coal-fired electric generating unit that commences commercial operation before July 1, 2008, by January 1, 2009.

(B) For the owner or operator of a coal-fired electric generating unit that commences commercial operation on or after July 1, 2008, by the later of the following dates:

(i) January 1, 2009; or

(ii) 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which the unit commences commercial operation.

(C) For the owner or operator of a coal-fired electric generating unit for which construction of a new stack or flue or installation of add-on Hg emission controls, a flue gas desulfurization system, a selective catalytic reduction system, or a compact hybrid particulate collector system is completed after the applicable deadline under paragraph (2)(a)(A) or (B) of this rule, by 90 unit operating days or 180 calendar days, whichever occurs first, after the date on which emissions first exit to the atmosphere through the new stack or flue, add-on Hg emissions controls, flue gas desulfurization system, selective catalytic reduction system, or compact hybrid particulate collector system.

(b) Heat input. For monitoring systems used to monitor heat input in accordance with OAR 340-228-0606(4)(a), if applicable, by the later of the following dates:

(A) July 1, 2012 or the date established under OAR 340-228-0606(3); or

(B) The date on which the unit commences commercial operation.

(c) Inlet Hg. If required to perform coal sampling and analysis in accordance with OAR 340-228-0606(4)(b)(A)(i) or measure Hg emission prior to any control device(s) in accordance with OAR 340-228-0606(4)(b)(A)(ii), if applicable, by the later of the following dates:

(A) July 1, 2012 or the date established under OAR 340-228-0606(3); or

(B) The date on which the unit commences commercial operation.

(3) Reporting data.

(a) Except as provided in subsection (3)(b) of this rule, the owner or operator of a coal-fired electric generating unit that does not meet the applicable compliance date set forth in section (2) of this rule for any monitoring system under subsection (1)(a) of this rule must, for each monitoring system, determine, record, and report maximum potential (or, as appropriate, minimum potential) values for Hg concentration, stack gas flow rate, stack gas moisture content, and any other parameters required to determine Hg mass emissions and heat input in accordance with OAR 340-228-0637(5).

(b) The owner or operator of a coal-fired electric generating unit that does not meet the applicable compliance date set forth in paragraph (2)(a)(C) of this rule for any monitoring system under subsection (1)(a) must, for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures in 40 CFR part 75 subpart D, OAR 340-228-0631, and 340-228-0633, in lieu of the maximum potential (or, as appropriate, minimum potential) values, for a parameter if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under subsection (2)(a)(C) of this rule.

(4) Prohibitions.

(a) No owner or operator of a coal-fired electric generating unit shall use any alternative monitoring system, alternative reference method, or any other alternative to any requirement of this rule and OAR 340-228-0611 through 0637 without having obtained prior written approval.

(b) No owner or operator of a coal-fired electric generating unit shall operate the unit so as to discharge, or allow to be discharged, Hg emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this rule and OAR 340-228-0611 through 0637.

(c) No owner or operator of a coal-fired electric generating unit shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording Hg mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of this rule and OAR 340-228-0611 through 0637.

(d) No owner or operator of a coal-fired electric generating unit shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved emission monitoring system under this rule, except under any one of the following circumstances:

(A) The owner or operator is monitoring Hg mass emissions from the coal-fired electric generating unit with another certified monitoring system approved, in accordance with the applicable provisions of this rule and OAR 340-228-0611 through 0637, by the Department for use at that unit that provides emission data for the same pollutant or parameter as the retired or discontinued monitoring system; or

(B) The owner or operator submits notification of the date of certification testing of a replacement monitoring system for the retired or discontinued monitoring system in accordance with OAR 340-228-0621(3)(c)(A).

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0611
Additional Requirements to Provide Heat Input Data

The owner or operator of a coal-fired electric generating unit that monitors and reports Hg mass emissions using a Hg concentration monitoring system and a flow monitoring system must also monitor and report heat input rate at the unit level using the procedures set forth in 40 CFR part 75, appendix F (procedure 5).

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0613
Monitoring of Hg Mass Emissions and Heat Input at the Unit Level

The owner or operator of the affected coal-fired electric generating unit must meet the general operating requirements in 40 CFR 75.10 for the following continuous emission monitors (except as provided in accordance with 40 CFR part 75 subpart E):

(1) A Hg concentration monitoring system (as defined in OAR 340-228-0602) or a sorbent trap monitoring system (as defined in OAR 340-228-0602) to measure Hg concentration; and

(2) A flow monitoring system; and

(3) A continuous moisture monitoring system (if correction of Hg concentration for moisture is required), as described in 40 CFR 75.11(b). Alternatively, the owner or operator may use the appropriate fuel-specific default moisture value provided in 40 CFR 75.11 or 75.12, or a site-specific moisture value approved by the Department; and

(4) If heat input is required to be reported, the owner or operator also must meet the general operating requirements for a flow monitoring system and an O2 or CO2 monitoring system to measure heat input rate.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0615
Monitoring of Hg Mass Emissions and Heat Input at Common and Multiple Stacks

(1) Unit utilizing common stack with other coal-fired electric generating unit(s). When a coal-fired electric generating unit utilizes a common stack with one or more coal-fired electric generating units, but no non coal-fired electric generating units, the owner or operator must either:

(a) Install, certify, operate, and maintain the monitoring systems described in OAR 340-228-0613 at the common stack and record the combined Hg mass emissions for the units exhausting to the common stack. If reporting of the unit heat input rate is required, determine the hourly unit heat input rates either by:

(A) Apportioning the common stack heat input rate to the individual units according to the procedures in 40 CFR 75.16(e)(3); or

(B) Installing, certifying, operating, and maintaining a flow monitoring system and diluent monitor in the duct to the common stack from each unit; or

(b) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in OAR 340-228-0613 in the duct to the common stack from each unit.

(2) Unit utilizing common stack with non coal-fired electric generating unit(s). When one or more coal-fired electric generating units utilize a common stack with one or more non coal-fired electric generating units, the owner or operator must either:

(a) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in OAR 340-228-0613 in the duct to the common stack from each coal-fired electric generating unit; or

(b) Install, certify, operate, and maintain the monitoring systems described in OAR 340-228-0613 in the common stack; and

(A) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in OAR 340-228-0613 in the duct to the common stack from each non coal-fired electric generating unit. The owner or operator must submit a petition to the Department to allow a method of calculating and reporting the Hg mass emissions from the coal-fired electric generating units as the difference between Hg mass emissions measured in the common stack and Hg mass emissions measured in the ducts of the non coal-fired electric generating units, not to be reported as an hourly value less than zero. The Department may approve such a method whenever the owner or operator demonstrates, to the satisfaction of the Department, that the method ensures that the Hg mass emissions from the coal-fired electric generating units are not underestimated; or

(B) Count the combined emissions measured at the common stack as the Hg mass emissions for the coal-fired electric generating units, for recordkeeping and compliance purposes, in accordance with section (1) of this rule; or

(C) Submit a petition to the Department to allow use of a method for apportioning Hg mass emissions measured in the common stack to each of the units using the common stack and for reporting the Hg mass emissions. The Department may approve such a method whenever the owner or operator demonstrates, to the satisfaction of the Department, that the method ensures that the Hg mass emissions from the coal-fired electric generating units are not underestimated.

(c) If the monitoring option in subsection (2)(b) of this rule is selected, and if heat input is required to be reported, the owner or operator must either:

(A) Apportion the common stack heat input rate to the individual units according to the procedures in 40 CFR 75.16(e)(3); or

(B) Install a flow monitoring system and a diluent gas (O2 or CO2) monitoring system in the duct leading from each affected unit to the common stack, and measure the heat input rate in each duct, according to section 5.2 of appendix F to 40 CFR part 75.

(3) Unit with a main stack and a bypass stack. Whenever any portion of the flue gases from a coal-fired electric generating unit can be routed through a bypass stack to avoid the Hg monitoring system(s) installed on the main stack, the owner and operator must either:

(a) Install, certify, operate, and maintain the monitoring systems described in OAR 340-228-0613 on both the main stack and the bypass stack and calculate Hg mass emissions for the unit as the sum of the Hg mass emissions measured at the two stacks;

(b) Install, certify, operate, and maintain the monitoring systems described in OAR 340-228-0613 at the main stack and measure Hg mass emissions at the bypass stack using the appropriate reference methods in OAR 340-228-0602(33) or in 40 CFR 75.22. Calculate Hg mass emissions for the unit as the sum of the emissions recorded by the installed monitoring systems on the main stack and the emissions measured by the reference method monitoring systems;

(c) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in OAR 340-228-0613 only on the main stack. If this option is chosen, it is not necessary to designate the exhaust configuration as a multiple stack configuration in the monitoring plan required under 40 CFR 75.53 and OAR 340-228-0637(2), since only the main stack is monitored. For each unit operating hour in which the bypass stack is used, report, as applicable, the maximum potential Hg concentration (as defined in OAR 340-228-0602(25)), and the appropriate substitute data values for flow rate, CO2 concentration, O2 concentration, and moisture (as applicable), in accordance with the missing data procedures of OAR 340-228-0631 and 0633, as applicable; or

(d) If the monitoring option in subsection (3)(a) or (b) of this rule is selected, and if heat input is required to be reported, the owner or operator must:

(A) Use the installed flow and diluent monitors to determine the hourly heat input rate at each stack (MMBtu/hr), according to section 5.2 of appendix F to 40 CFR part 75; and

(B) Calculate the hourly heat input at each stack (in MMBtu) by multiplying the measured stack heat input rate by the corresponding stack operating time; and

(C) Determine the hourly unit heat input by summing the hourly stack heat input values.

(4) Unit with multiple stack or duct configuration. When the flue gases from a coal-fired electric generating unit discharge to the atmosphere through more than one stack, or when the flue gases from a coal-fired electric generating unit utilize two or more ducts feeding into a single stack and the owner or operator chooses to monitor in the ducts rather than in the stack, the owner or operator must either:

(a) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in OAR 340-228-0613 in each of the multiple stacks and determine Hg mass emissions from the coal-fired electric generating unit as the sum of the Hg mass emissions recorded for each stack. If another unit also exhausts flue gases into one of the monitored stacks, the owner or operator must comply with the applicable requirements of sections (1) and (2) of this rule, in order to properly determine the Hg mass emissions from the units using that stack;

(b) Install, certify, operate, and maintain the monitoring systems and (if applicable) perform the Hg emission testing described in OAR 340-228-0613 in each of the ducts that feed into the stack, and determine Hg mass emissions from the coal-fired electric generating unit using the sum of the Hg mass emissions measured at each duct, except that where another unit also exhausts flue gases to one or more of the stacks, the owner or operator must also comply with the applicable requirements of sections (1) and (2) of this rule to determine and record Hg mass emissions from the units using that stack. The owner or operator must calculate Hg mass emissions and heat input rate in accordance with approved procedures; or

(c) If the monitoring option in subsection (4)(a) or (b) of this rule is selected, and if heat input is required to be reported, the owner or operator must:

(A) Use the installed flow and diluent monitors to determine the hourly heat input rate at each stack or duct (MMBtu/ hr), according to section 5.2 of appendix F to 40 CFR part 75; and

(B) Calculate the hourly heat input at each stack or duct (in MMBtu) by multiplying the measured stack (or duct) heat input rate by the corresponding stack (or duct) operating time; and

(C) Determine the hourly unit heat input by summing the hourly stack (or duct) heat input values.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0617
Special Provisions for Measuring Hg Mass Emissions using the Sorbent Trap Monitoring Methodology

For an affected coal-fired electric generating unit, if the owner or operator elects to use sorbent trap monitoring systems to quantify Hg mass emissions, the guidelines in sections (1) through (11) of this rule must be followed for this monitoring methodology:

(1) For each sorbent trap monitoring system (whether primary or redundant backup), the use of paired sorbent traps, as described in OAR 340-228-0627, is required.

(2) Each sorbent trap must have both a main section, a backup section, and a third section to allow spiking with a calibration gas of known Hg concentration, as described in OAR 340-228-0627.

(3) A certified flow monitoring system is required.

(4) Correction for stack gas moisture content is required, and in some cases, a certified O2 or CO2 monitoring system is required.

(5) Each sorbent trap monitoring system must be installed and operated in accordance with OAR 340-228-0627. The automated data acquisition and handling system must ensure that the sampling rate is proportional to the stack gas volumetric flow rate.

(6) At the beginning and end of each sample collection period, and at least once in each unit operating hour during the collection period, the dry gas meter reading must be recorded.

(7) After each sample collection period, the mass of Hg adsorbed in each sorbent trap (in all three sections) must be determined according to the applicable procedures in OAR 340-228-0627.

(8) The hourly Hg mass emissions for each collection period are determined using the results of the analyses in conjunction with contemporaneous hourly data recorded by a certified stack flow monitor, corrected for the stack gas moisture content. For each pair of sorbent traps analyzed, the average of the two Hg concentrations must be used for reporting purposes under OAR 340-228-0637(4). Notwithstanding this requirement, if, due to circumstances beyond the control of the owner or operator, one of the paired traps is accidentally lost, damaged, or broken and cannot be analyzed, the results of the analysis of the other trap may be used for reporting purposes, provided that:

(a) The other trap has met all of the applicable quality-assurance requirements; and

(b) The Hg concentration measured by the other trap is multiplied by a factor of 1.111.

(9) All unit operating hours for which valid Hg concentration data are obtained with the primary sorbent trap monitoring system (as verified using the quality assurance procedures in OAR 340-228-0627) must be reported in the quarterly report under OAR 340-228-0637(4). For hours in which data from the primary monitoring system are invalid, the owner or operator may report valid Hg concentration data from a certified redundant backup CEMS or sorbent trap monitoring system or from an applicable reference method under OAR 340-228-0602(33) or 40 CFR 75.22. If no quality-assured Hg concentration is available for a particular hour, the owner or operator must report the appropriate substitute data value in accordance with OAR 340-228-0633.

(10) Initial certification requirements and additional quality-assurance requirements for the sorbent trap monitoring systems are found in OAR 340-228-0627.

(11) Whenever the type of sorbent material used by the traps is changed, the owner or operator must conduct a diagnostic RATA of the modified sorbent trap monitoring system within 720 unit or stack operating hours after the date and hour when the new sorbent material is first used. If the diagnostic RATA is passed, data from the modified system may be reported as quality-assured, back to the date and hour when the new sorbent material was first used. If the RATA is failed, all data from the modified system shall be invalidated, back to the date and hour when the new sorbent material was first used, and data from the system shall remain invalid until a subsequent RATA is passed. If the required RATA is not completed within 720 unit or stack operating hours, but is passed on the first attempt, data from the modified system shall be invalidated beginning with the first operating hour after the 720 unit or stack operating hour window expires and data from the system shall remain invalid until the date and hour of completion of the successful RATA.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0619
Procedures for Hg Mass Emissions

(1) Use the procedures in this rule to calculate the hourly Hg mass emissions (in pounds) at each monitored location, for the affected unit or group of units that discharge through a common stack.

(a) To determine the hourly Hg mass emissions when using a Hg concentration monitoring system that measures on a wet basis and a flow monitor, use the following equation:

$$Mh = K \times Ch \times Qh \times th$$

Where:
Mh = Hg mass emissions for the hour, rounded off to three decimal places, (pounds).
K = Units conversion constant, 6.236 x 10-11 lb-m3/μg-scf
Ch = Hourly Hg concentration, wet basis, adjusted for bias if the bias-test procedures show that a bias-adjustment factor is necessary, (μg/wscm).
Qh = Hourly stack gas volumetric flow rate, adjusted for bias, where the bias-test procedures show a bias-adjustment factor is necessary, (scfh)
th = Unit or stack operating time, as defined in 40 CFR 72.2, (hr)

(b) To determine the hourly Hg mass emissions when using a Hg concentration monitoring system that measures on a dry basis or a sorbent trap monitoring system and a flow monitor, use the following equation:

$$Mh = K \times Ch \times Qh \times th \times (1 - Bws)$$

Where:
Mh = Hg mass emissions for the hour, rounded off to three decimal places, (pounds).
K = Units conversion constant, 6.236 x 10-11 lb-m3/μg-scf
Ch = Hourly Hg concentration, dry basis, adjusted for bias if the bias-test procedures show that a bias-adjustment factor is necessary, (μg/dscm). For sorbent trap systems, a single value of Ch (i.e., a flow proportional average concentration for the data collection period), is applied to each hour in the data collection period, for a particular pair of traps.
Qh = Hourly stack gas volumetric flow rate, adjusted for bias, where the bias-test procedures show a bias-adjustment factor is necessary, (scfh)
Bws = Moisture fraction of the stack gas, expressed as a decimal (equal to % H2O 100)
th = Unit or stack operating time, as defined in 40 CFR 72.2, (hr)

(2) Use equation 1 to this division to calculate quarterly, year-to-date, and 12-month total Hg mass emissions in pounds.

(3) If heat input rate monitoring is required, follow the applicable procedures for heat input apportionment and summation in sections 5.3, 5.6 and 5.7 of appendix F to 40 CFR part 75.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0621
Initial Certification and Recertification Procedures

(1) The owner or operator of a coal-fired electric generating unit shall be exempt from the initial certification requirements of this rule for a monitoring system under OAR 340-228-0609(1)(a) if the following conditions are met:

(a) The monitoring system has been previously certified; and

(b) The applicable quality-assurance and quality-control requirements are fully met for the certified monitoring system described in subsection (1)(a) of this rule.

(2) The recertification provisions of this rule shall apply to a monitoring system under OAR 340-228-0609(1)(a) exempt from initial certification requirements under section (1) of this rule.

(3) Initial certification and recertification procedures. Except as provided in section (1) of this rule, the owner or operator of a coal-fired electric generating unit must comply with the following initial certification and recertification procedures for a continuous monitoring system (e.g., a continuous emission monitoring system or sorbent trap monitoring system). The owner or operator must meet any additional requirements for Hg concentration monitoring systems, sorbent trap monitoring systems (as defined in OAR 340-228-0602(36)), flow monitors, CO2 monitors, O2 monitors, or moisture monitors, as set forth under OAR 340-228-0613, under the common stack provisions in OAR 340-228-0615. The owner or operator of a unit that qualifies to use an alternative monitoring system must comply with the procedures in section (4) of this rule.

(a) Requirements for initial certification. The owner or operator must ensure that each monitoring system under OAR 340-228-0609(1)(a) (including the automated data acquisition and handling system) successfully completes all of the initial certification testing by the applicable deadline in OAR 340-228-0609(2). In addition, whenever the owner or operator installs a monitoring system to meet the requirements of this rule in a location where no such monitoring system was previously installed, initial certification is required.

(b) Requirements for recertification. Whenever the owner or operator makes a replacement, modification, or change in any certified continuous emission monitoring system or sorbent trap monitoring system that may significantly affect the ability of the system to accurately measure or record the CO2 concentration, stack gas volumetric flow rate, Hg concentration, Hg mass emissions, percent moisture, or heat input rate or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21, OAR 340-228-0623, or appendix B to 40 CFR part 75, the owner or operator must recertify the monitoring system in accordance with 40 CFR 75.20(b). Furthermore, whenever the owner or operator makes a replacement, modification, or change to the flue gas handling system or the unit's operation that may significantly change the stack flow or concentration profile, the owner or operator must recertify each continuous emission monitoring system or sorbent trap monitoring system, whose accuracy is potentially affected by the change, in accordance with 40 CFR 75.20(b). Examples of changes to a continuous emission monitoring system that require recertification include replacement of the analyzer, complete replacement of an existing continuous emission monitoring system, or change in location or orientation of the sampling probe or site.

(c) Approval process for initial certification and recertification. Paragraphs (3)(c)(A) through (D) of this rule apply to both initial certification and recertification of a continuous monitoring system under OAR 340-228-0609(1)(a). For recertifications, apply the word "recertification" instead of the words "certification" and "initial certification" and apply the word "recertified" instead of the word "certified," and follow the procedures in 40 CFR 75.20(b)(5) in lieu of the procedures in paragraph (3)(c)(E) of this rule.

(A) Notification of certification. The owner or operator must submit to the Department written notice of the dates of certification testing, in accordance with 40 CFR 75.61.

(B) Certification application. The owner or operator must submit to the Department a certification application for each monitoring system. A complete certification application must include the information specified in 40 CFR 75.63.

(C) Provisional certification date. The provisional certification date for a monitoring system must be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitoring system may be used for a period not to exceed 120 days after receipt by the Department of the complete certification application for the monitoring system under paragraph (3)(c)(B) of this rule. Data measured and recorded by the provisionally certified monitoring system will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Department does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of the date of receipt of the complete certification application by the Department.

(D) Certification application approval process. The Department will issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application under paragraph (3)(c)(B) of this rule. In the event the Department does not issue such a notice within such 120-day period, each monitoring system that meets the applicable performance requirements and is included in the certification application will be deemed certified for use.

(i) Approval notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements, then the Department will issue a written notice of approval of the certification application within 120 days of receipt.

(ii) Incomplete application notice. If the certification application is not complete, then the Department will issue a written notice of incompleteness that sets a reasonable date by which the owner or operator must submit the additional information required to complete the certification application. If the owner or operator does not comply with the notice of incompleteness by the specified date, then the Department may issue a notice of disapproval under subparagraph (3)(c)(D)(iii) of this rule. The 120-day review period must not begin before receipt of a complete certification application.

(iii) Disapproval notice. If the certification application shows that any monitoring system does not meet the performance requirements or if the certification application is incomplete and the requirement for disapproval under subparagraph (3)(c)(D)(ii) of this rule is met, then the Department will issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is invalidated by the Department and the data measured and recorded by each uncertified monitoring system must not be considered valid quality-assured data beginning with the date and hour of provisional certification (as defined under 40 CFR 75.20(a)(3)). The owner or operator must follow the procedures for loss of certification in paragraph (3)(c)(E) of this rule for each monitoring system that is disapproved for initial certification.

(iv) Audit decertification. The Department may issue a notice of disapproval of the certification status of a monitor in accordance with OAR 340-228-0629(2).

(E) Procedures for loss of certification. If the Department issues a notice of disapproval of a certification application under subparagraph (3)(c)(D)(iii) of this rule or a notice of disapproval of certification status under subparagraph (3)(c)(D)(iv) of this rule, then:

(i) The owner or operator must substitute the following values, as applicable, for each disapproved monitoring system, for each hour of unit operation during the period of invalid data specified under 40 CFR 75.20(a)(4)(iii), 40 CFR 75.21(e) and continuing until such time, date, and hour as the continuous emission monitoring system can be adjusted, repaired, or replaced and certification tests successfully completed (or, if the conditional data validation procedures in 40 CFR 75.20(b)(3)(ii) through (ix) are used, until a probationary calibration error test is passed following corrective actions in accordance with 40 CFR 75.20(b)(3)(ii)):

(I) For a disapproved Hg pollutant concentration monitor and disapproved flow monitor, respectively, the maximum potential Hg concentration, as defined in OAR 340-228-0602(25), and the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to 40 CFR part 75; and

(II) For a disapproved moisture monitoring system and disapproved diluent gas monitoring system, respectively, the minimum potential moisture percentage and either the maximum potential CO2 concentration or the minimum potential O2 concentration (as applicable), as defined in sections 2.1.5, 2.1.3.1, and 2.1.3.2 of appendix A to 40 CFR part 75.

(III) For a disapproved sorbent trap monitoring system and disapproved flow monitor, respectively, the maximum potential Hg concentration, as defined in OAR 340-228-0602(25), and maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to 40 CFR part 75.

(ii) The owner or operator must submit a notification of certification retest dates as specified in 40 CFR 75.61(a)(1)(ii) and a new certification application in accordance with paragraphs (3)(c)(A) and (B) of this rule.

(iii) The owner or operator must repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Department's notice of disapproval, no later than 30 unit operating days after the date of issuance of the notice of disapproval.

(d) For each Hg concentration monitoring system, the owner or operator must perform the following tests for initial certification or recertification of a Hg continuous emission system:

(A) A 7-day calibration error test in accordance with section 6.3 of appendix A to 40 CFR part 75. The owner or operator may perform this test using either NIST-traceable elemental Hg standards, a NIST-traceable source of oxidized Hg, or other NIST-traceable standards subject to the approval of the Department. The calibration error of a Hg concentration monitor must not deviate from the reference value of either the zero or upscale calibration gas by more than 5.0 percent of the span value, as calculated using Equation A–5 of appendix A to 40 CFR part 75. Alternatively, if the span value is 10 µg/m3, the calibration error test results are also acceptable if the absolute value of the difference between the monitor response value and the reference value, |R–A| in Equation A–5 of appendix A to 40 CFR part 75, is ≤ 1.0 µg/m3. If moisture is added to the calibration gas, the added moisture must be accounted for and the dry-basis concentration of the calibration gas must be used to calculate the calibration error.

(B) A linearity check in accordance with section 6.2 of appendix A to 40 CFR part 75. Design and equip each mercury monitor to permit the introduction of known concentrations of elemental Hg and HgCl2 separately, at a point immediately preceding the sample extraction filtration system, such that the entire measurement system can be checked. If the Hg monitor does not have a converter, the HgCl2 injection capability is not required. Follow the applicable procedures in section 6.2 of appendix A to 40 CFR part 75 when performing the 3-level system integrity checks described in paragraph (3)(d)(F) of this rule. Perform the linearity check using NIST-traceable elemental Hg standards and the 3-level system integrity checks using NIST-traceable source of oxidized Hg or other NIST-traceable standards subject to the approval of the Department. If moisture is added to the calibration gas during the required linearity checks or system integrity checks, the moisture content of the calibration gas must be accounted for. Under these circumstances, the dry basis concentration of the calibration gas must be used to calculate the linearity error or measurement error (as applicable).

(C) A relative accuracy test audit (RATA) in accordance with section 6.5 of appendix A to 40 CFR part 75 and as follows:

(i) The RATA must be performed on a *µ*g/m3 basis and while the unit is combusting coal.

(ii) Calculate the relative accuracy, in accordance with section 7.3 or 7.4 of appendix A to 40 CFR part 75, as applicable.

(iii) The relative accuracy shall not exceed 20.0 percent. Alternatively, for affected units where the average of the reference method measurements of Hg concentration during the relative accuracy test audit is less than 5.0 ìg/m3, the test results are acceptable if the difference between the mean value of the monitor measurements and the reference method mean value does not exceed 1.0 µg/m3, in cases where the relative accuracy specification of 20.0 percent is not achieved.

(iv) For the RATA of a Hg CEMS using the Ontario Hydro Method, or for the RATA of a sorbent trap system (irrespective of the reference method used), the time per run must be long enough to collect a sufficient mass of Hg to analyze. For the RATA of a sorbent trap monitoring system, use the same-size trap that is used for daily operation of the monitoring system. Spike the third section of each sorbent trap with elemental Hg, as described in OAR 340-228-0627(7)(a)(B). Install a new pair of sorbent traps prior to each test run. For each run, the sorbent trap data must be validated according to the quality assurance criteria in OAR 340-228-0627(8).

(v) Use the same basic approach for traverse point selection that is used for other gas monitoring system RATAs, except that the stratification test provisions in sections 8.1.3 through 8.1.3.5 of Method 30A shall apply, rather than the provisions of section 6.5.6.1 through 6.5.6.3 of appendix A to 40 CFR part 75.

(vi) Up to 336 consecutive unit or stack operating hours may be taken to complete the RATA of a Hg monitoring system, when the Ontario Hydro Method or Method 29 is used as the reference method.

(D) A bias test in accordance with section 7.6 of appendix A to 40 CFR part 75 and as follows:

(i) To calculate bias for a Hg monitoring system when using the Ontario Hydro Method or Method 29, “d” is, for each data point, the difference between the average Hg concentration value (in µg/m3) from the paired Ontario Hydro or Method 29 sampling trains and the concentration measured by the monitoring system. For sorbent trap systems, use the average Hg concentration measured by the paired traps in calculation of “d”.

(ii) For single-load RATAs of Hg concentration monitoring systems, and sorbent trap monitoring systems, the appropriate BAF is determined directly from the RATA results at normal load, using Equation A–12.

(iii) For multiple-load flow RATAs, perform a bias test at each load level designated as normal under section 6.5.2.1 of appendix A to 40 CFR part 75.

(iv) Mercury concentration monitoring systems and sorbent trap monitoring systems shall not be biased low.

(v) For Hg concentration and sorbent trap monitoring systems, where the average Hg concentration during the RATA is < 5.0 µg/dscm, if the monitoring system meets the normal or the alternative relative accuracy specification in subparagraph (3)(d)(C)(iii) of this rule but fails the bias test, the owner or operator may either use the bias adjustment factor (BAF) calculated from Equation A–12 appendix A to 40 CFR part 75 and in accordance with sections 7.6.4 and 7.6.5 of appendix A to 40 CFR part 75, using the data from the relative accuracy test audits, or may use a default BAF of 1.250 for reporting purposes.

(vi) Use the bias-adjusted values in computing substitution values in the missing data procedure and in reporting the concentration of Hg during the quarter and calendar year. In addition, when using a Hg concentration or sorbent trap monitoring system and a flow monitor to calculate Hg mass emissions, use bias-adjusted values for Hg concentration and flow rate in the mass emission calculations and use bias-adjusted Hg concentrations to compute the appropriate substitution values for Hg concentration in the missing data routines.

(E) A cycle time test in accordance to section 6.4 of appendix A to 40 CFR part 75. For Hg monitors, the calibration gas used for this test may either be the elemental or oxidized form of Hg. As an alternative, the reading is considered stable if it changes by no more than 0.5 µg/m3 for two minutes.

(F) A 3-level system integrity check, using a NIST-traceable source of oxidized Hg, or other NIST-traceable standards subject to the approval of the Department. This test is not required for an Hg monitor that does not have a converter. The system measurement error must not exceed 10.0 percent of the reference value at any of the three gas levels. To calibrate the measurement error at each level, take the absolute value of the difference between the reference value and mean CEM response, divide the result by the reference value, and then multiply by 100. Alternatively, the results at any gas level are acceptable if the absolute value of the difference between the average monitor response and the average reference value, i.e., |R–A| in equation A–4 of appendix A to 40 CFR part 75, does not exceed 0.8 µg/m3.

(4) Certification/recertification procedures for alternative monitoring systems. The owner or operator of each unit for which the owner or operator intends to use an alternative monitoring system approved by the Department must comply with the applicable notification and application procedures of 40 CFR 75.20(f).

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0623
Quality Assurance and Quality Control Requirements

(1) For units that use continuous emission monitoring systems to account for Hg mass emissions, the owner or operator must meet the applicable quality assurance and quality control requirements in 40 CFR 75.21, appendix B to 40 CFR part 75, and as follows, for the flow monitoring systems, Hg concentration monitoring systems, moisture monitoring systems, and diluent monitors required under OAR 340-228-0613. Units using sorbent trap monitoring systems must meet the applicable quality assurance requirements in OAR 340-228-0617, 340-228-0627, and as follows.

(a) Calibration Error Test. Except as provided in section 2.1.1.2 of appendix B to 40 CFR part 75, perform the daily calibration error test of each Hg monitoring system according to the procedures in OAR 340-228-0621(3)(d)(A). For Hg monitors, the daily assessments may be made using either NIST-traceable elemental Hg standards, a NIST-traceable source of oxidized Hg, or other NIST-traceable standards subject to the approval of the Department.

(b) Data Validation. For a Hg monitor, an out-of-control period occurs when the calibration error exceeds 5.0% of the span value. Notwithstanding, the Hg monitor shall not be considered out-of-control if |R–A| in Equation A–6 of appendix A to 40 CFR part 75 does not exceed 1.0 µg/m3.

(c) Linearity Check. Unless a particular monitor (or monitoring range) is exempted under this subsection or under section 6.2 of appendix A to 40 CFR part 75, perform a linearity check, in accordance with the procedures in section 6.2 of appendix A to 40 CFR part 75, for each primary and redundant backup Hg at least once during each QA operating quarter, as defined in 40 CFR 72.2. For Hg monitors, perform the linearity checks using NIST-traceable elemental Hg standards, or other NIST-traceable standards subject to the approval of the Department. Alternatively, the owner or operator may perform 3-level system integrity checks at the same three calibration gas levels (i.e., low, mid, and high), using a NIST-traceable source of oxidized Hg, or other NIST-traceable standards subject to the approval of the Department. If choosing this option, the performance specification in paragraph (1)(i)(B) of this rule must be met at each gas level. For units using both a low and high span value, a linearity check is required only on the range(s) used to record and report emission data during the QA operating quarter. Conduct the linearity checks no less than 30 days apart, to the extent practicable.

(d) Standard RATA Frequencies. For each primary and redundant backup Hg concentration monitoring system and each sorbent trap monitoring system, RATAs must be performed annually, i.e., once every four successive QA operating quarters (as defined in 40 CFR 72.2).

(e) RATA Load (or Operating) Levels and Additional RATA Requirements. For Hg concentration monitoring systems and sorbent trap monitoring systems, the required semiannual or annual RATA tests must be done at the load level (or operating level) designated as normal under section 6.5.2.1(d) of appendix A to 40 CFR part 75. If two load levels (or operating levels) are designated as normal, the required RATA(s) may be done at either load level (or operating level).

(f) Data Validation. Each time that a hands-off RATA of a Hg concentration monitoring system or a sorbent trap monitoring system is passed, perform a bias test in accordance with section 7.6.4 of appendix A to 40 CFR part 75. Apply the appropriate bias adjustment factor to the reported Hg data, in accordance with subsection (1)(g) of this rule.

(g) Bias Adjustment Factor. Except as otherwise specified in section 7.6.5 of appendix A to 40 CFR part 75, if an Hg concentration monitoring system or sorbent trap monitoring system fails the bias test, use the bias adjustment factor given in Equations A–11 and A–12 of appendix A to 40 CFR part 75, or a default bias adjustment factor of 1.250, to adjust the monitored data.

(h) Bias Adjusted Values. Use the bias-adjusted values in computing substitution values in the missing data procedure and in reporting the concentration of Hg during the quarter and calendar year. In addition, when using a Hg concentration or sorbent trap monitoring system and a flow monitor to calculate Hg mass emissions, use bias-adjusted values for Hg concentration and flow rate in the mass emission calculations and use bias-adjusted Hg concentrations to compute the appropriate substitution values for Hg concentration in the missing data routines.

(i) System Integrity Checks for Hg Monitors. For each Hg concentration monitoring system (except for a Hg monitor that does not have a converter), perform a single-point system integrity check weekly, i.e., at least once every 168 unit or stack operating hours, using a NIST-traceable source of oxidized Hg, or other NIST-traceable standards subject to the approval of the Department. Perform this check as follows using a mid- or high-level gas concentration, as defined in section 5.2 of appendix A to 40 CFR part 75.

(A) The performance specification in paragraph (1)(i)(B) must be met, otherwise the monitoring system is considered out-of-control, from the hour of the failed check until a subsequent system integrity check is passed. If a required system integrity check is not performed and passed within 168 unit or stack operating hours of last successful check, the monitoring system shall also be considered out of control, beginning with the 169th unit of stack operating hour after the last successful check, and continuing until a subsequent system integrity check is passed. This weekly check is not required if the daily calibration assessments in subsection (1)(a) of this rule are performed using a NIST-traceable source of oxidized Hg, or other NIST-traceable standards subject to the approval of the Department.

(B) The measurement error for the linearity check must not exceed 10.0 percent of the reference value at any of the three gas levels. To calibrate the measurement error at each level, take the absolute value of the difference between the reference value and mean CEM response, divide the result by the reference value, and then multiply by 100. Alternatively, the results at any gas level are acceptable if the absolute value of the difference between the average monitor response and the average reference value, i.e., |R–A| in equation A–4 of appendix A to 40 CFR part 75, does not exceed 0.8 µg/m3.

(2) Missing data procedures. Except as provided in OAR 340-228-0617(11) and 340-228-0631(2), the owner or operator must provide substitute data from monitoring systems required under OAR 340-228-0613 for each affected unit as follows:

(a) For an owner or operator using an Hg concentration monitoring system, substitute for missing data in accordance with the applicable missing data procedures in 40 CFR 75.31 through 75.37 and OAR 340-228-0631 and 0633 whenever the unit combusts fuel and:

(A) A valid, quality-assured hour of Hg concentration data (in µg/m3) has not been measured and recorded, either by a certified Hg concentration monitoring system, by an appropriate reference method under OAR 340-228-0602(33) or 40 CFR 75.22, or by an approved alternative monitoring method under 40 CFR part 75 subpart E; or

(B) A valid, quality-assured hour of flow rate data (in scfh) has not been measured and recorded for a unit either by a certified flow monitor, by an appropriate EPA reference method under 40 CFR 75.22, or by an approved alternative monitoring system under 40 CFR part 75 subpart E; or

(C) A valid, quality-assured hour of moisture data (in percent H2O) has not been measured or recorded for an affected unit, either by a certified moisture monitoring system, by an appropriate EPA reference method under 40 CFR 75.22, or an approved alternative monitoring method under 40 CFR part 75 subpart E. This requirement does not apply when a default percent moisture value, as provided in 40 CFR 75.11(b), is used to account for the hourly moisture content of the stack gas, or when correction of the Hg concentration for moisture is not necessary; or

(D) A valid, quality-assured hour of heat input rate data (in MMBtu/hr) has not been measured and recorded for a unit, either by certified flow rate and diluent (CO2 or O2) monitors, by appropriate EPA reference methods under 40 CFR 75.22, or by approved alternative monitoring systems under 40 CFR part 75 subpart E.

(b) For an owner or operator using a sorbent trap monitoring system to quantify Hg mass emissions, substitute for missing data in accordance with the missing data procedures in OAR 340-228-0633.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0625
Specifications and Test Procedures for Total Vapor Phase Mercury CEMS

(1) Analyte. Mercury (Hg), CAS No. 7439-97-6.

(2) Applicability.

(a) This specification is for evaluating the acceptability of total vapor phase Hg CEMS installed on the exit gases from fossil fuel fired boilers at the time of or soon after installation and whenever specified in the regulations. The Hg CEMS must be capable of measuring the total concentration in µg/m3 (regardless of speciation) of vapor phase Hg, and recording that concentration on a wet or dry basis.

(b) Particle bound Hg is not included in the measurements.

(c) This specification is not designed to evaluate an installed CEMS's performance over an extended period of time nor does it identify specific calibration techniques and auxiliary procedures to assess the CEMS's performance. The source owner or operator, however, is responsible to calibrate, maintain, and operate the CEMS properly.

(d) The Department may require the operator to conduct CEMS performance evaluations at other times besides the initial test to evaluate the CEMS performance.

(e) The owner or operator must conduct the performance evaluation of the Hg CEMS according to OAR 340-228-0621(3)(d) and the following procedures:

(3) Summary of Performance Specification. Procedures for measuring CEMS relative accuracy, measurement error and drift are outlined. CEMS installation and measurement location specifications, and data reduction procedures are included. Conformance of the CEMS with the Performance Specification is determined.

(4) Definitions.

(a) "Continuous Emission Monitoring System (CEMS)" means the total equipment required for the determination of a pollutant concentration. The system consists of the following major subsystems:

(A) "Sample Interface" means that portion of the CEMS used for one or more of the following: sample acquisition, sample transport, sample conditioning, and protection of the monitor from the effects of the stack effluent.

(B) "Hg Analyzer" means that portion of the Hg CEMS that measures the total vapor phase Hg mass concentration and generates a proportional output.

(C) "Data Recorder" means that portion of the CEMS that provides a permanent electronic record of the analyzer output. The data recorder may provide automatic data reduction and CEMS control capabilities.

(b) "Span Value" means the upper limit of the intended Hg concentration measurement range. The span value is a value equal to two times the emission standard. Alternatively, the Hg span value(s) may be determined as follows:

(A) For each Hg monitor, determine a high span value, by rounding the maximum potential Hg concentration value from OAR 340-228-0602(25) upward to the next highest multiple of 10 µg/m3.

(B) For an affected unit equipped with an FGD system or a unit with add-on Hg emission controls, if the maximum expected Hg concentration value from OAR 340-228-0602(24) is less than 20 percent of the high span value from paragraph (4)(b)(A) of this rule, and if the high span value is 20 µg/m3 or greater, define a second, low span value of 10 µg/m3.

(C) If only a high span value is required, set the full-scale range of the Hg analyzer to be greater than or equal to the span value.

(D) If two span values are required, the owner or operator may either:

(i) Use two separate (high and low) measurement scales, setting the range of each scale to be greater than or equal to the high or low span value, as appropriate; or

(ii) Quality-assure two segments of a single measurement scale.

(c) "Measurement Error (ME)" means the absolute value of the difference between the concentration indicated by the Hg analyzer and the known concentration generated by a reference gas, expressed as a percentage of the span value, when the entire CEMS, including the sampling interface, is challenged. An ME test procedure is performed to document the accuracy and linearity of the Hg CEMS at several points over the measurement range.

(d) "Upscale Drift (UD)" means the absolute value of the difference between the CEMS output response and an upscale Hg reference gas, expressed as a percentage of the span value, when the entire CEMS, including the sampling interface, is challenged after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.

(e) "Zero Drift (ZD)" means the absolute value of the difference between the CEMS output response and a zero-level Hg reference gas, expressed as a percentage of the span value, when the entire CEMS, including the sampling interface, is challenged after a stated period of operation during which no unscheduled maintenance, repair, or adjustment took place.

(f) "Relative Accuracy (RA)" means the absolute mean difference between the pollutant concentration(s) determined by the CEMS and the value determined by the reference method (RM) plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the RM tests. Alternatively, for low concentration sources, the RA may be expressed as the absolute value of the difference between the mean CEMS and RM values.

(5) Safety. The procedures required under this performance specification may involve hazardous materials, operations, and equipment. This performance specification may not address all of the safety problems associated with these procedures. It is the responsibility of the user to establish appropriate safety and health practices and determine the applicable regulatory limitations prior to performing these procedures. The CEMS user's manual and materials recommended by the RM should be consulted for specific precautions to be taken.

(6) Equipment and Supplies.

(a) CEMS Equipment Specifications.

(A) Data Recorder Scale. The Hg CEMS data recorder output range must include zero and a high level value. The high level value must be approximately two times the Hg concentration corresponding to the emission standard level for the stack gas under the circumstances existing as the stack gas is sampled. A lower high level value may be used, provided that the measured values do not exceed 95 percent of the high level value. Alternatively, the owner or operator may set the full-scale range(s) of the Hg analyzer according to subsection (4)(b) of this rule.

(B) The CEMS design should also provide for the determination of calibration drift at a zero value (zero to 20 percent of the span value) and at an upscale value (between 50 and 100 percent of the high-level value).

(b) Reference Gas Delivery System. The reference gas delivery system must be designed so that the flowrate of reference gas introduced to the CEMS is the same at all three challenge levels specified in subsection (7)(a) of this rule and at all times exceeds the flow requirements of the CEMS.

(c) Other equipment and supplies, as needed by the applicable reference method used. See paragraph (8)(f)(B) of this rule.

(7) Reagents and Standards.

(a) Reference Gases. Reference gas standards are required for both elemental and oxidized Hg (Hg and mercuric chloride, HgCl2). The use of National Institute of Standards and Technology (NIST)-certified or NIST-traceable standards and reagents is required. The following gas concentrations are required.

(A) Zero-level. 0 to 20 percent of the span value.

(B) Mid-level. 50 to 60 percent of the span value.

(C) High-level. 80 to 100 percent of the span value.

(b) Reference gas standards may also be required for the reference methods. See paragraph (8)(f)(B) of this rule.

(8) Performance Specification (PS) Test Procedure.

(a) Installation and Measurement Location Specifications.

(A) CEMS Installation. Install the CEMS at an accessible location downstream of all pollution control equipment. Since the Hg CEMS sample system normally extracts gas from a single point in the stack, use a location that has been shown to be free of stratification for SO2 and NOX through concentration measurement traverses for those gases. If the cause of failure to meet the RA test requirement is determined to be the measurement location and a satisfactory correction technique cannot be established, the Administrator may require the CEMS to be relocated. Measurement locations and points or paths that are most likely to provide data that will meet the RA requirements are listed below.

(B) Measurement Location. The measurement location should be (1) at least two equivalent diameters downstream of the nearest control device, point of pollutant generation or other point at which a change of pollutant concentration may occur, and (2) at least half an equivalent diameter upstream from the effluent exhaust. The equivalent duct diameter is calculated as per appendix A to 40 CFR part 60, Method 1.

(C) Hg CEMS Sample Extraction Point. Use a sample extraction point (1) no less than 1.0 meter from the stack or duct wall, or (2) within the centroidal velocity traverse area of the stack or duct cross section.

(b) RM Measurement Location and Traverse Points. Refer to PS 2 of appendix B to 40 CFR part 60. The RM and CEMS locations need not be immediately adjacent.

(c) ME Test Procedure. The Hg CEMS must be constructed to permit the introduction of known concentrations of Hg and HgCl2 separately into the sampling system of the CEMS immediately preceding the sample extraction filtration system such that the entire CEMS can be challenged. Sequentially inject each of the three reference gases (zero, mid-level, and high level) for each Hg species. Record the CEMS response and subtract the reference value from the CEMS value, and express the absolute value of the difference as a percentage of the span value. For each reference gas, the absolute value of the difference between the CEMS response and the reference value must not exceed 5 percent of the span value. If this specification is not met, identify and correct the problem before proceeding.

(d) UD Test Procedure.

(A) UD Test Period. While the affected facility is operating at more than 50 percent of normal load, or as specified in an applicable subpart, determine the magnitude of the UD once each day (at 24-hour intervals, to the extent practicable) for 7 consecutive unit operating days according to the procedure given in paragraphs (8)(d)(B) through (C) of this rule. The 7 consecutive unit operating days need not be 7 consecutive calendar days. Use either Hg0 or HgCl2 standards for this test.

(B) The purpose of the UD measurement is to verify the ability of the CEMS to conform to the established CEMS response used for determining emission concentrations or emission rates. Therefore, if periodic automatic or manual adjustments are made to the CEMS zero and response settings, conduct the UD test immediately before these adjustments, or conduct it in such a way that the UD can be determined.

(C) Conduct the UD test at either the mid-level or high-level point specified in subsection (7)(a) of this rule. Introduce the reference gas to the CEMS. Record the CEMS response and subtract the reference value from the CEMS value, and express the absolute value of the difference as a percentage of the span value. For the reference gas, the absolute value of the difference between the CEMS response and the reference value must not exceed 5 percent of the span value. If this specification is not met, identify and correct the problem before proceeding.

(e) ZD Test Procedure.

(A) ZD Test Period. While the affected facility is operating at more than 50 percent of normal load, or as specified in an applicable subpart, determine the magnitude of the ZD once each day (at 24-hour intervals, to the extent practicable) for 7 consecutive unit operating days according to the procedure given in paragraphs (8)(e)(B) through (C) of this rule. The 7 consecutive unit operating days need not be 7 consecutive calendar days. Use either nitrogen, air, Hg0, or HgCl2 standards for this test.

(B) The purpose of the ZD measurement is to verify the ability of the CEMS to conform to the established CEMS response used for determining emission concentrations or emission rates. Therefore, if periodic automatic or manual adjustments are made to the CEMS zero and response settings, conduct the ZD test immediately before these adjustments, or conduct it in such a way that the ZD can be determined.

(C) Conduct the ZD test at the zero level specified in subsection (7)(a) of this rule. Introduce the zero gas to the CEMS. Record the CEMS response and subtract the zero value from the CEMS value and express the absolute value of the difference as a percentage of the span value. For the zero gas, the absolute value of the difference between the CEMS response and the reference value must not exceed 5 percent of the span value. If this specification is not met, identify and correct the problem before proceeding.

(f) RA Test Procedure.

(A) RA Test Period. Conduct the RA test according to the procedure given in paragraphs (8)(f)(B) through (F) of this rule while the affected facility is operating at normal full load, or as specified in an applicable subpart. The RA test may be conducted during the ZD and UD test period.

(B) RM. Use one of the reference methods specified in OAR 340-228-0602(33). Do not include the filterable portion of the sample when making comparisons to the CEMS results. When Method 29 or ASTM D6784–02 is used, conduct the RM test runs with paired or duplicate sampling systems. When an approved instrumental method is used, paired sampling systems are not required. If the RM and CEMS measure on a different moisture basis, data derived with Method 4 in appendix A to 40 CFR part 60 must also be obtained during the RA test.

(C) Sampling Strategy for RM Tests. Conduct the RM tests in such a way that they will yield results representative of the emissions from the source and can be compared to the CEMS data. It is preferable to conduct moisture measurements (if needed) and Hg measurements simultaneously, although moisture measurements that are taken within an hour of the Hg measurements may be used to adjust the Hg concentrations to a consistent moisture basis. In order to correlate the CEMS and RM data properly, note the beginning and end of each RM test period for each paired RM run (including the exact time of day) on the CEMS chart recordings or other permanent record of output.

(D) Number and length of RM Tests. Conduct a minimum of nine RM test runs. When Method 29 or ASTM D6784–02 is used, only test runs for which the data from the paired RM trains meet the relative deviation (RD) criteria of this PS must be used in the RA calculations. In addition, for Method 29 and ASTM D 6784–02, use a minimum sample run time of 2 hours. Note: More than nine sets of RM tests may be performed. If this option is chosen, paired RM test results may be excluded so long as the total number of paired RM test results used to determine the CEMS RA is greater than or equal to nine. However, all data must be reported, including the excluded data.

(E) Correlation of RM and CEMS Data. Correlate the CEMS and the RM test data as to the time and duration by first determining from the CEMS final output (the one used for reporting) the integrated average pollutant concentration for each RM test period. Consider system response time, if important, and confirm that the results are on a consistent moisture basis with the RM test. Then, compare each integrated CEMS value against the corresponding RM value. When Method 29 or ASTM D6784–02 is used, compare each CEMS value against the corresponding average of the paired RM values.

(F) Paired RM Outliers.

(i) When Method 29 or ASTM D6784–02 is used, outliers are identified through the determination of relative deviation (RD) of the paired RM tests. Data that do not meet this criteria should be flagged as a data quality problem. The primary reason for performing paired RM sampling is to ensure the quality of the RM data. The percent RD of paired data is the parameter used to quantify data quality. Determine RD for two paired data points as follows:

RD=100 x |(Ca–Cb)|/(Ca+ Cb)

where Ca and Cb are concentration values determined from each of the two samples respectively.

(ii) A minimum performance criteria for RM Hg data is that RD for any data pair must be ≤10 percent as long as the mean Hg concentration is greater than 1.0 µg/m3. If the mean Hg concentration is less than or equal to 1.0 µg/m3, the RD must be ≤20 percent. Pairs of RM data exceeding these RD criteria should be eliminated from the data set used to develop a Hg CEMS correlation or to assess CEMS RA.

(G) Calculate the mean difference between the RM and CEMS values in the units of micrograms per cubic meter (µg/m3), the standard deviation, the confidence coefficient, and the RA according to the procedures in section (10) of this rule.

(g) Reporting. At a minimum (check with the Department for additional requirements, if any), summarize in tabular form the results of the RD tests and the RA tests or alternative RA procedure, as appropriate. Include all data sheets, calculations, charts (records of CEMS responses), reference gas concentration certifications, and any other information necessary to confirm that the performance of the CEMS meets the performance criteria.

(9) Analytical Procedure. Sample collection and analysis are concurrent for this PS (see section (8) of this rule). Refer to the RM employed for specific analytical procedures.

(10) Calculations and Data Analysis. Summarize the results on a data sheet similar to that shown in Figure 2–2 for PS 2.

(a) Consistent Basis. All data from the RM and CEMS must be compared in units of µg/m3, on a consistent and identified moisture and volumetric basis (STP = 20oC, 760 millimeters (mm) Hg).

(b) Moisture Correction (as applicable). If the RM and CEMS measure Hg on a different moisture basis, using the following equation to make the appropriate corrections to the Hg concentrations.

Concentration(dry) = Concentration(wet)/(1–Bws)

In the above equation, Bws is the moisture content of the flue gas from Method 4, expressed as a decimal fraction (e.g., for 8.0 percent H2O, Bws = 0.08).

(c) Arithmetic Mean. Calculate the arithmetic mean of the difference, d, of a data set using equation 2 to this division.

(d) Standard Deviation. Calculate the standard deviation, Sd, using equation 3 to this division.

(e) Confidence Coefficient (CC). Calculate the 2.5 percent error confidence coefficient (one-tailed), CC, using equation 4 to this division.

(f) RA. Calculate the RA of a set of data using equation 5 to this division.

(11) Performance Specifications.

(a) ME. ME is assessed at zero-level, mid-level and high-level values as given below using standards for both Hg0 and HgCl2. The mean difference between the indicated CEMS concentration and the reference concentration value for each standard must be no greater than 5 percent of the span value.

(b) UD. The UD must not exceed 5 percent of the span value on any of the 7 days of the UD test.

(c) ZD. The ZD must not exceed 5 percent of the span value on any of the 7 days of the ZD test.

(d) RA. The RA of the CEMS must be no greater than 20 percent of the mean value of the RM test data in terms of units of µg/m3. Alternatively, if the mean RM is less than 5.0 µg/m3, the results are acceptable if the absolute value of the difference between the mean RM and CEMS values does not exceed 1.0 µg/m3.

(12) Bibliography.

(a) 40 CFR part 60, appendix B, ''Performance Specification 2— Specifications and Test Procedures for SO2 and NOX Continuous Emission Monitoring Systems in Stationary Sources.''

(b) 40 CFR part 60, appendix A, ''Method 29 — Determination of Metals Emissions from Stationary Sources.''

(c) ASTM Method D6784–02, ''Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method).''

(13) The following values are already corrected for n–1 degrees of freedom. Use n equal to the number of individual values.

(a) For n = 2, t0.975 = 12.706.
(b) For n = 3, t0.975 = 4.303.
(c) For n = 4, t0.975 = 3.182.
(d) For n = 5, t0.975 = 2.776.
(e) For n = 6, t0.975 = 2.571.
(f) For n = 7, t0.975 = 2.447.
(g) For n = 8, t0.975 = 2.365.
(h) For n = 9, t0.975 = 2.306.
(i) For n = 10, t0.975 = 2.262.
(j) For n = 11, t0.975 = 2.228.
(k) For n = 12, t0.975 = 2.201.
(l) For n = 13, t0.975 = 2.179.
(m) For n = 14, t0.975 = 2.160.
(n) For n = 15, t0.975 = 2.145.
(o) For n = 16, t0.975 = 2.131.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0627
Quality Assurance and Operating Procedures for Sorbent Trap Monitoring Systems

(1) Scope and Application. This rule specifies sampling, and analytical, and quality-assurance criteria and procedures for the performance-based monitoring of vapor-phase mercury (Hg) emissions in combustion flue gas streams, using a sorbent trap monitoring system (as defined in OAR 340-228-0602). The principle employed is continuous sampling using in-stack sorbent media coupled with analysis of the integrated samples. The performance-based approach of this rule allows for use of various suitable sampling and analytical technologies while maintaining a specified and documented level of data quality through performance criteria. Persons using this rule should have a thorough working knowledge of Methods 1, 2, 3, 4 and 5 in appendices A–1 through A–3 to 40 CFR part 60, as well as the determinative technique selected for analysis.

(a) Analytes. The analyte measured by these procedures and specifications is total vapor-phase Hg in the flue gas, which represents the sum of elemental Hg (Hg0, CAS Number 7439–97–6) and oxidized forms of Hg, in mass concentration units of micrograms per dry standard cubic meter (µg/dscm).

(b) Applicability. These performance criteria and procedures are applicable to monitoring of vapor-phase Hg emissions under relatively low-dust conditions (i.e., sampling in the stack after all pollution control devices), from coal-fired electric utility steam generators. Individual sample collection times can range from 30 minutes to several days in duration, depending on the Hg concentration in the stack. The monitoring system must achieve the performance criteria specified in section (8) of this rule and the sorbent media capture ability must not be exceeded. The sampling rate must be maintained at a constant proportion to the total stack flowrate to ensure representativeness of the sample collected. Failure to achieve certain performance criteria will result in invalid Hg emissions monitoring data.

(2) Principle. Known volumes of flue gas are extracted from a stack or duct through paired, in-stack, pre-spiked sorbent media traps at an appropriate nominal flow rate. Collection of Hg on the sorbent media in the stack mitigates potential loss of Hg during transport through a probe/sample line. Paired train sampling is required to determine measurement precision and verify acceptability of the measured emissions data. The sorbent traps are recovered from the sampling system, prepared for analysis, as needed, and analyzed by any suitable determinative technique that can meet the performance criteria. A section of each sorbent trap is spiked with Hg0 prior to sampling. This section is analyzed separately and the recovery value is used to correct the individual Hg sample for measurement bias.

(3) Clean Handling and Contamination. To avoid Hg contamination of the samples, special attention should be paid to cleanliness during transport, field handling, sampling, recovery, and laboratory analysis, as well as during preparation of the sorbent cartridges. Collection and analysis of blank samples (field, trip, lab) is useful in verifying the absence of contaminant Hg.

(4) Safety.

(a) Site hazards. Site hazards must be thoroughly considered in advance of applying these procedures/specifications in the field; advance coordination with the site is critical to understand the conditions and applicable safety policies. At a minimum, portions of the sampling system will be hot, requiring appropriate gloves, long sleeves, and caution in handling this equipment.

(b) Laboratory safety policies. Laboratory safety policies should be in place to minimize risk of chemical exposure and to properly handle waste disposal. Personnel must wear appropriate laboratory attire according to a Chemical Hygiene Plan established by the laboratory.

(c) Toxicity or carcinogenicity. The toxicity or carcinogenicity of any reagents used must be considered. Depending upon the sampling and analytical technologies selected, this measurement may involve hazardous materials, operations, and equipment and this rule does not address all of the safety problems associated with implementing this approach. It is the responsibility of the user to establish appropriate safety and health practices and determine the applicable regulatory limitations prior to performance. Any chemical should be regarded as a potential health hazard and exposure to these compounds should be minimized. Chemists should refer to the Material Safety Data Sheet (MSDS) for each chemical used.

(d) Wastes. Any wastes generated by this procedure must be disposed of according to a hazardous materials management plan that details and tracks various waste streams and disposal procedures.

(5) Equipment and Supplies. The following list is presented as an example of key equipment and supplies likely required to perform vapor-phase Hg monitoring using a sorbent trap monitoring system. It is recognized that additional equipment and supplies may be needed. Collection of paired samples is required. Also required are a certified stack gas volumetric flow monitor that meets the requirements of 40 CFR 75.10 and an acceptable means of correcting for the stack gas moisture content, i.e., either by using data from a certified continuous moisture monitoring system or by using an approved default moisture value (see 40 CFR 75.11(b)).

(a) Sorbent Trap Monitoring System. The monitoring system must include the following components:

(A) Sorbent Traps. The sorbent media used to collect Hg must be configured in a trap with three distinct and identical segments or sections, connected in series, that are amenable to separate analyses. Section 1 is designated for primary capture of gaseous Hg. Section 2 is designated as a backup section for determination of vapor-phase Hg breakthrough. Section 3 is designated for QA/QC purposes where this section must be spiked with a known amount of gaseous Hg0 prior to sampling and later analyzed to determine recovery efficiency. The sorbent media may be any collection material (e.g., carbon, chemically-treated filter, etc.) capable of quantitatively capturing and recovering for subsequent analysis, all gaseous forms of Hg for the intended application. Selection of the sorbent media must be based on the material's ability to achieve the performance criteria contained in section (8) of this rule as well as the sorbent's vapor phase Hg capture efficiency for the emissions matrix and the expected sampling duration at the test site. The sorbent media must be obtained from a source that can demonstrate the quality assurance and control necessary to ensure consistent reliability. The paired sorbent traps are supported on a probe (or probes) and inserted directly into the flue gas stream.

(B) Sampling Probe Assembly. Each probe assembly must have a leak-free attachment to the sorbent trap(s). Each sorbent trap must be mounted at the entrance of or within the probe such that the gas sampled enters the trap directly. Each probe/sorbent trap assembly must be heated to a temperature sufficient to prevent liquid condensation in the sorbent trap(s). Auxiliary heating is required only where the stack temperature is too low to prevent condensation. Use a calibrated thermocouple to monitor the stack temperature. A single probe capable of operating the paired sorbent traps may be used. Alternatively, individual probe/sorbent trap assemblies may be used, provided that the individual sorbent traps are co-located to ensure representative Hg monitoring and are sufficiently separated to prevent aerodynamic interference.

(C) Moisture Removal Device. A robust moisture removal device or system, suitable for continuous duty (such as a Peltier cooler), must be used to remove water vapor from the gas stream prior to entering the dry gas meter.

(D) Vacuum Pump. Use a leak-tight, vacuum pump capable of operating within the candidate system's flow range.

(E) Dry Gas Meter. A dry gas meter must be used to determine total sample volume. The meter must be sufficiently accurate to measure the total sample volume within 2 percent, must be calibrated at the selected flow rate and conditions actually encountered during sampling, and must be equipped with a temperature sensor capable of measuring typical meter temperatures accurately to within 3oC for correcting final sample volume.

(F) Sample Flow Rate Meter and Controller. Use a flow rate indicator and controller for maintaining necessary sampling flow rates.

(G) Temperature Sensor. Same as Section 6.1.1.7 of Method 5 in appendix A–3 to 40 CFR part 60.

(H) Barometer. Same as Section 6.1.2 of Method 5 in appendix A–3 to 40 CFR part 60.

(I) Data Logger (Optional). Device for recording associated and necessary ancillary information (e.g., temperatures, pressures, flow, time, etc.).

(b) Gaseous Hg0 Sorbent Trap Spiking System. A known mass of gaseous Hg0 must be spiked onto section 3 of each sorbent trap prior to sampling. Any approach capable of quantitatively delivering known masses of Hg0 onto sorbent traps is acceptable. Several technologies or devices are available to meet this objective. Their practicality is a function of Hg mass spike levels. For low levels, NIST-certified or NIST-traceable gas generators or tanks may be suitable, but will likely require long preparation times. A more practical, alternative system, capable of delivering almost any mass required, makes use of NIST-certified or NIST-traceable Hg salt solutions (e.g., Hg(NO3)2). With this system, an aliquot of known volume and concentration is added to a reaction vessel containing a reducing agent (e.g., stannous chloride); the Hg salt solution is reduced to Hg0 and purged onto section 3 of the sorbent trap using an impinger sparging system.

(c) Sample Analysis Equipment. Any analytical system capable of quantitatively recovering and quantifying total gaseous Hg from sorbent media is acceptable provided that the analysis can meet the performance criteria in section (8) of this rule. Candidate recovery techniques include leaching, digestion, and thermal desorption. Candidate analytical techniques include ultraviolet atomic fluorescence (UV AF); ultraviolet atomic absorption (UV AA), with and without gold trapping; and in situ X-ray fluorescence (XRF) analysis.

(6) Reagents and Standards. Only NIST-certified or NIST-traceable calibration gas standards and reagents must be used for the tests and procedures required under this rule.

(7) Sample Collection and Transport.

(a) Pre-Test Procedures.

(A) Selection of Sampling Site. Sampling site information should be obtained in accordance with Method 1 in appendix A–1 to 40 CFR part 60. Identify a monitoring location representative of source Hg emissions. Locations shown to be free of stratification through measurement traverses for gases such as SO2 and NOX may be one such approach. An estimation of the expected stack Hg concentration is required to establish a target sample flow rate, total gas sample volume, and the mass of Hg0 to be spiked onto section 3 of each sorbent trap.

(B) Pre-Sampling Spiking of Sorbent Traps. Based on the estimated Hg concentration in the stack, the target sample rate and the target sampling duration, calculate the expected mass loading for section 1 of each sorbent trap (for an example calculation, see subsection (12)(a) of this rule). The pre-sampling spike to be added to section 3 of each sorbent trap must be within + 50 percent of the expected section 1 mass loading. Spike section 3 of each sorbent trap at this level, as described in subsection (5)(b) of this rule. For each sorbent trap, keep an official record of the mass of Hg0 added to section 3. This record must include, at a minimum, the ID number of the trap, the date and time of the spike, the name of the analyst performing the procedure, the mass of Hg0 added to section 3 of the trap (μg), and the supporting calculations. This record must be maintained in a format suitable for inspection and audit and must be made available to the regulatory agencies upon request.

(C) Pre-test Leak Check. Perform a leak check with the sorbent traps in place. Draw a vacuum in each sample train. Adjust the vacuum in the sample train to +15□ Hg. Using the dry gas meter, determine leak rate. The leakage rate must not exceed 4 percent of the target sampling rate. Once the leak check passes this criterion, carefully release the vacuum in the sample train then seal the sorbent trap inlet until the probe is ready for insertion into the stack or duct.

(D) Determination of Flue Gas Characteristics. Determine or measure the flue gas measurement environment characteristics (gas temperature, static pressure, gas velocity, stack moisture, etc.) in order to determine ancillary requirements such as probe heating requirements (if any), initial sample rate, proportional sampling conditions, moisture management, etc.

(b) Sample Collection.

(A) Remove the plug from the end of each sorbent trap and store each plug in a clean sorbent trap storage container. Remove the stack or duct port cap and insert the probe(s). Secure the probe(s) and ensure that no leakage occurs between the duct and environment.

(B) Record initial data including the sorbent trap ID, start time, starting dry gas meter readings, initial temperatures, setpoints, and any other appropriate information.

(C) Flow Rate Control. Set the initial sample flow rate at the target value from paragraph (7)(a)(A) of this rule. Record the initial dry gas meter reading, stack temperature, meter temperatures, etc. Then, for every operating hour during the sampling period, record the date and time, the sample flow rate, the gas meter reading, the stack temperature, the flow meter temperatures, temperatures of heated equipment such as the vacuum lines and the probes (if heated), and the sampling system vacuum readings. Also record the stack gas flow rate, as measured by the certified flow monitor, and the ratio of the stack gas flow rate to the sample flow rate. Adjust the sampling flow rate to maintain proportional sampling, i.e., keep the ratio of the stack gas flow rate to sample flow rate constant, to within + 25 percent of the reference ratio from the first hour of the data collection period (see section (11) of this rule). The sample flow rate through a sorbent trap monitoring system during any hour (or portion of an hour) in which the unit is not operating shall be zero.

(D) Stack Gas Moisture Determination. Determine stack gas moisture using a continuous moisture monitoring system, as described in 40 CFR 75.11(b). Alternatively, the owner or operator may use the appropriate fuel-specific moisture default value provided in 40 CFR 75.11, or a site specific moisture default value approved by petition under 40 CFR 75.66.

(E) Essential Operating Data. Obtain and record any essential operating data for the facility during the test period, e.g., the barometric pressure must be obtained for correcting sample volume to standard conditions. At the end of the data collection period, record the final dry gas meter reading and the final values of all other essential parameters.

(F) Post Test Leak Check. When sampling is completed, turn off the sample pump, remove the probe/sorbent trap from the port and carefully re-plug the end of each sorbent trap. Perform a leak check with the sorbent traps in place, at the maximum vacuum reached during the sampling period. Use the same general approach described in paragraph (7)(a)(C) of this rule. Record the leakage rate and vacuum. The leakage rate must not exceed 4 percent of the average sampling rate for the data collection period. Following the leak check, carefully release the vacuum in the sample train.

(G) Sample Recovery. Recover each sampled sorbent trap by removing it from the probe, sealing both ends. Wipe any deposited material from the outside of the sorbent trap. Place the sorbent trap into an appropriate sample storage container and store/preserve in appropriate manner.

(H) Sample Preservation, Storage, and Transport. While the performance criteria of this approach provide for verification of appropriate sample handling, it is still important that the user consider, determine, and plan for suitable sample preservation, storage, transport, and holding times for these measurements. Therefore, procedures in ASTM D6911–03 ''Standard Guide for Packaging and Shipping Environmental Samples for Laboratory Analysis'' must be followed for all samples.

(I) Sample Custody. Proper procedures and documentation for sample chain of custody are critical to ensuring data integrity. The chain of custody procedures in ASTM D4840–99 (reapproved 2004) ''Standard Guide for Sample Chain-of-Custody Procedures'' must be followed for all samples (including field samples and blanks).

(8) Quality Assurance and Quality Control. The owner and operator using a sorbent trap monitoring system must develop and implement a quality assurance/quality control (QA/QC) program. At a minimum, include in each QA/QC program a written plan that describes in detail (or that refers to separate documents containing) complete, step-by-step procedures and operations. Upon request from the Department, the owner or operator must make all procedures, maintenance records, and ancillary supporting documentation from the manufacturer (e.g., software coefficients and troubleshooting diagrams) available for review during an audit. Electronic storage of the information in the QA/QC plan is permissible, provided that the information can be made available in hardcopy upon request during an audit. Table 2 to this division summarizes the QA/QC performance criteria that are used to validate the Hg emissions data from sorbent trap monitoring systems, including the relative accuracy test audit (RATA) requirement (see section 6.5.7 of appendix A to 40 CFR part 75 and section 2.3 of appendix B to 40 CFR part 75, except that for sorbent trap monitoring systems, RATAs must be performed annually, i.e., once every four successive QA operating quarters). The RATA must meet the requirements in OAR 340-228-0621(3)(d)(C)(iii). Except as provided in OAR 340-228-0617(8) and as otherwise indicated in Table 2 to this division, failure to achieve these performance criteria will result in invalidation of Hg emissions data.

(9) Quality Assurance and Quality Control Plan Content. In addition to section 1 of Appendix B to 40 CFR part 75, the QA/QC plan must contain the following:

(a) Sorbent Trap Identification and Tracking. Include procedures for inscribing or otherwise permanently marking a unique identification number on each sorbent trap, for tracking purposes. Keep records of the ID of the monitoring system in which each sorbent trap is used, and the dates and hours of each Hg collection period.

(b) Monitoring System Integrity and Data Quality. Explain the procedures used to perform the leak checks when a sorbent trap is placed in service and removed from service. Also explain the other QA procedures used to ensure system integrity and data quality, including, but not limited to, dry gas meter calibrations, verification of moisture removal, and ensuring airtight pump operation. In addition, the QA plan must include the data acceptance and quality control criteria in section (8) of this rule.

(c) Hg Analysis. Explain the chain of custody employed in packing, transporting, and analyzing the sorbent traps (see paragraphs (7)(b)(H) and (I) of this rule). Keep records of all Hg analyses. The analyses must be performed in accordance with the procedures described in section (11) of this rule.

(d) Laboratory Certification. The QA Plan must include documentation that the laboratory performing the analyses on the carbon sorbent traps is certified by the International Organization for Standardization (ISO) to have a proficiency that meets the requirements of ISO 17025. Alternatively, if the laboratory performs the spike recovery study described in subsection (11)(c) of this rule and repeats that procedure annually, ISO certification is not required.

(10) Calibration and Standardization.

(a) Only NIST-certified and NIST-traceable calibration standards (i.e., calibration gases, solutions, etc.) must be used for the spiking and analytical procedures in this rule.

(b) Dry Gas Meter Calibration. Prior to its initial use, perform a full calibration of the metering system at three orifice settings to determine the average dry gas meter coefficient (Y), as described in section 10.3.1 of Method 5 in appendix A–3 to 40 CFR part 60. Thereafter, recalibrate the metering system quarterly at one intermediate orifice setting, as described in section 10.3.2 of Method 5 in appendix A–3 to 40 CFR part 60. If a quarterly recalibration shows that the value of Y has changed by more than 5 percent, repeat the full calibration of the metering system to determine a new value of Y.

(c) Thermocouples and Other Temperature Sensors. Use the procedures and criteria in section 10.3 of Method 2 in appendix A–1 to 40 CFR part 60 to calibrate in-stack temperature sensors and thermocouples. Dial thermometers must be calibrated against mercury-in-glass thermometers. Calibrations must be performed prior to initial use and at least quarterly thereafter. At each calibration point, the absolute temperature measured by the temperature sensor must agree to within + 1.5 percent of the temperature measured with the reference sensor, otherwise the sensor may not continue to be used.

(d) Barometer. Calibrate against a mercury barometer. Calibration must be performed prior to initial use and at least quarterly thereafter. At each calibration point, the absolute pressure measured by the barometer must agree to within + 10 mm Hg of the pressure measured by the mercury barometer, otherwise the barometer may not continue to be used.

(e) Other Sensors and Gauges. Calibrate all other sensors and gauges according to the procedures specified by the instrument manufacturer(s).

(f) Analytical System Calibration. See subsection (10)(a) of this rule.

(11) Analytical Procedures. The analysis of the Hg samples may be conducted using any instrument or technology capable of quantifying total Hg from the sorbent media and meeting the performance criteria in section (8) of this rule.

(a) Analyzer System Calibration. Perform a multipoint calibration of the analyzer at three or more upscale points over the desired quantitative range (multiple calibration ranges must be calibrated, if necessary). The field samples analyzed must fall within a calibrated, quantitative range and meet the necessary performance criteria. For samples that are suitable for aliquotting, a series of dilutions may be needed to ensure that the samples fall within a calibrated range. However, for sorbent media samples that are consumed during analysis (e.g., thermal desorption techniques), extra care must be taken to ensure that the analytical system is appropriately calibrated prior to sample analysis. The calibration curve range(s) should be determined based on the anticipated level of Hg mass on the sorbent media. Knowledge of estimated stack Hg concentrations and total sample volume may be required prior to analysis. The calibration curve for use with the various analytical techniques (e.g., UV AA, UV AF, and XRF) can be generated by directly introducing standard solutions into the analyzer or by spiking the standards onto the sorbent media and then introducing into the analyzer after preparing the sorbent/standard according to the particular analytical technique. For each calibration curve, the value of the square of the linear correlation coefficient, i.e., r2, must be ≥ 0.99, and the analyzer response must be within + 10 percent of reference value at each upscale calibration point. Calibrations must be performed on the day of the analysis, before analyzing any of the samples. Following calibration, an independently prepared standard (not from same calibration stock solution) must be analyzed. The measured value of the independently prepared standard must be within + 10 percent of the expected value.

(b) Sample Preparation. Carefully separate the three sections of each sorbent trap. Combine for analysis all materials associated with each section, i.e., any supporting substrate that the sample gas passes through prior to entering a media section (e.g., glass wool, polyurethane foam, etc.) must be analyzed with that segment.

(c) Spike Recovery Study. Before analyzing any field samples, the laboratory must demonstrate the ability to recover and quantify Hg from the sorbent media by performing the following spike recovery study for sorbent media traps spiked with elemental mercury. Using the procedures described in subsections (5)(b) and (11)(a) of this rule, spike the third section of nine sorbent traps with gaseous Hg0, i.e., three traps at each of three different mass loadings, representing the range of masses anticipated in the field samples. This will yield a 3 x 3 sample matrix. Prepare and analyze the third section of each spiked trap, using the techniques that will be used to prepare and analyze the field samples. The average recovery for each spike concentration must be between 85 and 115 percent. If multiple types of sorbent media are to be analyzed, a separate spike recovery study is required for each sorbent material. If multiple ranges are calibrated, a separate spike recovery study is required for each range.

(d) Field Sample Analyses. Analyze the sorbent trap samples following the same procedures that were used for conducting the spike recovery study. The three sections of the sorbent trap must be analyzed separately (i.e., section 1, then section 2, then section 3). Quantify the mass of total Hg for each section based on analytical system response and the calibration curve from subsection (10)(a) of this rule. Determine the spike recovery from sorbent trap section 3. Pre-sampling spike recoveries must be between 75 and 125 percent. To report final Hg mass, normalize the data for sections 1 and 2 based on the sample-specific spike recovery, and add the normalized masses together.

(12) Calculations and Data Analysis.

(a) Calculation of Pre-Sampling Spiking Level. Determine sorbent trap section 3 spiking level using estimates of the stack Hg concentration, the target sample flow rate, and the expected sample duration. First, calculate the expected Hg mass that will be collected in section 1 of the trap. The presampling spike must be within + 50 percent of this mass. Example calculation: For an estimated stack Hg concentration of 5 µg/m3, a target sample rate of 0.30 L/min, and a sample duration of 5 days:

(0.30 L/min) (1440 min/day) (5 days) (10-3 m3/liter) (5µg/m3) = 10.8 µg

A pre-sampling spike of 10.8 µg + 50 percent is, therefore, appropriate.

(b) Calculations for Flow-Proportional Sampling. For the first hour of the data collection period, determine the reference ratio of the stack gas volumetric flow rate to the sample flow rate, as follows:

Rref = K x Qref / Fref

Where:

Rref = Reference ratio of hourly stack gas flow rate to hourly sample flow rate

Qref = Average stack gas volumetric flow rate for first hour of collection period, adjusted for bias, if necessary according to section 7.6.5 of appendix A to 40 CFR part 75, (scfh)

Fref = Average sample flow rate for first hour of the collection period, in appropriate units (e.g., liters/min, cc/min, dscm/min)

K = Power of ten multiplier, to keep the value of Rref between 1 and 100. The appropriate K value will depend on the selected units of measure for the sample flow rate.

Then, for each subsequent hour of the data collection period, calculate ratio of the stack gas flow rate to the sample flow rate using the following equation:

Rh = K x Qh / Fh

Where:

Rh = Ratio of hourly stack gas flow rate to hourly sample flow rate

Qh = Average stack gas volumetric flow rate for the hour, adjusted for bias, if necessary, according to section 7.6.5 of appendix A to 40 CFR part 75, (scfh)

Fh = Average sample flow rate for the hour, in appropriate units (e.g., liters/min, cc/min, dscm/min)

K = Power of ten multiplier, to keep the value of Rh between 1 and 100. The appropriate K value will depend on the selected units of measure for the sample flow rate and the range of expected stack gas flow rates.

Maintain the value of Rh within + 25 percent of Rref throughout the data collection period.

(c) Calculation of Spike Recovery. Calculate the percent recovery of each section 3 spike, as follows:

%R = (M3/Ms) x 100

Where:

%R = Percentage recovery of the presampling spike

M3 = Mass of Hg recovered from section 3 of the sorbent trap, (µg)

Ms = Calculated Hg mass of the pre-sampling spike, from paragraph (7)(a)(B) of this rule, (µg)

(d) Calculation of Breakthrough. Calculate the percent breakthrough to the second section of the sorbent trap, as follows:

%B = (M2/M1) x 100

Where:

%B = Percent breakthrough

M2 = Mass of Hg recovered from section 2 of the sorbent trap, (µg)

M1 = Mass of Hg recovered from section 1 of the sorbent trap, (µg)

(e) Normalizing Measured Hg Mass for Section 3 Spike Recoveries. Based on the results of the spike recovery in subsection (12)(c) of this rule, normalize the Hg mass collected in sections 1 and 2 of the sorbent trap, as follows:

M* = ((M1+M2) x Ms) / M3

Where:

M* = Normalized total mass of Hg recovered from sections 1 and of the sorbent trap, (µg)

M1 = Mass of Hg recovered from section 1 of the sorbent trap, unadjusted, (µg)

M2 = Mass of Hg recovered from section 2 of the sorbent trap, unadjusted, (µg)

Ms = Calculated Hg mass of the pre-sampling spike, from paragraph (7)(a)(B) of this rule, (µg)

M3 = Mass of Hg recovered from section 3 of the sorbent trap, (µg)

(f) Calculation of Hg Concentration. Calculate the Hg concentration for each sorbent trap, using the following equation:

C = M* / Vt

Where:

C = Concentration of Hg for the collection period, (µg/dscm)

M* = Normalized total mass of Hg recovered from sections 1 and 2 of the sorbent trap, (µg)

Vt = Total volume of dry gas metered during the collection period, (dscm). For the purposes of this rule, standard temperature and pressure are defined as 20oC and 760 mm Hg, respectively.

(g) Calculation of Paired Trap Agreement. Calculate the relative deviation (RD) between the Hg concentrations measured with the paired sorbent traps as follows:

RD = (|Ca – Cb| / (Ca + Cb)) x 100

Where:

RD = Relative deviation between the Hg concentrations from traps ‘’a’’ and ‘’b’’ (percent)

Ca = Concentration of Hg for the collection period, for sorbent trap ‘’a’’ (µg/dscm)

Cb = Concentration of Hg for the collection period, for sorbent trap ‘’b’’ (µg/dscm)

(h) Calculation of Hg Mass Emissions. To calculate Hg mass emissions, follow the procedures in OAR 340-228-0619(1)(b). Use the average of the two Hg concentrations from the paired traps in the calculations, except as provided in OAR 340-228-0617(8) or in Table 2 to this division.

(13) Method Performance. These monitoring criteria and procedures have been applied to coal-fired utility boilers (including units with post-

combustion emission controls), having vapor-phase Hg concentrations ranging from 0.03 µg/dscm to 100 µg/dscm.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0629
Out of Control Periods and Adjustment for System Bias

(1) Whenever any monitoring system fails to meet the quality-assurance and quality-control requirements or data validation requirements of OAR 340-228-0623, data must be substituted using the applicable missing data procedures.

(2) Audit decertification. Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under OAR 340-228-0621 or the applicable provisions of 40 CFR part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department will issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this section, an audit must be either a field audit or an audit of any information submitted to the Department. By issuing the notice of disapproval, the Department revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system must not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator must follow the applicable initial certification or recertification procedures in OAR 340-228-0621 for each disapproved monitoring system.

(3) When the bias test indicates that a flow monitor, a Hg concentration monitoring system or a sorbent trap monitoring system is biased low (i.e., the arithmetic mean of the differences between the reference method value and the monitor or monitoring system measurements in a relative accuracy test audit exceed the bias statistic), the owner or operator must adjust the monitor or continuous emission monitoring system to eliminate the cause of bias such that it passes the bias test or calculate and use the bias adjustment factor given in Equations A-11 and A-12 of appendix A to 40 CFR part 75, to adjust the monitored data.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0631
Standard Missing Data Procedures for Hg CEMS

(1) Once 720 quality assured monitor operating hours of Hg concentration data have been obtained following initial certification, the owner or operator must provide substitute data for Hg concentration in accordance with the procedures in 40 CFR 75.33(b)(1) through (b)(4), except that the term “Hg concentration” shall apply rather than “SO2 concentration,” the term “Hg concentration monitoring system” shall apply rather than “SO2 pollutant concentration monitor,” the term “maximum potential Hg concentration,” as defined in 340-228-0602(25) shall apply, rather than “maximum potential SO2 concentration”, and the percent monitor data availability trigger conditions prescribed for Hg in Table 1 of this division shall apply rather than the trigger conditions prescribed for SO2.

(2) For a unit equipped with add-on Hg emission controls (e.g., carbon injection), the standard missing data procedures in section (1) of this rule may only be used for hours in which the Hg emission controls are documented to be operating properly, as described in OAR 340-228-0635(6). For any hour(s) in the missing data period for which this documentation is unavailable, the owner or operator must report, as applicable, the maximum potential Hg concentration, as defined in OAR 340-228-0602(25). In addition, under 40 CFR 75.64(c), the owner or operator must submit as part of each quarterly report, a certification statement, verifying the proper operation of the Hg emission controls for each missing data period in which the procedures in section (1) of this rule are applied.

(3) For units with add-on Hg controls, when the percent monitor data availability is less than 80.0 percent and is greater than or equal to 70.0 percent, and a missing data period occurs, consistent with 40 CFR 75.34(a)(3), for each missing data hour in which the Hg emission controls are documented to be operating properly, the owner or operator may report the maximum controlled Hg concentration recorded in the previous 720 quality-assured monitor operating hours. In addition, when the percent monitor data availability is less than 70.0 percent and a missing data period occurs, consistent with 40 CFR 75.34(a)(5), for each missing data hour in which the Hg emission controls are documented to be operating properly, the owner or operator may report the greater of the maximum expected Hg concentration (MEC) or 1.25 times the maximum controlled Hg concentration recorded in the previous 720 quality-assured monitor operating hours. The MEC must be determined in accordance with OAR 340-228-0602(24).

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0633
Missing Data Procedures for Sorbent Trap Monitoring Systems

(1) If a primary sorbent trap monitoring system has not been certified by the applicable compliance date specified under OAR 340-228-0609(2), and if the quality-assured Hg concentration data from a certified backup Hg monitoring system, reference method, or approved alternative monitoring system are unavailable, the owner or operator must report the maximum potential Hg concentration, as defined in OAR 340-228-0602(25), until the primary system is certified.

(2) For a certified sorbent trap system, a missing data period will occur in the following circumstances, unless quality-assured Hg concentration data from a certified backup Hg CEMS, sorbent trap system, reference method, or approved alternative monitoring system are available:

(a) A gas sample is not extracted from the stack during unit operation (e.g. during a monitoring system malfunction or when the system undergoes maintenance); or

(b) The results of the Hg analysis for the paired sorbent traps are missing or invalid (as determined using the quality assurance procedures in OAR 340-228-0627). The missing data period begins with the hour in which the paired sorbent traps for which the Hg analysis is missing or invalid were put into service. The missing data period ends at the first hour in which valid Hg concentration data are obtained with another pair of sorbent traps (i.e., the hour at which this pair of traps was placed in service), or with a certified backup Hg CEMS, reference method, or approved alternative monitoring system.

(3) Initial missing data procedures. Use the following missing data procedures until 720 hours of quality-assured Hg concentration data have been collected with the sorbent trap monitoring system(s), following initial certification. For each hour of the missing data period, the substitute data value for Hg concentration shall be the average Hg concentration from all valid sorbent trap analyses to date, including data from the initial certification test runs.

(4) Standard missing data procedures. Once 720 quality-assured hours of data have been obtained with the sorbent trap system(s), begin reporting the percent monitor data availability in accordance with 40 CFR 75.32 and switch from the initial missing data procedures in section (3) of this rule to the standard missing data procedures in OAR 340-228-0631.

(5) Notwithstanding the requirements of sections (3) and (4) of this rule, if the unit has add-on Hg emission controls, the owner or operator must report the maximum potential Hg concentration, as defined in 340-228-0602(25), for any hour(s) in the missing data period for which proper operation of the Hg emission controls is not documented according to OAR 340-228-0635(6).

(6) In cases where the owner or operator elects to use a primary Hg CEMS and a certified redundant (or non-redundant) backup sorbent trap monitoring system (or vice-versa), when both the primary and backup monitoring systems are out-of-service and quality-assured Hg concentration data from a temporary like-kind replacement analyzer, reference method, or approved alternative monitoring system are unavailable, the previous 720 quality-assured monitor operating hours reported in the quarterly report under OAR 340-228-0637(4) must be used for the required missing data lookback, irrespective of whether these data were recorded by the Hg CEMS, the sorbent trap system, a temporary like-kind replacement analyzer, a reference method, or an approved alternative monitoring system.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0635
Recordkeeping

(1) General recordkeeping provisions. The owner or operator of any coal-fired electric generating unit must maintain for each coal-fired electric generating unit and each non-affected unit under OAR 340-228-0615(2)(b)(B) a file of all measurements, data, reports, and other required information at the source in a form suitable for inspection for at least 5 years from the date of each record. Except for the certification data required in 40 CFR 75.57(a)(4) and the initial submission of the monitoring plan required in 40 CFR 75.57(a)(5), the data must be collected beginning with

the earlier of the date of provisional certification or the compliance deadline in OAR 340-228-0609(2). The certification data required in 40 CFR 75.57(a)(4) must be collected beginning with the date of the first certification test performed. The file must contain the following information:

(a) The information required in 40 CFR 75.57(a)(2), (a)(4), (a)(5), (a)(6), (b), (c)(2), (g) (if applicable), (h), and sections (4) or (5) of this rule (as applicable).

(b) For coal-fired electric generating units using Hg CEMS or sorbent trap monitoring systems, for each hour when the unit is operating, record the Hg mass emissions, calculated in accordance with OAR 340-228-0619.

(c) Heat input and Hg methodologies for the hour.

(d) Formulas from monitoring plan for total Hg mass emissions and heat input rate (if applicable); and

(e) Laboratory calibrations of the source sampling equipment. For sorbent trap monitoring systems, the laboratory analyses of all sorbent traps, and information documenting the results of all leak checks and other applicable quality control procedures.

(f) Unless otherwise provided, the owners and operators of the coal-fired electric generating unit must keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Department.

(A) All emissions monitoring information, in accordance with OAR 340-228-0609 through 0637.

(B) Copies of all reports, compliance certifications, and other submissions.

(2) Certification, quality assurance, and quality control record provisions. The owner or operator of a coal-fired electric generating unit must maintain the information required in 40 CFR 75.59, including the following:

(a) For each Hg monitor, the owner or operator must record the information in 40 CFR 75.59(a)(1)(i) through (xi) for all daily and 7-day calibration error tests, all daily system integrity checks (Hg monitors, only), and all off-line calibration demonstrations, including any follow-up tests after corrective action.

(b) For each Hg concentration monitor, the owner or operator must record the information in 40 CFR 75.59(a)(3)(i) through (x) for the initial and all subsequent linearity check(s) and 3-level system integrity checks (Hg monitors with converters, only), including any follow-up tests after corrective action.

(c) For each Hg concentration monitoring system or sorbent trap monitoring system, the owner or operator must record the information in 40 CFR 75.59(a)(5)(i) and (iii) through (vii) for the initial and all subsequent relative accuracy test audits. The owner or operator must also record individual test run data from the relative accuracy test audit for the Hg concentration monitoring system or sorbent trap monitoring system, including the information in 40 CFR 75.59(a)(5)(ii)(A) through (M).

(d) For each Hg pollutant concentration monitor, the owner or operator must record the information in 40 CFR 75.59(a)(6)(i) through (xi) for the cycle time test.

(e) For each relative accuracy test audit run using the Ontario Hydro Method to determine Hg concentration:

(A) Percent CO2 and O2 in the stack gas, dry basis;

(B) Moisture content of the stack gas (percent H2O);

(C) Average stack temperature (oF);

(D)) Dry gas volume metered (dscm);

(E) Percent isokinetic;

(F) Particle-bound Hg collected by the filter, blank, and probe rinse (*µ*g);

(G) Oxidized Hg collected by the KCl impingers (*µ*g);

(H) Elemental Hg collected in the HNO3/H2O2 impinger and in the KMnO4/H2SO4 impingers (*µ*g);

(I) Total Hg, including particle-bound Hg (*µ*g); and

(J) Total Hg, excluding particle-bound Hg (*µ*g).

(f) For each RATA run using Method 29 to determine Hg concentration:

(A) Percent CO2 and O2 in the stack gas, dry basis;

(B) Moisture content of the stack gas (percent H2O);

(C) Average stack gas temperature (°F);

(D) Dry gas volume metered (dscm);

(E) Percent isokinetic;

(F) Particulate Hg collected in the front half of the sampling train, corrected for the front-half blank value (*µ*g); and

(G) Total vapor phase Hg collected in the back half of the sampling train, corrected for the back-half blank value (*µ*g).

(g) When hardcopy relative accuracy test reports, certification reports, recertification reports, or semiannual or annual reports for Hg CEMS or sorbent trap monitoring systems are required or requested under 40 CFR 75.60(b)(6) or 75.63, the reports must include, at a minimum, the elements in 40 CFR 75.59(a)(9)(i) through (ix) (as applicable to the type(s) of test(s) performed). For sorbent trap monitoring systems, the report must include laboratory analyses of all sorbent traps, and information documenting the results of all leak checks and other applicable quality control procedures.

(h) Except as otherwise provided in subsection (6)(a) of this rule, for units with add-on Hg emission controls, the owner or operator must keep the records in 40 CFR 75.59(c)(1) through (2) on-site in the quality assurance/quality control plan.

(3) Monitoring plan recordkeeping provisions.

(a) General provisions. The owner or operator of a coal-fired electric generating unit must prepare and maintain a monitoring plan for each affected unit or group of units monitored at a common stack and each non coal-fired electric generating unit under OAR 340-228-0615(2)(b)(B). The monitoring plan must contain sufficient information on the continuous monitoring systems and the use of data derived from these systems to demonstrate that all the unit's Hg emissions are monitored and reported.

(b) Updates. Whenever the owner or operator makes a replacement, modification, or change in a certified continuous monitoring system or alternative monitoring system under 40 CFR part 75 subpart E, including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects information reported in the monitoring plan (e.g., a change to a serial number for a component of a monitoring system), then the owner or operator must update the monitoring plan.

(c) Contents of the monitoring plan. Each monitoring plan must contain the information in 40 CFR 75.53(g)(1) in electronic format and the information in 40 CFR 75.53(g)(2) in hardcopy format.

(4) Hg emission record provisions (CEMS). The owner or operator must record for each hour the information required by this section for each affected unit using Hg CEMS in combination with flow rate, and (in certain cases) moisture, and diluent gas monitors, to determine Hg mass emissions and (if applicable) unit heat input.

(a) For Hg concentration during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(A) Component-system identification code, as provided in 40 CFR 75.53;

(B) Date and hour;

(C) Hourly Hg concentration (µg/m3, rounded to the nearest tenth). For a particular pair of sorbent traps, this will be the flow-proportional average concentration for the data collection period;

(D) The bias-adjusted hourly average Hg concentration (µg/m3, rounded to the nearest tenth) if a bias adjustment factor is required, as provided in OAR 340-228-0629(3);

(E) Method of determination for hourly Hg concentration using Codes 1–55 in Table 3 to this division; and

(F) The percent monitor data availability (to the nearest tenth of a percent), calculated pursuant to 40 CFR 75.32.

(b) For flue gas moisture content during unit operation (if required), as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination (except where a default moisture value is used in accordance with 40 CFR 75.11(b) or approved under 40 CFR 75.66):

(A) Component-system identification code, as provided in 40 CFR 75.53;

(B) Date and hour;

(C) Hourly average moisture content of flue gas (percent, rounded to the nearest tenth). If the continuous moisture monitoring system consists of wet- and dry-basis oxygen analyzers, also record both the wet- and dry-basis oxygen hourly averages (in percent O2, rounded to the nearest tenth);

(D) Percent monitor data availability (recorded to the nearest tenth of a percent) for the moisture monitoring system, calculated pursuant to 40 CFR 75.32; and

(E) Method of determination for hourly average moisture percentage, using Codes 1–55 in Table 3 to this division.

(c) For diluent gas (O2 or CO2) concentration during unit operation (if required), as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(A) Component-system identification code, as provided in 40 CFR 75.53;

(B) Date and hour;

(C) Hourly average diluent gas (O2 or CO2) concentration (in percent, rounded to the nearest tenth);

(D) Method of determination code for diluent gas (O2 or CO2) concentration data using Codes 1–55, in Table 3 to this division; and

(E) The percent monitor data availability (to the nearest tenth of a percent) for the O2 or CO2 monitoring system (if a separate O2 or CO2 monitoring system is used for heat input determination), calculated pursuant to 40 CFR 75.32.

(d) For stack gas volumetric flow rate during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination, record the information required under paragraphs 40 CFR 75.57(c)(2)(i) through (c)(2)(vi).

(e) For Hg mass emissions during unit operation, as measured and reported from the certified primary monitoring system(s), certified redundant or nonredundant back-up monitoring system(s), or other approved method(s) of emissions determination:

(A) Date and hour;

(B) Hourly Hg mass emissions (pounds, rounded to three decimal places);

(C) Hourly Hg mass emissions (pounds, rounded to three decimal places), adjusted for bias if a bias adjustment factor is required, as provided in OAR 340-228-0629(3); and

(D) Identification code for emissions formula used to derive hourly Hg mass emissions from Hg concentration, flow rate and moisture data, as provided in 40 CFR 75.53.

(5) Hg emission record provisions (sorbent trap systems). For the sorbent traps used in sorbent trap monitoring systems to quantify Hg concentration (including sorbent traps used for relative accuracy testing), the owner or operator must record for each hour the information required by this section.

(a) For Hg concentration during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination:

(A) Component-system identification code, as provided in 40 CFR 75.53;

(B) The ID number of the monitoring system in which each sorbent trap was used to collect Hg;

(C) The unique identification number of each sorbent trap;

(D) The beginning and ending dates and hours of the data collection period for each sorbent trap;

(E) Hourly Hg concentration (μg/dscm, rounded to the nearest tenth). For a particular pair of sorbent traps, this will be the flow-proportional average concentration for the data collection period;

(F) The bias-adjusted hourly average Hg concentration (μg/dscm, rounded to the nearest tenth) if a bias adjustment factor is required, as provided in OAR 340-228-0629(3);

(G) Method of determination for hourly average Hg concentration using Codes 1–55 in Table 3 to this division; and

(H) Percent monitor data availability (recorded to the nearest tenth of a percent), calculated pursuant to 40 CFR 75.32.

(b) For flue gas moisture content during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination (except where a default moisture value is used in accordance with 40 CFR 75.11(b) or approved under 40 CFR 75.66), record the information required under paragraphs (4)(b)(A) through (E) of this rule.

(c) For diluent gas (O2 or CO2) concentration during unit operation (if required for heat input determination), record the information required under paragraphs (4)(c)(A) through (E) of this rule.

(d) For stack gas volumetric flow rate during unit operation, as measured and reported from each certified primary monitor, certified back-up monitor, or other approved method of emissions determination, record the information required under 40 CFR 75.57(c)(2)(i) through (c)(2)(vi).

(e) For Hg mass emissions during unit operation, as measured and reported from the certified primary monitoring system(s), certified redundant or nonredundant back-up monitoring system(s), or other approved method(s) of emissions determination, record the information required under subsection (4)(e) of this rule.

(f) Record the average flow rate of stack gas through each sorbent trap (in appropriate units, e.g., liters/min, cc/min, dscm/min).

(g) Record the dry gas meter reading (in dscm, rounded to the nearest hundredth), at the beginning and end of the collection period and at least once in each unit operating hour during the collection period.

(h) Calculate and record the ratio of the bias-adjusted stack gas flow rate to the sample flow rate, as described in OAR 340-228-0627(11)(b).

(i) Information documenting the results of the required leak checks;

(j) The analysis of the Hg collected by each sorbent trap; and

(k) Information documenting the results of the other applicable quality control procedures in OAR 340-228-0617, 0623, and 0627.

(6) General recordkeeping provisions for specific situations. Except as otherwise provided in 40 CFR 75.34(d), the owner or operator must record:

(a) Parametric data which demonstrate, for each hour of missing Hg emission data, the proper operation of the add-on emission controls, as described in the quality assurance/quality control program for the unit. The parametric data must be maintained on site and must be submitted, upon request, to the Department.

(b) A flag indicating, for each hour of missing Hg emission data, either that the add-on emission controls are operating properly, as evidenced by all parameters being within the ranges specified in the quality assurance/quality control program, or that the add-on emission controls are not operating properly.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-228-0637
Reporting

(1) General reporting provisions.

(a) The owner or operator of an affected unit must comply with all reporting requirements in this section.

(b) The owner or operator of an affected unit must submit the following for each affected unit or group of units monitored at a common stack and each non-affected unit under OAR 340-228-0615(2)(b)(B):

(A) Initial certification and recertification applications in accordance with OAR 340-228-0621;

(B) Monitoring plans in accordance with section (2) of this rule; and

(C) Quarterly reports in accordance with section (4) of this rule.

(c) Quality assurance RATA reports. If requested by the Department, the owner or operator of an affected unit must submit the quality assurance RATA report for each affected unit or group of units monitored at a common stack and each non-affected unit under OAR 340-228-0615(2)(b)(B) by the later of 45 days after completing a quality assurance RATA or 15 days of receiving the request. The owner or operator must report the hardcopy information required by 40 CFR 75.59(a)(9) and OAR 340-228-0635(2)(f) to the Department.

(d) Notifications. The owner or operator of an affected unit must submit written notice to the Department according to the provisions in 40 CFR 75.61 for each affected unit or group of units monitored at a common stack and each non-affected unit under OAR 340-228-0615(2)(b)(B).

(2) Monitoring plans. The owner or operator of a coal-fired electric generating unit must comply with the applicable requirements of subsections (2)(a) and (b) of this rule and 40 CFR 63.7521(b).

(a) The owner or operator of an affected unit must submit to the Department a complete, up-to-date monitoring plan file for each affected unit or group of units monitored at a common stack and each non-affected unit under OAR 340-228-0615(2)(b)(B), as follows: No later than 21 days prior to the commencement of initial certification testing; at the time of a certification or recertification application submission; and whenever an update of the monitoring plan is required, under 40 CFR 75.53. In addition the information in 40 CFR 75.53(e)(1), the plan must include the type(s) of emission controls for Hg installed or to be installed, including specifications of whether such controls are pre-combustion, post-combustion, or integral to the combustion process; control equipment code, installation date, and optimization date; control equipment retirement date (if applicable); primary/secondary controls indicator; and an indicator for whether the controls are an original installation.

(b) The owner or operator of an affected unit must submit all of the information required under 40 CFR 75.53, for each affected unit or group of units monitored at a common stack and each non-affected unit under OAR 340-228-0615(2)(b)(B), to the Department prior to initial certification. Thereafter, the owner or operator must submit information only if that portion of the monitoring plan is revised. The owner or operator must submit the required information as follows: no later than 21 days prior to the commencement of initial certification testing; with any certification or recertification application, if a monitoring plan change is associated with the recertification event; and within 30 days of any other event with which a monitoring plan change is associated, pursuant to 40 CFR 75.53(b).

(3) Certification applications. The owner or operator must submit an application to the Department within 45 days after completing all initial certification or recertification tests required under OAR 340-228-0621, including the information required under 40 CFR 75.63.

(4) Quarterly reports. The owner or operator must submit quarterly reports, as follows:

(a) Submission. Quarterly reports must be submitted, beginning with the calendar quarter containing the compliance date in OAR 340-228-0609(2). The owner or operator must report the data and information in this subsection and the applicable compliance certification information in subsection (4)(b) of this rule to the Department quarterly. Each report must be submitted to the Department within 30 days following the end of each calendar quarter. Each report must include the date of report generation and the following information for each affected unit or group of units monitored at a common stack.

(A) The facility information in 40 CFR 75.64(a)(3); and

(B) The information and hourly data required in OAR 340-228-0635(1) and (2), except for:

(i) Descriptions of adjustments, corrective action, and maintenance;

(ii) Other information such as field data sheets, lab analyses, quality control plan;

(iii) For units with add-on Hg emission controls, the parametric information in OAR 340-228-0635(6);

(iv) Information required by 40 CFR 75.57(h) concerning the causes of any missing data periods and the actions taken to cure such causes;

(v) Hardcopy monitoring plan information required by 40 CFR 75.53, OAR 340-228-0637(2), and hardcopy test data and results required by 40 CFR 75.59 and OAR 340-228-0635(2);

(vi) Records of flow polynomial equations and numerical values required by 40 CFR 75.59(a)(5)(vi);

(vii) Stratification test results required as part of RATAs;

(viii) Data and results of RATAs that are aborted or invalidated due to problems with the reference method or operational problems with the unit and data and results of linearity checks that are aborted or invalidated due to operational problems with the unit;

(ix) Supplementary RATA information required under 40 CFR 75.59(a)(7) and OAR 340-228-0635(2)(e), except that:

(I) The applicable data elements under 40 CFR 75.59(a)(7)(ii)(A) through (T) and under 40 CFR 75.59(a)(7)(iii)(A) through (M) must be reported for flow RATAs at circular or rectangular stacks (or ducts) in which angular compensation for pitch and/or yaw angles is used (i.e. Method 2F and 2G in appendixes A-1 and A-2 to 40 CFR part 60), with or without wall effects adjustments;

(II) The applicable data elements under 40 CFR 75.59(a)(7)(ii)(A) through (T) and under 40 CFR 75.59(a)(7)(iii)(A) through (M) must be reported for any flow RATA run at a circular stack in which Method 2 in appendices A–1 and A–2 to 40 CFR part 60 is used and a wall effects adjustment factor is determined by direct measurement;

(III) The data under 40 CFR 75.59(a)(7)(ii)(T) must be reported for all flow RATAs at circular stacks in which Method 2 in appendices A–1 and A–2 to 40 CFR part 60 is used and a default wall effects adjustment factor is applied; and

(IV) The data under 40 CFR 75.59(a)(7)(ix)(A) through (F) must be reported for all flow RATAs at rectangular stacks or ducts in which Method 2 in appendices A–1 and A–2 to 40 CFR part 60 is used and a wall effects adjustment factor is applied.

(x) For units using sorbent trap monitoring systems, the hourly dry gas meter readings taken between the initial and final meter readings for the data collection period;

(C) Pounds of Hg emitted during quarter and cumulative pounds of Hg emitted in the year-to-date (rounded to the nearest thousandth);

(E) Unit or stack operating hours for quarter, cumulative unit or stack operating hours for year-to-date; and

(F) Reporting period heat input (if applicable) and cumulative, year-to-date heat input.

(b) Compliance certification.

(A) The owner or operator must certify that the monitoring plan information in each quarterly report (i.e., component and system identification codes, formulas, etc.) represent current operating conditions for the affected unit(s)

(B) The owner or operator must submit and sign a compliance certification in support of each quarterly emissions monitoring report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. The certification must state that:

(i) The monitoring data submitted were recorded in accordance with the applicable requirements of OAR 340-228-0609 through 0637 and 40 CFR part 75, including the quality assurance procedures and specifications; and

(ii) With regard to a unit with add-on Hg emission controls, that for all hours where data are substituted in accordance with OAR 340-228-0631(2), the add-on emission controls were operating within the range of parameters listed in the quality assurance plan for the unit, and that the substitute values do not systematically underestimate Hg emissions.

(5) Reporting data prior to initial certification. If, by the applicable compliance date under OAR 340-228-0609(2), the owner or operator of a coal-fired electric generating unit has not successfully completed all required certification tests for any monitoring system(s), he or she must determine, record and report hourly data prior to initial certification using one of the following procedures, for the monitoring system(s) that are uncertified:

(a) For Hg concentration and flow monitoring systems, report the maximum potential Hg concentration of Hg as defined in OAR 340-228-0602(25) and the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to 40 CFR part 75; or

(b) For any unit, report data from the reference methods in OAR 340-228-0602(33) or in 40 CFR 75.22; or

(c) For any unit that is required to report heat input, report (as applicable) the maximum potential flow rate, as defined in section 2.1.4.1 of appendix A to 40 CFR part 75, the maximum potential CO2 concentration, as defined in section 2.1.3.1 of appendix A to 40 CFR part 75, the minimum potential O2 concentration, as defined in section 2.1.3.2 of appendix A to 40 CFR part 75, and the minimum potential percent moisture, as defined in section 2.1.5 of appendix A to 40 CFR part 75.

Stat. Auth.: ORS 468.020 & 468A.310
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0300
Applicability

(1) Applicability: OAR 340-230-0310 through 340-230-0359 apply to each municipal waste combustor unit with a combustion capacity greater than 250 tons per day of municipal solid waste for which construction was commenced on or before September 20, 1994.

(a) MWC greater than 250 tons per day that commenced construction after September 20, 1989 and on or before September 20, 1994 are also subject to **40 CFR Part 60 Subpart Ea** as adopted under OAR 340-238-0060.

(b) MWC subject to OAR 340-230-0300 through 340-230-0350 are not subject to the incinerator rules in OAR 340-230-0100 through 340-230-0150.

(2) Exemptions:

(a) Any municipal waste combustion unit that is capable of combusting more than 250 tons per day of municipal solid waste and is subject to a federally enforceable permit limiting the maximum amount of municipal solid waste that may be combusted in the unit to less than or equal to 11 tons per day is not subject to this rule if the owner or operator:

(A) Notifies the Department of an exemption claim;

(B) Provides a copy of the federally enforceable permit that limits the firing of municipal solid waste to less than 11 tons per day; and

(C) Keeps records of the amount of municipal solid waste fired on a daily basis.

(b) Physical or operational changes made to an existing municipal waste combustor unit primarily for the purpose of complying with emission limits under these rules are not considered in determining whether the unit is a modified or reconstructed facility under 40 CFR 60, Subparts Ea or Eb.

(c) A qualifying small power production facility, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)), that burns homogeneous waste (such as automotive tires or used oil, but not including refuse-derived fuel) for the production of electric energy is not subject to these rules if the owner or operator of the facility notifies the Department of this exemption and provides data documenting that the facility qualifies for this exemption.

(d) A qualifying cogeneration facility, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), that burns homogeneous waste (such as automotive tires or used oil, but not including refuse-derived fuel) for the production of electric energy and steam or forms of useful energy (such as heat) that are used for industrial, commercial, heating, or cooling purposes, is not subject to these rules if the owner or operator of the facility notifies the Department of this exemption and provides data documenting that the facility qualifies for this exemption.

(e) Any unit combusting a single-item waste stream of tires is not subject to this rule if the owner or operator of the unit:

(A) Notifies the Department of an exemption claim; and

(B) Provides data documenting that the unit qualifies for this exemption.

(f) Any unit required to have a permit under section 3005 of the Solid Waste Disposal Act is not subject to these rules.

(g) Any materials recovery facility (including primary or secondary smelters) that combusts waste for the primary purpose of recovering metals is not subject to these rules.

(h) Any cofired combustor, as defined in 40 CFR 60.51b, that meets the capacity specifications in section (1) of this rule is not subject to these rules if the owner or operator of the cofired combustor:

(A) Notifies the Department of an exemption claim;

(B) Provides a copy of the federally enforceable permit (specified in the definition of cofired combustor); and

(C) Keeps a record on a calendar quarter basis of the weight of municipal solid waste combusted at the cofired combustor and the weight of all other fuels combusted at the cofired combustor.

(i) Pyrolysis/combustion units that are an integrated part of a plastics/rubber recycling unit (as defined in 40 CFR 60.51b) are not subject to this rule if the owner or operator of the plastics/rubber recycling unit keeps records of:

(A) The weight of plastics, rubber, and/or rubber tires processed on a calendar quarter basis;

(B) The weight of chemical plant feedstocks and petroleum refinery feedstocks produced and marketed on a calendar quarter basis; and

(C) The name and address of the purchaser of the feedstocks. The combustion of gasoline, diesel fuel, jet fuel, fuel oils, residual oil, refinery gas, petroleum coke, liquified petroleum gas, propane, or butane produced by chemical plants or petroleum refineries that use feedstocks produced by plastics/rubber recycling units are not subject to these rules.

(j) Air curtain incinerators that meet the capacity specifications in subsection (a) of this section, and that combust a fuel stream composed of 100 percent yard waste are exempt from all provisions of this subpart except the opacity standard under OAR 340-230-0310, the testing procedures under OAR 340-230-0340, and the reporting and recordkeeping provisions under OAR 340-230-0350.

(k) Air curtain incinerators that meet the capacity specifications in subsection (a) of this section and that combust municipal solid waste other than yard waste are subject to all provisions of this subpart.

(l) Cement kilns firing municipal solid waste are not subject to this subpart.

(m) Any affected facility meeting the applicability requirements under this rule is not subject to **40 CFR part 60 subpart E**.

Stat. Auth.: ORS 468.020
Stats.Implemented: ORS 468A.025
Hist.: DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0950; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0310
Emissions Limitations

No person may cause, suffer, allow, or permit the operation of any affected municipal waste combustor unit in a manner that violates the following emission limits and requirements:

(1) Before April 28, 2009, particulate matter emissions from each unit must not exceed 27 milligrams per dry standard cubic meter (0.012 grains per dry standard cubic foot) corrected to 7 percent oxygen. On and after April 28, 2009, particulate matter emissions from each unit must not exceed 25 milligrams per dry standard cubic meter (0.011 grains per dry standard cubic foot) corrected to 7 percent oxygen.

(2) Opacity. The emission limit for opacity exhibited by the gases discharged to the atmosphere from a designated facility must not exceed 10 percent opacity as a 6-minute average.

(3) Municipal Waste Combustor Metals:

(a) Before April 28, 2009, cadmium emissions from each unit must not exceed 0.040 milligrams per dry standard cubic meter (0.000018 gr/dscf) corrected to 7 percent oxygen. On and after April 28, 2009, cadmium emissions from each unit must not exceed 0.020 milligrams per dry standard cubic meter (0.000008 gr/dscf) corrected to 7 percent oxygen.

(b) Before April 28, 2009, lead emissions from each unit must not exceed 0.44 milligrams per dry standard cubic meter (0.00020 gr/dscf) corrected to 7 percent oxygen. On and after April 28, 2009, lead emissions from each unit must not exceed 0.20 milligrams per dry standard cubic meter (0.00009 gr/dscf) corrected to 7 percent oxygen.

(c) Before April 28, 2009, mercury emissions from each unit must not exceed 0.080 milligrams per dry standard cubic meter (0.000035 gr/dscf) or 15 percent of the potential mercury emission concentration (an 85 percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent. On and after April 28, 2009, mercury emissions from each unit must not exceed 0.050 milligrams per dry standard cubic meter (0.000022 gr/dscf) or 15 percent of the potential mercury emission concentration (an 85-percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.

(4) Sulfur dioxide (SO2) emissions from each unit must not exceed 29 parts per million by volume or 25 percent of the potential sulfur dioxide emission concentration (75-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent. Compliance with this emission limit is based on a 24-hour daily geometric mean.

(5) Hydrogen chloride (HCl) emissions from each unit must not exceed 29 parts per million by volume or 5 percent of the potential hydrogen chloride emission concentration (95-percent reduction by weight or volume), corrected to 7 percent oxygen (dry basis), whichever is less stringent.

(6) The dioxin/furan emissions from each unit must not exceed:

(a) Before April 28, 2009, 60 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, for a municipal waste combustor unit that employs an electrostatic precipitator-based emission control system;

(b) On and after April 28, 2009, 35 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, for a municipal waste combustor unit that employs an electrostatic precipitator-based emission control system;

(c) Before April 28, 2009, 30 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, for a municipal waste combustor unit that does not employ an electrostatic precipitator-based emission control system. On and after April 28, 2009, 15 nanograms per dry standard cubic meter (total mass), corrected to 7 percent oxygen, for a municipal waste combustor unit that does not employ an electrostatic precipitator-based emission control system.

(7) Emissions of nitrogen oxides from each unit must not exceed 205 parts per million by volume on a dry basis corrected to 7 percent oxygen.

(8) Fugitive Emissions:

(a) No owner or operator may cause or allow visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 observations, except as provided in subsections (b) and (c) of this section.

(b) The emission limit specified in subsection (a) of this section does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in subsection (a) of this section does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

(c) The provisions specified in subsection (a) of this section do not apply during maintenance and repair of ash conveying systems.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0960; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0320
Operating Practices

(1) Emissions of carbon monoxide from each unit must not exceed 100 parts per million by volume on a dry basis corrected to 7 percent oxygen as a 4-hour block arithmetic average.

(2) No owner or operator of an affected facility may cause such facility to operate at a load level greater than 110 percent of the maximum demonstrated municipal waste combustor unit load as defined in **40 CFR 60.51b** except as specified in subsections (2)(a) and (b) of this rule. The averaging time is a 4-hour block arithmetic average as specified under OAR 340-230-0340(9).

(a) During the annual dioxin/furan or mercury performance test and the 2 weeks preceding the annual dioxin/furan or mercury performance test, no municipal waste combustor unit load limit is applicable if the provisions of subsection (2)(b) of this rule are met.

(b) The municipal waste combustor unit load limit may be waived in writing by the Administrator for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions. The municipal waste combustor unit load limit continues to apply, and remains enforceable, until and unless the Administrator grants the waiver.

(3) No owner or operator of an affected facility may cause or allow such facility to operate at a temperature, measured at the particulate matter control device inlet, exceeding 17°C above the maximum demonstrated particulate matter control device temperature as defined in 40 CFR 60.51b, except as specified in subsections (3)(a) and (b) of this rule. The averaging time must be a 4-hour block arithmetic average as specified under OAR 340-230-0340(9). The requirements specified in this paragraph apply to each particulate matter control device utilized at the affected facility.

(a) During the annual dioxin/furan or mercury performance test and the 2 weeks preceding the annual dioxin/furan or mercury performance test, no particulate matter control device temperature limitations are applicable if the provisions of subsection (3)(b) of this rule are met.

(b) The particulate matter control device temperature limits may be waived in writing by the Administrator for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions. The temperature limits continues to apply, and remains enforceable, until and unless the Administrator grants the waiver.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0970; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0330
Operator Training and Certification

(1) Each chief facility operator and shift supervisor must have completed full certification with either the American Society of Mechanical Engineers (ASME) (QRO-1-1994 - see 40 CFR 60.17) or other State approved certification program.

(2) If a chief facility operator or shift supervisor is not fully certified in accordance with section (1) of this rule, the chief facility operator and shift supervisor must obtain and maintain a current provisional operator certification from either the ASME (QRO-1-1994 - see 40 CFR 60.17) or other State approved certification and must have scheduled a full certification exam with either the ASME (QRO-1-1994) or other State approved certification program.

(3) No owner or operator of an affected facility may allow the facility to be operated at any time unless one of the following persons is on duty and at the affected facility: A fully certified chief facility operator, a provisionally certified chief facility operator who is scheduled to take the full certification exam, a fully certified shift supervisor, or a provisionally certified shift supervisor who is scheduled to take the full certification exam.

(a) If both the certified chief operator and certified shift supervisor are unavailable, a provisionally certified control room operator on site at the affected facility may fulfill the certified operator requirement. Depending on the length of time that a certified chief operator and certified shift supervisor are away, the owner or operator of the affected facility must meet one of the three criteria:

(A) When the certified chief facility operator and certified shift supervisor are both off site for 12 hours or less, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor.

(B) When the certified chief facility operator and certified shift supervisor are off site for more than 12 hours, but for two weeks or less, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor without notice or approval. However, the owner or operator of the affected facility must record the period when the certified chief facility operator and certified shift supervisor are off site and include that information in the annual report as specified under OAR 340-230-0350(3)(e).

(C) When the certified chief facility operator and certified shift supervisor are off site for more than two weeks, and no other certified operator is on site, the provisionally certified control room operator may perform the duties of the certified chief facility operator or certified shift supervisor without approval. However, the owner or operator of the affected facility must take two actions:

(i) Notify the in writing. In the notice, state what caused the absence and what actions are being taken by the owner or operator of the facility to ensure that a certified chief facility operator or certified shift supervisor is on site as expeditiously as practicable.

(ii) Submit a status report and corrective action summary to the every four weeks following the initial notification. If the Department provides notice that the status report or corrective action summary is disapproved, the municipal waste combustion unit may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that the Department withdraws the disapproval, municipal waste combustion unit operation may continue.

(b) A provisionally certified operator who is newly promoted or recently transferred to a shift supervisor position or a chief facility operator position at the municipal waste combustion unit may perform the duties of the certified chief facility operator or certified shift supervisor without notice to, or approval for up to six months before taking the ASME QRO certification exam.

(4) The owner or operator of an affected facility must develop and update on a yearly basis a site-specific operating manual that, at a minimum, addresses the elements of municipal waste combustor unit operation specified in subsections (4)(a) through (k) of this rule:

(a) A summary of the applicable standards under OAR 340-230-0310 through 340-230-0335;

(b) A description of basic combustion theory applicable to a municipal waste combustor unit;

(c) Procedures for receiving, handling, and feeding municipal solid waste;

(d) Municipal waste combustor unit startup, shutdown, and malfunction procedures;

(e) Procedures for maintaining proper combustion air supply levels;

(f) Procedures for operating the municipal waste combustor unit within the standards established under OAR 340-230-0310 through 340-230-0335;

(g) Procedures for responding to periodic upset or off-specification conditions;

(h) Procedures for minimizing particulate matter carryover;

(i) Procedures for handling ash;

(j) Procedures for monitoring municipal waste combustor unit emissions; and

(k) Reporting and recordkeeping procedures.

(5) The owner or operator of an affected facility must establish a training program to review the operating manual according to the schedule specified in subsections (5)(a) and (b) of this rule with each person who has responsibilities affecting the operation of an affected facility including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

(a) Each person specified in section (5) of this rule must undergo initial training no later than the date specified in paragraph (5)(a)(A) or (B) of this rule, whichever is later.

(A) The date before the day the person assumes responsibilities affecting municipal waste combustor unit operation; or

(B) June 19, 1998.

(b) Annually, following the initial review required by subsection (5)(a) of this rule.

(6) The operating manual required by section (4) of this rule must be kept in a readily accessible location for all persons required to undergo training under section (5) of this rule. The operating manual and records of training must be available for inspection by the EPA or the Department upon request.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0980; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0335
Standards for Municipal Waste Combustor Fugitive Ash Emissions

(1) No owner or operator of an affected facility shall cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by EPA Reference Method 22 observations as specified in OAR 340-230-0340(11), except as provided in sections (2) and (3) of this rule.

(2) The emission limit specified in section (1) of this rule does not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in section (1) of this rule does cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

(3) The provisions specified in section (1) of this rule do not apply during maintenance and repair of ash conveying systems.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0340
Monitoring and Testing

(1) The standards under OAR 340-230-0300 through 0359 apply at all times except during periods of startup, shutdown, and malfunction. Duration of startup, shutdown, or malfunction periods are limited to 3 hours per occurrence, except as provided in subsection (1)(c) of this rule. During periods of startup, shutdown, or malfunction, monitoring data must be dismissed or excluded from compliance calculations, but must be recorded and reported in accordance with the provisions of OAR 340-230-0350(1)(f).

(a) The startup period commences when the affected facility begins the continuous burning of municipal solid waste and does not include any warmup period when the affected facility is combusting fossil fuel or other nonmunicipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

(b) Continuous burning is the continuous, semicontinuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.

(c) For purposes of compliance with the carbon monoxide emissions limit in OAR 340-230-320(1), if a loss of boiler water level control (e.g., boiler waterwall tube failure) or a loss of combustion air control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to 15 hours per occurrence. During such periods of malfunction, monitoring data must be dismissed or excluded from compliance calculations, but must be recorded and reported in accordance with the provisions of OAR 340-230-0350(1)(f).

(2) The owner or operator of an affected facility must install, calibrate, maintain, and operate a continuous emission monitoring system for measuring the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions, or particulate matter (if the owner or operator elects to continuously monitor emissions under section (13) of this rule) are monitored and record the output of the system and must comply with the test procedures and test methods specified in subsections (2)(a) through (g) of this rule.

(a) The span value of the oxygen (or carbon dioxide) monitor must be 25 percent oxygen (or 20 percent carbon dioxide).

(b) The monitor must be installed, evaluated, and operated in accordance with 40 CFR 60.13.

(c) The monitor must conform to Performance Specification 3 in appendix B of 40 CFR 60 except for section 2.3 (relative accuracy requirement).

(d) The quality assurance procedures of Appendix F of 40 CFR 60 except for section 5.1.1 (relative accuracy test audit) shall apply to the monitor.

(e) If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the following procedures and methods specified in paragraphs (2)(e)(A) through (D) of this rule. This relationship may be reestablished during subsequent performance compliance tests.

(A) The fuel factor equation in Method 3B must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. EPA Reference Method 3, 3A, 3B, or as an alternative ASME PTC-19-10-1981-Part 10, as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

(B) Samples must be taken for at least 30 minutes in each hour.

(C) Each sample must represent a 1-hour average.

(D) A minimum of three runs must be performed.

(f) The relationship between carbon dioxide and oxygen concentrations that is established in accordance with subsection (2)(e) of this rule must be submitted to the Department as part of the annual performance test report if the relationship is reestablished during the annual performance test.

(g) During a loss of boiler water level control or loss of combustion air control malfunction period as specified in subsection (1)(c) of this rule, a diluent cap of 14 percent for oxygen or 5 percent for carbon dioxide may be used in the emissions calculations for sulfur dioxide and nitrogen oxides.

(3) Except as provided in subsection (3)(i) of this rule, the procedures and test methods specified in subsections (3)(a) through (j) of this rule must be used to determine compliance with the emission limits for particulate matter and opacity under OAR 340-230-0310(1) and (2).

(a) EPA Reference Method 1 must be used to select sampling site and number of traverse points.

(b) EPA Reference Method 3, 3A or 3B, or as an alternative ASME PTC-19-10-1981-Part 10, as applicable, must be used for gas analysis.

(c) EPA Reference Method 5 must be used for determining compliance with the particulate matter emission limit. The minimum sample volume must be 1.7 cubic meters (60 cubic feet). The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160°C (320°F). An oxygen or carbon dioxide measurement must be obtained simultaneously with each EPA Reference Method 5 run.

(d) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(e) As specified under 40 CFR 60.8, all performance tests must consist of at least three test runs. The average of the particulate matter emission concentrations from the three test runs is used to determine compliance.

(f) In accordance with subsections (3)(g) and (j) of this rule, EPA Reference Method 9 must be used for determining compliance with the opacity limit except as provided under 40 CFR 60.11(e).

(g) The owner or operator of an affected facility must install, calibrate, maintain, and operate a continuous opacity monitoring system for measuring opacity and must follow the methods and procedures specified in paragraphs (3)(g)(A) through (C) of this rule.

(A) The output of the continuous opacity monitoring system must be recorded on a 6-minute average basis.

(B) The continuous opacity monitoring system must be installed, evaluated, and operated in accordance with 40 CFR 60.13.

(C) The continuous opacity monitoring system must conform to Performance Specification 1 in appendix B of 40 CFR Part 60.

(h) The owner or operator of an affected facility must conduct a performance test for particulate matter on a calendar year basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test; and must complete five performance tests in each 5-year calendar period).

(i) In place of particulate matter testing with EPA Reference Method 5, an owner or operator may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor particulate matter emissions instead of conducting performance testing using EPA Reference Method 5 must install, calibrate, maintain, and operate a continuous emission monitoring system and must comply with the requirements specified in paragraphs (3)(i)(A) through (N) of this rule. The owner or operator who elects to continuously monitor particulate matter emissions instead of conducting performance testing using EPA Reference Method 5 is not required to complete performance testing for particulate matter as specified in subsection (3)(h) of this rule and is not required to continuously monitor opacity as specified in subsection (3)(g) of this rule.

(A) Notify the Administrator and the Department one month before starting use of the system.

(B) Notify the Administrator and the Department one month before stopping use of the system.

(C) The monitor must be installed, evaluated, and operated in accordance with 40 CFR 60.13.

(D) The initial performance evaluation must be completed no later than 180 days of notification to the Administrator and the Department of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 performance tests, whichever is later.

(E) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(F) The owner or operator of an affected facility must conduct an initial performance test for particulate matter emissions as required under 40 CFR 60.8. Compliance with the particulate matter emission limit must be determined by using the continuous emission monitoring system specified in subsection (3)(i) of this rule to measure particulate matter and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19, section 12.4.1.

(G) Compliance with the particulate matter emission limit must be determined based on the 24-hour daily (block) average of the hourly arithconcentration or a 24-hour daily geometric average percent reduction using EPA reference Method 19, sections 4.3 and 5.4, as applicable.

(e) The owner or operator of an affected facility must install, evaluate, calibrate, maintain, and operate a continuous emission monitoring system for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system in accordance with 40 CFR 60.13.

(f) Compliance with the sulfur dioxide emission limit must be determined based on the 24-hour daily geometric average of the hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data if compliance is based on an emission concentration, or continuous emission monitoring system inlet and outlet data if compliance is based on a percent reduction.

(g) At a minimum, valid continuous monitoring system hourly averages must be obtained as specified in paragraphs (5)(g)(A) and (B) of this rule for 90 percent of the operating hours per calendar quarter and 95 percent of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

(A) At least two data points per hour must be used to calculate each 1-hour arithmetic average.

(B) Each sulfur dioxide 1-hour arithmetic average must be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(h) The 1-hour arithmetic averages required under subsection (5)(f) of this rule must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 24-hour daily geometric average emission concentrations and daily geometric average emission percent reductions. The 1-hour arithmetic averages must be calculated using the data points required under 40 CFR 60.13(e)(2).

(i) All valid continuous emission monitoring system data must be used in calculating average emission concentrations and percent reductions even if the minimum continuous emission monitoring system data requirements of subsection (5)(g) of this rule are not met.

(j) The continuous emission monitoring system must be operated according to Performance Specification 2 in appendix B of 40 CFR 60. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide continuous emission monitoring systems should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the continuous emission monitoring systems, whichever is greater.

(A) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 in appendix B of 40 CFR 60, sulfur dioxide and oxygen (or carbon dioxide) must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in subparagraphs (5)(j)(A)(i) and (ii) of this rule.

(i) For sulfur dioxide, EPA Reference Method 6, 6A, or 6C, or as an alternative ASME PTC-19-10-1981-Part 10, must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, or as an alternative ASME PTC-19-10-1981-Part 10, must be used.

(B) The span value of the continuous emissions monitoring system at the inlet to the sulfur dioxide control device must be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit. The span value of the continuous emission monitoring system at the outlet of the sulfur dioxide control device must be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit.

(k) Quarterly accuracy determinations and daily calibration tests must be performed in accordance with Procedure 1 in Appendix F of 40 CFR 60.

(l) When sulfur dioxide emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and/or zero and span adjustments, emissions data must be obtained by using other monitoring systems as approved by the Department or EPA Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 90 percent of the hours per calendar quarter and 95 percent of the hours per calendar year that the affected facility is operated and combusting municipal solid waste.

(6) The procedures and test methods specified in subsections (6)(a) through (h) if this rule must be used for determining compliance with the hydrogen chloride emission limit under OAR 340-230-0310(5).

(a) EPA Reference Method 26 or 26A, as applicable, must be used to determine the hydrogen chloride emission concentration. The minimum sampling time for must be 1 hour.

(b) An oxygen (or carbon dioxide) measurement must be obtained simultaneously with each test run for hydrogen chloride required by subsection (6)(a) of this rule.

(c) The percent reduction in potential hydrogen chloride emissions (% PHCl) is computed using equation 2: [Equation not included. See ED. NOTE.]

(d) The owner or operator of an affected facility may request that compliance with the hydrogen chloride emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(e) As specified under 40 CFR 60.8, all performance tests must consist of three test runs. The average of the hydrogen chloride emission concentrations from the three test runs is used to determine compliance.

(f) The owner or operator of an affected facility must conduct a performance test for hydrogen chloride emissions on a calendar year basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test; and must complete five performance tests in each 5-year calendar period).

(g) In place of hydrogen chloride testing with EPA Reference Method 26 or 26A, an owner or operator may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring hydrogen chloride emissions discharged to the atmosphere and record the output of the system according to the provisions of sections (13) and (14) of this rule.

(7) The procedures and test methods specified in subsections (7)(a) through (h) of this rule must be used to determine compliance with the limits for dioxin/furan emissions under OAR 340-230-0310(6).

(a) EPA Reference Method 1 must be used for determining the location and number of sampling points.

(b) EPA Reference Method 3, 3A, or 3B, or as an alternative ASME PTC-19-10-1981-Part 10, as applicable, must be used for flue gas analysis.

(c) EPA Reference Method 23 must be used for determining the dioxin/furan emission concentration.

(A) The minimum sample time must be 4 hours per test run.

(B) An oxygen (or carbon dioxide) measurement must be obtained simultaneously with each EPA Reference Method 23 test run for dioxins/furans.

(d) The owner or operator of an affected facility must conduct performance tests for dioxin/furan emissions in accordance with subsection (7)(c) of this rule, according to one of the schedules specified in paragraphs (7)(d)(A) through (C) of this rule.

(A) Performance tests must be conducted on a calendar year basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test; and must complete five performance tests in each 5-year calendar period).

(B) For the purpose of evaluating system performance to establish new operating parameter levels, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions, the owner or operator of an affected facility that qualifies for the performance testing schedule specified in paragraph (7)(d)(C) of this rule, may test one unit for dioxin/furan and apply the dioxin/furan operating parameters to similarly designed and equipped units on site by meeting the requirements specified in subparagraphs (7)(d)(B)(i) through (iv) of this rule.

(i) Follow the testing schedule established in paragraph (7)(d)(C) of this rule. For example, each year a different affected facility at the municipal waste combustor plant must be tested, and the affected facilities at the plant must be tested in sequence (e.g., unit 1, unit 2, unit 3, as applicable).

(ii) Where such units use carbon to meet the applicable dioxin/furan emission limit, upon meeting the requirements in paragraph (7)(d)(C) of this rule for one affected facility, the owner or operator may elect to apply the average carbon mass feed rate and associated carbon injection system operating parameter levels for dioxin/furan as established in section (13) of this rule to similarly designed and equipped units on site.

(iii) Upon testing each subsequent unit in accordance with the testing schedule established in paragraph (7)(d)(C) of this rule, the dioxin/furan and mercury emissions of the subsequent unit must not exceed the dioxin/furan and mercury emissions measured in the most recent test of that unit prior to the revised operating parameter levels.

(iv) The owner or operator of an affected facility that selects to follow the performance testing schedule specified in paragraph (7)(d)(C) of this rule and apply the carbon injection system operating parameters to similarly designed and equipped units on site must follow the procedures specified in OAR 340-230-0350(3)(d) for reporting.

(C) Where all performance tests over a 2-year period indicate that dioxin/furan emissions are less than or equal to 7 nanograms per dry standard cubic meter (total mass) for all affected facilities located within a municipal waste combustor plant, the owner or operator of the municipal waste combustor plant may elect to conduct annual performance tests for one affected facility (i.e., unit) per year at the municipal waste combustor plant. At a minimum, a performance test for dioxin/furan emissions must be conducted on a calendar year basis (no less than 9 calendar months and no more than 15 months following the previous performance test; and must complete five performance tests in each 5-year calendar period) for one affected facility at the municipal waste combustor plant. Each year a different affected facility at the municipal waste combustor plant must be tested, and the affected facilities at the plant must be tested in sequence (e.g., unit 1, unit 2, unit 3, as applicable). If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to 7 nanograms per dry standard cubic meter (total mass), the owner or operator may continue conducting a performance test on only one affected facility per year. If any annual performance test indicates either a dioxin/furan emission level greater than 7 nanograms per dry standard cubic meter (total mass), performance tests thereafter must be conducted annually on all affected facilities at the plant until and unless all annual performance tests for all affected facilities at the plant over a 2-year period indicate a dioxin/furan emission level less than or equal to 7 nanograms per dry standard cubic meter (total mass).

(e) The owner or operator of an affected facility that selects to follow the performance testing schedule specified in paragraph (7)(d)(C) of this rule must follow the procedures specified in OAR 340-230-0350(3)(d) for reporting the selection of this schedule.

(f) The owner or operator of an affected facility where activated carbon is used must follow the procedures specified in section (12) of this rule for measuring and calculating the carbon usage rate.

(g) The owner or operator of an affected facility may request that compliance with the dioxin/furan emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(h) As specified under 40 CFR 60.8, all performance tests must consist of three test runs. The average of the dioxin/furan emission concentrations from the three test runs is used to determine compliance.

(i) In place of dioxin/furan sampling and testing with EPA Reference Method 23, an owner or operator may elect to sample dioxin/furan by installing, calibrating, maintaining, and operating a continuous automated sampling system for monitoring dioxin/furan emissions discharged to the atmosphere, recording the output of the system, and analyzing the sample using EPA Reference Method 23. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from monitors is published in the Federal Register or the date of approval of a site-specific monitoring plan. The owner or operator of an affected facility who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Reference Method 23 must install, calibrate, maintain, and operate a continuous automated sampling system and must comply with the requirements specified in sections (15) and (16) of this rule.

(8) The procedures and test methods specified in subsections (8)(a) through (i) of this rule must be used to determine compliance with the nitrogen oxides emission limit for affected facilities.

(a) Compliance with the nitrogen oxides emission limit must be determined by using the continuous emission monitoring system specified in subsection (8)(c) of this rule for measuring nitrogen oxides and calculating a 24-hour daily arithmetic average emission concentration using EPA Reference Method 19, section 4.1.

(b) An owner or operator may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(c) The owner or operator of an affected facility must install, calibrate, maintain, and operate a continuous emission monitoring system for measuring nitrogen oxides discharged to the atmosphere, and record the output of the system.

(d) At a minimum, valid continuous emission monitoring system hourly averages must be obtained as specified in paragraphs (8)(d)(A) and (B) of this rule for 90 percent of the operating hours per calendar quarter and for 95 percent of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

(A) At least 2 data points per hour must be used to calculate each 1-hour arithmetic average.

(B) Each nitrogen oxides 1-hour arithmetic average must be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(e) The 1-hour arithmetic averages must be expressed in parts per million by volume (dry basis) and used to calculate the 24-hour daily arithmetic average concentrations. The 1-hour arithmetic averages must be calculated using the data points required under 40 CFR 60.13(e)(2).

(f) All valid continuous emission monitoring system data must be used in calculating emission averages even if the minimum continuous emission monitoring system data requirements of subsection (8)(d) of this rule are not met.

(g) The owner or operator of an affected facility must operate the continuous emission monitoring system according to Performance Specification 2 in Appendix B of 40 CFR 60 and must follow the procedures and methods specified in paragraphs (8)(g)(A) and (B) of this rule.

(A) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 in Appendix B of 40 CFR 60, nitrogen oxides and oxygen (or carbon dioxide) must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in subparagraphs (8)(g)(A)(i) and (ii) of this rule.

(i) For nitrogen oxides, EPA Reference Methods 7, 7A, 7C, 7D, or 7E must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, or as an alternative ASME PTC-19-10-1981-Part 10, as applicable, must be used.

(B) The span value of the continuous emission monitoring system must be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the municipal waste combustor unit.

(h) Quarterly accuracy determinations and daily calibration drift tests must be performed in accordance with Procedure 1 in Appendix F of 40 CFR Part 60.

(i) When nitrogen oxides continuous emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data must be obtained using other monitoring systems as approved by the Department or EPA Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 90 percent of the hours per calendar quarter and 95 percent of the hours per calendar year the unit is operated and combusting municipal solid waste.

(9) The procedures specified in subsections (9)(a) through (k) of this rule must be used for determining compliance with the operating requirements under OAR 340-230-0320.

(a) Compliance with the carbon monoxide emission limits in OAR 340-230-0320(1) must be determined using a 4-hour block arithmetic average.

(b) The owner or operator of an affected facility must install, calibrate, maintain, and operate a continuous emission monitoring system for measuring carbon monoxide at the combustor outlet and record the output of the system and must follow the procedures and methods specified in paragraphs (9)(a)(A) through (C) of this rule:

(A) The continuous emission monitoring system must be operated according to Performance Specification 4A in Appendix B of 40 CFR 60.

(B) During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in Appendix B of 40 CFR Part 60, carbon monoxide and oxygen (or carbon dioxide) data must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in subparagraphs (9)(b)(B)(i) and (ii) of this rule. For affected facilities subject to the 100 parts per million dry volume carbon monoxide standard, the relative accuracy criterion of 5 parts per million dry volume is calculated as the absolute value of the mean difference between the reference method and continuous emission monitoring systems.

(i) For carbon monoxide, EPA Reference Methods 10, 10A, or 10B must be used.

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, or ASME PTC-19-10-1981--Part 10 (incorporated by reference, see 40 CFR 60.17), as applicable, must be used.

(C) The span value of the continuous emission monitoring system must be 125 percent of the maximum estimated hourly potential carbon monoxide emissions of the municipal waste combustor unit.

(c) The 4-hour block daily arithmetic averages specified in subsection (9)(a) of this rule must be calculated from 1-hour arithmetic averages expressed in parts per million by volume corrected to 7 percent oxygen (dry basis). The 1-hour arithmetic averages must be calculated using the data points generated by the continuous emission monitoring system. At least two data points must be used to calculate each 1-hour arithmetic average.

(d) The owner or operator of an affected facility may request that compliance with the carbon monoxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(e) The procedures specified in paragraphs (9)(e)(A) through (D) of this rule must be used to determine compliance with load level requirements under OAR 340-230-0320(2).

(A) The owner or operator of an affected facility with steam generation capability must install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in kilograms per hour (or pounds per hour) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow must be calculated in 4-hour block arithmetic averages.

(B) The method included in the “American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1 -- 1964 (R1991)” section 4 (incorporated by reference, see 40 CFR 60.17) must be used for calculating the steam (or feedwater) flow required under paragraph (9)(c)(A) of this rule. The recommendations in “American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition (1971),” chapter 4 (incorporated by reference -- see 40 CFR 60.17) must be followed for design, construction, installation, calibration, and use of nozzles and orifices except as specified in paragraph (9)(e)(C) of this rule:

(C) Measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed.

(D) All signal conversion elements associated with steam (or feedwater flow) measurements must be calibrated according to the manufacturer’s instructions before each dioxin/furan performance test, and at least once per year.

(f) To determine compliance with the maximum particulate matter control device temperature requirements under OAR 340-230-0320(3), the owner or operator of an affected facility must install, calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device utilized by the affected facility. Temperature must be calculated in 4-hour block arithmetic averages.

(g) The maximum demonstrated municipal waste combustor unit load must be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in OAR 340-230-0310(6) is achieved. The maximum demonstrated municipal waste combustor unit load shall be the highest 4-hour arithmetic average load achieved during four consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved. If a subsequent dioxin/furan performance test is being performed on only one affected facility at the MWC plant, as provided in paragraph (7)(d)(C) of this rule, the owner or operator may elect to apply the same maximum municipal waste combustor unit load from the tested facility for all the similarly designed and operated affected facilities at the MWC plant.

(h) For each particulate matter control device employed at the affected facility, the maximum demonstrated particulate matter control device temperature must be determined during each performance test during which compliance with the dioxin/furan emission limit specified in OAR 340-230-0310(6) is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved. If a subsequent dioxin/furan performance test is being performed on only one affected facility at the MWC plant, as provided in paragraph (7)(d)(C) of this rule, the owner or operator may elect to apply the same maximum particulate matter control device temperature from the tested facility for all the similarly designed and operated affected facilities at the MWC plant.

(i) At a minimum, valid continuous emission monitoring system hourly averages must be obtained as specified in paragraphs (9)(i)(A) and (B) of this rule for at least 90 percent of the operating hours per calendar quarter and 95 percent of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

(A) At least two data points per hour must be used to calculate each 1-hour arithmetic average.

(B) At a minimum, each carbon monoxide 1-hour arithmetic must be corrected to 7-percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(j) All valid continuous emission monitoring system data must be used in calculating the parameters specified under section (9) of this rule even if the minimum data requirements of subsection (9)(i) of this rule are not met. When carbon monoxide continuous emission data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data must be obtained using other monitoring systems as approved by the Department or EPA Reference Method 10 to provide, as necessary, the minimum valid emission data.

(k) Quarterly accuracy determinations and daily calibration drift tests for the carbon monoxide continuous emission monitoring system must be performed in accordance with **Procedure 1** in **appendix F of 40 CFR part 60**.

(10) The procedures specified in subsections (10)(a) an (b) of this rule must be used for calculating municipal waste combustor unit capacity as defined by 40 CFR 60.51b.

(a) For municipal waste combustor units capable of combusting municipal solid waste continuously for a 24-hour period, municipal waste combustor unit capacity must be calculated based on 24 hours of operation at the maximum charging rate. The maximum charging rate must be determined as specified in paragraphs (10)(a)(A) and (B) of this rule, as applicable:

(A) For combustors that are designed based on heat capacity, the maximum charging rate must be calculated based on the maximum design heat input capacity of the unit and a heating value of 12,800 kilojoules per kilogram for combustors firing refuse-derived fuel and a heating value of 10,500 kilojoules per kilogram for combustors firing municipal solid waste that is not refuse-derived fuel.

(B) For combustors that are not designed based on heat capacity, the maximum charging rate shall be the maximum design charging rate.

(b) For batch feed municipal waste combustor units, municipal waste combustor unit capacity must be calculated as the maximum design amount of municipal solid waste that can be charged per batch multiplied by the maximum number of batches that could be processed in a 24-hour period. The maximum number of batches that could be processed in a 24-hour period is calculated as 24 hours divided by the design number of hours required to process one batch of municipal solid waste, and may include fractional batches (e.g., if one batch requires 16 hours, then 24/16, or 1.5 batches, could be combusted in a 24-hour period). For batch combustors that are designed based on heat capacity, the design heating value of 12,800 kilojoules per kilogram for combustors firing refuse-derived fuel and a heating value of 10,500 kilojoules per kilogram for combustors firing municipal solid waste that is not refuse-derived fuel must be used in calculating the municipal waste combustor unit capacity in megagrams per day of municipal solid waste.

(11) The procedures specified in subsections (11)(a) through (c) of this rule must be used for determining compliance with the fugitive ash emission limit under OAR 340-0230-0335.

(a) EPA Reference Method 22 must be used for determining compliance with the fugitive ash emission limit under OAR 340-0230-0335. The minimum observation time must be a series of three 1-hour observations. The observation period must include times when the facility is transferring ash from the municipal waste combustor unit to the area where ash is stored or loaded into containers or trucks.

(b) The average duration of visible emissions per hour must be calculated from the three 1-hour observations. The average must be used to determine compliance with OAR 340-0230-0335.

(c) The owner or operator of an affected facility must conduct a performance test for fugitive ash emissions on a calendar year basis (no less than 9 calendar months and no more than 15 months following the previous performance test; and must complete five performance tests in each 5-year period).

(12) The owner or operator of an affected facility where activated carbon injection is used to comply with the mercury emission limit under OAR 340-230-0310(3)(c), the dioxin/furan emission limits under OAR 340-230-0310(6), or the dioxin/furan emission level specified in paragraph (7)(d)(C) of this rule must follow the procedures specified in subsections (12)(a) through (d) of this rule.

(a) During the performance tests for dioxins/furans and mercury, as applicable, the owner or operator must estimate an average carbon mass feed rate based on carbon injection system operating parameters such as the screw feeder speed, hopper volume, hopper refill frequency, or other parameters appropriate to the feed system being employed, as specified in paragraphs (12)(a)(A) and (B) of this rule.

(A) An average carbon mass feed rate in kilograms per hour or pounds per hour must be estimated during each performance test for mercury emissions.

(B) An average carbon mass feed rate in kilograms per hour or pounds per hour must be estimated during each performance test for dioxin/furan emissions, if applicable. If a subsequent dioxin/furan performance test is being performed on only one affected facility at the MWC plant, as provided in paragraph (7)(d)(C) of this rule, the owner or operator may elect to apply the same estimated average carbon mass feed rate from the tested facility for all the similarly designed and operated affected facilities at the MWC plant.

(b) During operation of the affected facility, the carbon injection system operating parameter(s) that are the primary indicator(s) of the carbon mass feed rate (e.g., screw feeder setting) must be averaged over a block 8-hour period, and the 8-hour average must equal or exceed the level(s) documented during the performance tests specified under paragraphs (12)(a)(A) and (B) of this rule, except as specified in paragraphs (12)(b)(A) and (B) of this rule.

(A) During the annual dioxin/furan or mercury performance test and the 2 weeks preceding the annual dioxin/furan or mercury performance test, no limit is applicable for average mass carbon feed rate if the provisions of paragraph (12)(b)(B) of this rule are met.

(B) The limit for average mass carbon feed rate may be waived in accordance with permission granted by the Administrator for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(c) The owner or operator must estimate the total carbon usage of the plant (kilograms or pounds) for each calendar quarter by two independent methods, according to the procedures in paragraphs (12)(c)(A) and (B) of this rule.

(A) The weight of carbon delivered to the plant.

(B) Estimate the average carbon mass feed rate in kilograms per hour or pounds per hour for each hour of operation for each affected facility based on the parameters specified under subsection (12)(a) of this rule, and sum the results for all affected facilities at the plant for the total number of hours of operation during the calendar quarter.

(d) Pneumatic injection pressure or other carbon injection system operational indicator must be used to provide additional verification of proper carbon injection system operation. The operational indicator must provide an instantaneous visual and/or audible alarm to alert the operator of a potential interruption in the carbon feed that would not normally be indicated by direct monitoring of carbon mass feed rate (e.g., continuous weight loss feeder) or monitoring of the carbon system operating parameter(s) that are the indicator(s) of carbon mass feed rate (e.g., screw feeder speed). The carbon injection system operational indicator used to provide additional verification of carbon injection system operation, including basis for selecting the indicator and operator response to the indicator alarm, must be included in subsection (5)(f) of this rule of the site-specific operating manual required under OAR 340-230-0330(4).

(13) In place of periodic manual testing of mercury, cadmium, lead, or hydrogen chloride with EPA Reference Method 26, 26A, 29, or as an alternative ASTM D6784-02 (as applicable), affected facilities may elect to install, calibrate, maintain, and operate a continuous emission monitoring system for monitoring emissions discharged to the atmosphere and record the output of the system. The option to use a continuous emission monitoring system for mercury takes effect on the date of approval of the site-specific monitoring plan required in subsection (13)(m) of this rule and section (14) of this rule. The option to use a continuous emission monitoring system for cadmium, lead, or hydrogen chloride takes effect on the date a final performance specification applicable to cadmium, lead, or hydrogen chloride monitor is published in the Federal Register or the date of approval of the site-specific monitoring plan required in subsection (13)(m) of this rule and section (14) of this rule. The owner or operator of an affected facility who elects to continuously monitor emissions instead of conducting manual performance testing must install, calibrate, maintain, and operate a continuous emission monitoring system and must comply with the requirements in subsections (13)(a) through (n) of this rule.

(a) Notify the Administrator and the Department one month before starting use of the system.

(b) Notify the Administrator and the Department one month before stopping use of the system.

(c) The monitor must be installed, evaluated, and operated in accordance with 40 CFR 60.13.

(d) The initial performance evaluation must be completed no later than 180 days after the date of initial startup of the affected facility, as specified under 40 CFR 60.8 or within 180 days of notification to the Administrator and the Department of use of the continuous monitoring system if the owner or operator was previously determining compliance by EPA Reference Method 26, 26A, 29, or as an alternative ASTM D6784-02 (as applicable) performance tests, whichever is later.

(e) The owner or operator may request that compliance with the emission limits be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(f) The owner or operator must conduct an initial performance test for emissions as required under 40 CFR 60.8. Compliance with the emission limits must be determined by using the continuous emission monitoring system specified in section (13) of this rule to measure emissions and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19, section 12.4.1.

(g) Compliance with the emission limits must be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data.

(h) Beginning on April 28, 2008 for mercury and on the date two years after final performance specifications for cadmium, lead or hydrogen chloride monitors are published in the Federal Register or the date two years after approval of a site-specific monitoring plan, valid continuous monitoring system hourly averages must be obtained as specified in paragraphs (13)(h)(A) and (B) of this rule for at least 90 percent of the operating hours per calendar quarter and 95 percent of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

(A) At least two data points per hour must be used to calculate each 1-hour arithmetic average.

(B) Each 1-hour arithmetic average must be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(i) The 1-hour arithmetic averages required under subsection (13)(g) of this rule must be expressed in micrograms per dry standard cubic meter for mercury, cadmium, lead and parts per million dry volume for hydrogen chloride corrected to 7 percent oxygen (dry basis) and must be used to calculate the 24-hour daily arithmetic (block) average emission concentrations. The 1-hour arithmetic averages must be calculated using the data points required under 40 CFR 60.13(e)(2).

(j) All valid continuous emission monitoring system data must be used in calculating average emission concentrations even if the minimum continuous emission monitoring system data requirements of subsection (13)(h) of this rule are not met.

(k) The continuous emission monitoring system for mercury must be operated according to Performance Specification 12A in 40 CFR part 60 appendix B or the approved site-specific monitoring plan.

(l) During each relative accuracy test run of the continuous emission monitoring system required by the performance specifications in subsection (13)(k) of this rule, mercury, cadmium, lead, hydrogen chloride, and oxygen (or carbon dioxide) data must be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraphs (13)(l)(A) through (C) of this rule.

(A) For mercury, cadmium, and lead, EPA Reference Method 29 or as an alternative ASTM D6784-02 must be used.

(B) For hydrogen chloride, EPA Reference Method 26 or 26A must be used.

(C) For oxygen (or carbon dioxide), EPA Reference Method 3, 3A, or 3B, as applicable must be used.

(m) The owner or operator who elects to install, calibrate, maintain, and operate a continuous emission monitoring system for mercury, cadmium, lead, or hydrogen chloride must develop and implement a site-specific monitoring plan as specified in section (14) of this rule. The owner or operator who relies on a performance specification may refer to that document in addressing applicable procedures and criteria.

(n) When emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, parametric monitoring data must be obtained by using other monitoring systems as approved by EPA.

(14) The owner or operator who elects to install, calibrate, maintain, and operate a continuous emission monitoring system for mercury, cadmium, lead, or hydrogen chloride must develop and submit for approval by EPA, a site-specific mercury, cadmium, lead, or hydrogen chloride monitoring plan that addresses the elements and requirements in subsections (14)(a) through (g) of this rule.

(a) Installation of the continuous emission monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).

(b) Performance and equipment specifications for the sample interface, the pollutant concentration analyzer, and the data collection and reduction system.

(c) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(d) Provisions for periods when the continuous emission monitoring system is out of control as described in paragraphs (14)(d)(A) through (C) of this rule.

(A) A continuous emission monitoring system is out of control if either of the conditions in subparagraph (14)(d)(A)(i) or (ii) of this rule are met.

(i) The zero (low-level), mid-level (if applicable), or high-level calibration drift exceeds two times the applicable calibration drift specification in the applicable performance specification or in the relevant standard; or

(ii) The continuous emission monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit.

(B) When the continuous emission monitoring system is out of control as defined in paragraph (14)(d)(A) of this rule, the owner or operator of the affected source must take the necessary corrective action and must repeat all necessary tests that indicate that the system is out of control. The owner or operator must take corrective action and conduct retesting until the performance requirements are below the applicable limits. The beginning of the out-of-control period is the hour the owner or operator conducts a performance check (e.g., calibration drift) that indicates an exceedance of the performance requirements established under this part. The end of the out-of-control period is the hour following the completion of corrective action and successful demonstration that the system is within the allowable limits. During the period the continuous emission monitoring system is out of control, recorded data shall not be used in data averages and calculations or to meet any data availability requirements in subsection (13)(h) of this rule.

(C) The owner or operator of a continuous emission monitoring system that is out of control as defined in subsection (14)(d) of this rule must submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken in the annual or semiannual compliance reports required in OAR 340-230-0350(3) or (4).

(e) Ongoing data quality assurance procedures for continuous emission monitoring systems as described in paragraphs (14)(e)(A) and (B) of this rule.

(A) Develop and implement a continuous emission monitoring system quality control program. As part of the quality control program, the owner or operator must develop and submit to EPA for approval, upon request, a site-specific performance evaluation test plan for the continuous emission monitoring system performance evaluation required in paragraph (14)(e)(B) of this rule. In addition, each quality control program must include, at a minimum, a written protocol that describes procedures for each of the operations described in subparagraphs (14)(e)(A)(i) through (vi) of this rule.

(i) Initial and any subsequent calibration of the continuous emission monitoring system;

(ii) Determination and adjustment of the calibration drift of the continuous emission monitoring system;

(iii) Preventive maintenance of the continuous emission monitoring system, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning continuous emission monitoring system.

(B) The performance evaluation test plan must include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external quality assurance program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data. The internal quality assurance program must include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of continuous emission monitoring system performance, for example, plans for relative accuracy testing using the appropriate reference method. The external quality assurance program must include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator or the Department of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(f) Conduct a performance evaluation of each continuous emission monitoring system in accordance with the site-specific monitoring plan.

(g) Operate and maintain the continuous emission monitoring system in continuous operation according to the site-specific monitoring plan.

(15) In place of periodic manual testing of dioxin/furan or mercury with EPA Reference Method 23, 29, or as an alternative ASTM D6784-02 (as applicable), the owner or operator of an affected facility may elect to install, calibrate, maintain, and operate a continuous automated sampling system for determining emissions discharged to the atmosphere. This option takes effect on the date a final performance specification applicable to such continuous automated sampling systems is published in the Federal Register or the date of approval of a site-specific monitoring plan. The owner or operator of an affected facility who elects to use a continuous automated sampling system to determine emissions instead of conducting manual performance testing must install, calibrate, maintain, and operate the sampling system and conduct analyses in compliance with the requirements specified in subsections (15)(a) through (k) of this rule.

(a) Notify the Administrator and the Department one month before starting use of the system.

(b) Notify the Administrator and the Department one month before stopping use of the system.

(c) The initial performance evaluation must be completed within 180 days of notification to the Administrator and the Department of use of the continuous monitoring system if the owner or operator was previously determining compliance by manual performance testing using Method 23, 29, or as an alternative ASTM D6784-02 (as applicable), whichever is later.

(d) The owner or operator may request that compliance with the emission limits be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for the affected facility must be established as specified in subsection (2)(e) of this rule.

(e) The owner or operator must conduct an initial performance test for emissions as required under 40 CFR 60.8. Compliance with the emission limits must be determined by using the continuous automated sampling system specified in section (15) of this rule to collect integrated samples and analyze emissions for the time period specified in paragraphs (15)(e)(A) and (B) of this rule.

(A) For dioxin/furan, the continuous automated sampling system must collect an integrated sample over each 2-week period. The collected sample must be analyzed using EPA Reference Method 23.

(B) For mercury, the continuous automated sampling system must collect an integrated sample over each 24-hour daily period and the sample must be analyzed according to the applicable final performance specification or the approved site-specific monitoring plan required by section (16) of this rule.

(f) Compliance with the emission limits must be determined based on 2-week emission concentrations for dioxin/furan and on the 24-hour daily emission concentrations for mercury using samples collected at the system outlet. The emission concentrations must be expressed in nanograms per dry standard cubic meter (total mass) for dioxin/furan and micrograms per dry standard cubic meter for mercury, corrected to 7 percent oxygen (dry basis).

(g) Beginning on the date two years after the respective final performance specification for continuous automated sampling systems for dioxin/furan or mercury is published in the Federal Register or two years after approval of a site-specific monitoring plan, the continuous automated sampling system must be operated and collect emissions for at least 90 percent of the operating hours per calendar quarter and 95 percent of the operating hours per calendar year that the affected facility is combusting municipal solid waste.

(h) All valid data must be used in calculating emission concentrations.

(i) The continuous automated sampling system must be operated according to the final performance specification or the approved site-specific monitoring plan.

(j) The owner or operator who elects to install, calibrate, maintain, and operate a continuous automated sampling system for dioxin/furan or mercury must develop and implement a site-specific monitoring plan as specified in section (16) of this rule. The owner or operator who relies on a performance specification may refer to that document in addressing applicable procedures and criteria.

(k) When emissions data are not obtained because of continuous automated sampling system breakdowns, repairs, quality assurance checks, or adjustments, parametric monitoring data must be obtained by using other monitoring systems as approved by EPA.

(16) The owner or operator who elects to install, calibrate, maintain, and operate a continuous automated sampling system for dioxin/furan or mercury must develop and submit for approval by EPA, a site-specific monitoring plan that has sufficient detail to assure the validity of the continuous automated sampling system data and that addresses the elements and requirements in subsections (16)(a) through (g) of this rule.

(a) Installation of the continuous automated sampling system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).

(b) Performance and equipment specifications for the sample interface, the pollutant concentration analytical method, and the data collection system.

(c) Performance evaluation procedures and acceptance criteria.

(d) Provisions for periods when the continuous automated sampling system is malfunctioning or is out of control as described in paragraphs (16)(d)(A) through (C) of this rule.

(A) The site-specific monitoring plan must identify criteria for determining that the continuous automated sampling system is out of control. This includes periods when the sampling system is not collecting a representative sample or is malfunctioning, or when the analytical method does not meet site-specific quality criteria established in subsection (16)(e) of this rule.

(B) When the continuous automated sampling system is out of control as defined in paragraph (16)(d)(A) of this rule, the owner or operator must take the necessary corrective action and must repeat all necessary tests that indicate that the system is out of control. The owner or operator must take corrective action and conduct retesting until the performance requirements are within the applicable limits. The out-of-control period includes all hours that the sampling system was not collecting a representative sample or was malfunctioning, or hours represented by a sample for which the analysis did not meet the relevant quality criteria. Emissions data obtained during an out-of-control period shall not be used in determining compliance with the emission limits or to meet any data availability requirements in subsection (15)(h) of this rule.

(C) The owner or operator of a continuous automated sampling system that is out of control as defined in subsection (16)(d) of this rule must submit all information concerning out-of-control periods, including start and end dates and hours and descriptions of corrective actions taken in the annual or semiannual compliance reports required in OAR 340-230-0350(3) or (4).

(e) Ongoing data quality assurance procedures for continuous automated sampling systems as described in paragraphs (16)(e)(A) and (B) of this rule.

(A) Develop and implement a continuous automated sampling system and analysis quality control program. As part of the quality control program, affected facilities must develop and submit to EPA for approval, upon request, a site-specific performance evaluation test plan for the continuous automated sampling system performance evaluation required in paragraph (16)(e)(B) of this rule. In addition, each quality control program must include, at a minimum, a written protocol that describes procedures for each of the operations described in subparagraphs (16)(e)(A)(i) through (vii) of this rule.

(i) Correct placement, installation of the continuous automated sampling system such that the system is collecting a representative sample of gas;

(ii) Initial and subsequent calibration of flow such that the sample collection rate of the continuous automated sampling system is known and verifiable;

(iii) Procedures to assure representative (e.g., proportional or isokinetic) sampling;

(iv) Preventive maintenance of the continuous automated sampling system, including spare parts inventory and procedures for cleaning equipment, replacing sample collection media, or other servicing at the end of each sample collection period;

(v) Data recording and reporting, including an automated indicator and recording device to show when the continuous automated monitoring system is operating and collecting data and when it is not collecting data;

(vi) Accuracy audit procedures for analytical methods; and

(vii) Program of corrective action for a malfunctioning continuous automated sampling system.

(B) The performance evaluation test plan must include the evaluation program objectives, an evaluation program summary, the performance evaluation schedule, data quality objectives, and both an internal and external quality assurance program. Data quality objectives are the pre-evaluation expectations of precision, accuracy, and completeness of data. The internal quality assurance program must include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of continuous automated sampling system performance, for example, plans for relative accuracy testing using the appropriate reference method in subsection (15)(c) of this rule, and an assessment of quality of analysis results. The external quality assurance program must include, at a minimum, systems audits that include the opportunity for on-site evaluation by the Administrator or the Department of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(f) Conduct a performance evaluation of each continuous automated sampling system in accordance with the site-specific monitoring plan.

(g) Operate and maintain the continuous automated sampling system in continuous operation according to the site-specific monitoring plan.

(17) Continuous monitoring for opacity, sulfur dioxide, nitrogen oxides, carbon monoxide,and diluent gases (oxygen or carbon dioxide) must be conducted in accordance with the Department's Continuous Monitoring Manual and the specific requirements of this rule. If at any time there is a conflict between the Department's Continuous Monitoring Manual and the federal requirements contained in **40 CFR 60.13**, **Appendix B** and **Appendix F**), the federal requirements must govern.

[ED NOTE: Equations referenced are available from the agency.]

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 468.020

Stats. Implemented: ORS 468A.02

Hist.: DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0990; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0350
Recordkeeping and Reporting

(1) The owner or operator of an affected facility subject to the standards contained in OAR 340-230-0310 through 340-230-0335 must maintain records of the information specified in subsections (1)(a) through (l) of this rule , as applicable, for each affected facility for a period of at least 5 years. The information must be available for submittal to the Department or for review onsite by an inspector.

(a) The calendar date of each record.

(b) The emission concentrations and parameters measured using continuous monitoring systems as specified in paragraphs (1)(b)(A) and (B) of this rule:

(A) The measurements specified in subparagraphs (1)(b)(A)(i) through (v) of this rule must be recorded and be available for submittal to the Department or review on-site by Department inspector:

(i) All 6-minute average opacity levels as specified under OAR 340-230-0340(3).

(ii) All 1-hour average sulfur dioxide emission concentrations as specified under OAR 340-230-0340(5).

(iii) All 1-hour average nitrogen oxides emission concentrations as specified under OAR 340-230-0340(8).

(iv) All 1-hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements (if applicable), and particulate matter control device inlet temperatures as specified under OAR 340-230-0340(9).

(v) For owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, or hydrogen chloride emissions instead of conducting performance testing using EPA manual test methods, all 1-hour average particulate matter, cadmium, lead, mercury, or hydrogen chloride emission concentrations as specified under OAR 340-230-0340(13).

(B) The average concentrations and percent reductions, as applicable, specified in subparagraphs (1)(b)(B)(i) through (vi) of this rule must be computed and recorded, and must be available for submittal to the Department or review on-site by Department inspector.

(i) All 24-hour daily geometric average sulfur dioxide emission concentrations and all 24-hour daily geometric average percent reductions in sulfur dioxide emissions as specified under OAR 340-230-0340(5).

(ii) All 24-hour daily arithmetic average nitrogen oxides emission concentrations as specified under OAR 340-230-0340(8).

(iii) All 4-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under OAR 340-230-0340(9).

(iv) All 4-hour block arithmetic average municipal waste combustor unit load levels (if applicable) and particulate matter control device inlet temperatures as specified under OAR 340-230-0340(9).

(v) For owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, or hydrogen chloride emissions instead of conducting performance testing using EPA manual test methods, all 24-hour daily arithmetic average particulate matter, cadmium, lead, mercury, or hydrogen chloride emission concentrations as specified under OAR 340-230-0340(13).

(vi) For owners and operators who elect to use a continuous automated sampling system to monitor mercury or dioxin/furan instead of conducting performance testing using EPA manual test methods, all integrated 24-hour mercury concentrations or all integrated 2-week dioxin/furan concentrations as specified under OAR 340-230-0340(15).

(c) Identification of the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under subparagraphs (1)(b)(B)(i) through (vi) of this rule, or the opacity levels recorded under subparagraph (1)(b)(A)(i) of this rule are above the applicable limits, with reasons for such exceedances and a description of corrective actions taken.

(d) For affected facilities that apply activated carbon for mercury or dioxin/furan control, the records specified in paragraphs (1)(d)(A) through (E) of this rule:

(A) The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as specified under OAR 340-230-0340(12)(a)(A) during each mercury emissions performance test, with supporting calculations.

(B) The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as specified under OAR 340-230-0340(12)(a)(B) during each dioxin/furan emissions performance test, with supporting calculations.

(C) The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated for each hour of operation as specified under OAR 340-230-0340(12)(c)(B), with supporting calculations.

(D) The total carbon usage for each calendar quarter estimated as specified under OAR 340-230-0340(12)(c), with supporting calculations.

(E) Carbon injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon feed rate (e.g., screw feeder speed).

(e) Identification of the calendar dates and times (hours) for which valid hourly data specified in paragraphs (1)(e)(A) through (F) of this rule have not been obtained, or continuous automated sampling systems were not operated as specified in paragraph (1)(e)(G) of this rule, including reasons for not obtaining the data and a description of corrective actions taken.

(A) Sulfur dioxide emissions data;

(B) Nitrogen oxides emissions data;

(C) Carbon monoxide emissions data;

(D) Municipal waste combustor unit load data;

(E) Particulate matter control device temperature data; and

(F) For owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, or hydrogen chloride emissions instead of performance testing by EPA manual test methods, particulate matter, cadmium, lead, mercury, or hydrogen chloride emissions data.

(G) For owners and operators who elect to use continuous automated sampling systems for dioxins/furans or mercury as allowed under OAR 340-230-0340(15) and (16), dates and times when the sampling systems were not operating or were not collecting a valid sample.

(f) Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data, particulate matter emissions data, cadmium emissions data, lead emissions data, mercury emissions data, hydrogen chloride emissions data, or dioxin/furan emissions data (for owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, or hydrogen chloride, or who elect to use continuous automated sampling systems for dioxin/furan or mercury emissions, instead of conducting performance testing using EPA manual test methods) or operational data (i.e., carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data.

(g) The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides, and carbon monoxide continuous emission monitoring systems, as required by 40 CFR part 60 appendix F, procedure 1.

(h) The test reports documenting the results of the initial performance test and all annual performance tests listed in paragraphs (1)(h)(A) and (B) of this rule must be recorded along with supporting calculations:

(A) The results of the initial performance test and all annual performance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission limits.

(B) For the initial dioxin/furan performance test and all subsequent dioxin/furan performance tests recorded under paragraph (1)(h)(A) of this rule, the maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device).

(i) An owner or operator who elects to continuously monitor emissions instead of performance testing by EPA manual methods must maintain records specified in paragraphs (1)(i)(A) through (C) of this rule.

(A) For owners and operators who elect to continuously monitor particulate matter instead of conducting performance testing using EPA manual test methods, as required under 40 CFR part 60 appendix F, procedure 2, the results of daily drift tests and quarterly accuracy determinations for particulate matter.

(B) For owners and operators who elect to continuously monitor cadmium, lead, mercury, or hydrogen chloride instead of conducting EPA manual test methods, the results of all quality evaluations, such as daily drift tests and periodic accuracy determinations, specified in the approved site-specific performance evaluation test plan required by OAR 340-230-0340(14)(e).

(C) For owners and operators who elect to use continuous automated sampling systems for dioxin/furan or mercury, the results of all quality evaluations specified in the approved site-specific performance evaluation test plan required by OAR 340-230-0340(16)(e).

(j) Training records specified in paragraphs (1)(j)(A) through (D) of this rule.

(A) Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program as required by OAR 340-230-0330(1), including the dates of initial and renewal certifications and documentation of current certification.

(B) Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program as required by OAR 340-230-0330(2), including the dates of initial and renewal certifications and documentation of current certification.

(C) Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course or a State-approved equivalent course, including documentation of training completion.

(D) Records of when a certified operator is temporarily off site. Include two main items:

(i) If the certified chief facility operator and certified shift supervisor are off site for more than 12 hours, but for 2 weeks or less, and no other certified operator is on site, record the dates that the certified chief facility operator and certified shift supervisor were off site.

(ii) When all certified chief facility operators and certified shift supervisors are off site for more than 2 weeks and no other certified operator is on site, keep records of four items:

(I) Time of day that all certified persons are off site.

(II) The conditions that cause those people to be off site.

(III) The corrective actions taken by owner or operator of the affected facility to ensure a certified chief facility operator or certified shift supervisor is on site as soon as practicable.

(IV) Copies of the written reports submitted every 4 weeks that summarize the actions taken by the owner or operator of the affected facility to ensure that a certified chief facility operator or certified shift supervisor will be on site as soon as practicable.

(k) Records showing the names of persons who have completed a review of the operating manual as required by OAR 340-230-0330(5), including the date of the initial review and subsequent annual reviews.

(l) For affected facilities that apply activated carbon for mercury or dioxin/furan control:

(A) Identification of the calendar dates when the average carbon mass feed rates were less than either of the hourly carbon feed rates estimated during performance tests for mercury or dioxin/furan emissions with reasons for such feed rates and a description of corrective actions taken.

(B) Identification of the calendar dates when the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (e.g., screw feeder speed) recorded under OAR 340-230-0340(12)(a)(A) and (B) are below the level(s) estimated during the performance tests, with reasons for such occurrences and a description of corrective actions taken.

(2) The owner or operator of an affected facility must submit the information specified in subsections (2)(a) through (f) of this rule in a performance test report within 60 days following the completion of each performance test.

(a) The performance test data as recorded under subparagraphs (1)(b)(B)(i) through (iv) of this rule for each performance test for sulfur dioxide, nitrogen oxide, carbon monoxide, municipal waste combustor unit load level, and particulate matter control device inlet temperature.

(b) The test report documenting the performance test recorded under subsection (1)(h) of this rule for particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, fugitive ash emissions.

(c) The performance evaluation of the continuous emission monitoring systems using the applicable performance specifications in 40 CFR 60 appendix B.

(d) The maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device inlet temperature(s) established during the dioxin/furan performance test.

(e) For affected facilities that apply activated carbon injection for mercury control, the owner or operator must submit the average carbon mass feed rate recorded during the mercury performance test.

(f) For affected facilities that apply activated carbon injection for dioxin/furan control, the owner or operator must submit the average carbon mass feed rate recorded during the dioxin/furan performance test.

(3) The owner or operator of an affected facility must submit semiannual reports that includes the information specified in subsections (3)(a) through (e) of this rule, as applicable, no later than July 30 for the first six months of each calendar year and February 1 for the second six months of each calendar year.

(a) A summary of data collected for all pollutants and parameters regulated under this rule, which includes the information specified in paragraphs (3)(a)(A) through (E) of this rule:

(A) A list of the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels achieved during any performance tests conducted during the reporting period.

(B) A list of the highest emission level recorded for sulfur dioxide, nitrogen oxides, carbon monoxide, particulate matter, cadmium, lead, mercury, hydrogen chloride, and dioxin/furan (for owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, hydrogen chloride, and dioxin/furan emissions instead of conducting performance testing using EPA manual test methods), municipal waste combustor unit load level, and particulate matter control device inlet temperature based on the data recorded during the reporting period.

(C) List the highest opacity level measured based on the data recorded during the reporting period.

(D) Periods when valid data were not obtained as described in subparagraphs (3)(a)(D)(i) through (iii) of this rule.

(i) The total number of hours per calendar quarter and hours per calendar year that valid data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, or particulate matter control device temperature data were not obtained based on the data recorded during the reporting period.

(ii) For owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, and hydrogen chloride emissions instead of conducting performance testing using EPA manual test methods, the total number of hours per calendar quarter and hours per calendar year that valid data for particulate matter, cadmium, lead, mercury, and hydrogen chloride were not obtained based on the data recorded during the reporting period. For each continuously monitored pollutant or parameter, the hours of valid emissions data per calendar quarter and per calendar year expressed as a percent of the hours per calendar quarter or year that the affected facility was operating and combusting municipal solid waste.

(iii) For owners and operators who elect to use continuous automated sampling systems for dioxin/furan or mercury, the total number of hours per calendar quarter and hours per calendar year that the sampling systems were not operating or were not collecting a valid sample based on the data recorded during the reporting period. Also, the number of hours during which the continuous automated sampling system was operating and collecting a valid sample as a percent of hours per calendar quarter or year that the affected facility was operating and combusting municipal solid waste.

(E) Periods when valid data were excluded from the calculation of average emission concentrations or parameters as described subparagraphs (3)(a)(E)(i) through (iii) of this rule.

(i) The total number of hours that data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded during the reporting period.

(ii) For owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, or hydrogen chloride emissions instead of conducting performance testing using EPA manual test methods, the total number of hours that data for particulate matter, cadmium, lead, mercury, or hydrogen chloride were excluded from the calculation of average emission concentrations or parameters based on the data recorded during the reporting period.

(iii) For owners and operators who elect to use continuous automated sampling systems for dioxin/furan or mercury, the total number of hours that data for mercury and dioxin/furan were excluded from the calculation of average emission concentrations or parameters based on the data recorded during the reporting periods.

(b) The summary of data reported under subsection (3)(a) of this rule must also provide the types of data specified in subsection (3)(a)(A) through (E) of this rule for the calendar year preceding the year being reported, in order to provide the Department with a summary of the performance of the affected facility over a 2-year period.

(c) The summary of data including the information specified in subsections (3)(a) and (b) of this rule must highlight any emission or parameter levels that did not achieve the emission or parameter limits specified by OAR 340-230-0310 through 340-230-0320.

(d) A notification of intent to begin the reduced dioxin/furan performance testing schedule specified in OAR 340-230-0340(7)(d)(C) during the following calendar year and notification of intent to apply the average carbon mass feed rate and associated carbon injection system operating parameter levels as established in OAR 340-230-0340(12) to similarly designed and equipped units on site.

(e) Documentation periods when all certified chief facility operators and certified shift supervisors are off site for more than 12 hours.

(4) The owner or operator of an affected facility must submit a semiannual report that includes the information specified in subsections (4)(a) through (e) of this rule for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit by July 30 for the first six months of each calendar year and February 1 for the second six months of each calendar year.

(a) The semiannual report must include information recorded under subsection (1)(c) of this rule for sulfur dioxide, nitrogen oxides, carbon monoxide, particulate matter, cadmium, lead, mercury, hydrogen chloride, dioxin/furan (for owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, or hydrogen chloride, or that elect to use continuous automated sampling systems for dioxin/furan or mercury emissions, instead of conducting performance testing using EPA manual test methods), municipal waste combustor unit load level, particulate matter control device inlet temperature, and opacity.

(b) For each date recorded under subsection (1)(c) of this rule and reported, as required by subsection (4)(a) of this rule, the semiannual report must include the sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, or opacity data, as applicable, recorded under subparagraphs (1)(b)(A)(i) and (1)(b)(B)(i) through (iv) of this rule, as applicable.

(c) If the test reports recorded under subsection (1)(h) of this rule document any particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels that were above the applicable pollutant limits, the semiannual report must include a copy of the test report documenting the emission levels and the corrective actions taken.

(d) The semiannual report must include the information recorded under subparagraph (1)(l)(B) of this rule for the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate.

(e) For each operating date reported as required under subsection (4)(d) of this rule, the semiannual report must include the carbon feed rate data recorded under paragraph (1)(d)(C) of this rule.

(5) All reports specified under sections (2) through (4) of this rule must be submitted as a paper copy, postmarked on or before the submittal dates specified, and maintained onsite as a paper copy for a period of 5 years.

(6) All records specified under section (1) of this rule must be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Department.

(7) If the owner or operator of an affected facility would prefer to select a different annual or semiannual date for submitting the periodic reports required under paragraphs (3) and (4) of this rule, then the dates may be changed in an Oregon Title V Operating Permit by mutual agreement between the owner or operator and the Department according to the procedures specified in 40 CFR 60.19(c).

(8) Owners and operators who elect to continuously monitor particulate matter, cadmium, lead, mercury, or hydrogen chloride, or who elect to use continuous automated sampling systems for dioxin/furan or mercury emissions, instead of conducting performance testing using EPA manual test methods must notify the Administrator and the Department one month prior to starting or stopping use of the particulate matter, cadmium, lead, mercury, hydrogen chloride, and dioxin/furan continuous emission monitoring systems or continuous automated sampling systems.

(9) Additional recordkeeping and reporting requirements for affected facilities with continuous cadmium, lead, mercury, or hydrogen chloride monitoring systems. In addition to complying with the requirements specified in sections (1) through (8) of this rule, the owner or operator of an affected source who elects to install a continuous emission monitoring system for cadmium, lead, mercury, or hydrogen chloride as specified in OAR 340-230-0340(13), must maintain the records in subsections (9)(a) through (j) of this rule and report the information in subsections (9)(k) and (l) of this rule, relevant to the continuous emission monitoring system:

(a) All required continuous emission monitoring measurements (including monitoring data recorded during unavoidable continuous emission monitoring system breakdowns and out-of-control periods).

(b) The date and time identifying each period during which the continuous emission monitoring system was inoperative except for zero (low-level) and high-level checks.

(c) The date and time identifying each period during which the continuous emission monitoring system was out of control, as defined in OAR 340-230-0340(14)(d).

(d) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the standard, that occurs during startups, shutdowns, and malfunctions of the affected source.

(e) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the standard, that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

(f) The nature and cause of any malfunction (if known).

(g) The corrective action taken to correct any malfunction or preventive measures adopted to prevent further malfunctions.

(h) The nature of the repairs or adjustments to the continuous emission monitoring system that was inoperative or out of control.

(i) All procedures that are part of a quality control program developed and implemented for the continuous emission monitoring system under OAR 340-230-0340(14).

(j) When more than one continuous emission monitoring system is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator must report the results as required for each continuous emission monitoring system.

(k) Submit to the Department for approval, the site-specific monitoring plan required by OAR 340-230-0340(13)(m) and (14), including the site-specific performance evaluation test plan for the continuous emission monitoring system required by OAR 340-230-0340(14)(e). The owner or operator must maintain copies of the site-specific monitoring plan on record for the life of the affected source to be made available for inspection, upon request, by the Department. If the site-specific monitoring plan is revised and approved, the owner or operator must keep previous (i.e., superseded) versions of the plan on record to be made available for inspection, upon request, by the Department, for a period of 5 years after each revision to the plan.

(l) Submit information concerning all out-of-control periods for each continuous emission monitoring system, including start and end dates and hours and descriptions of corrective actions taken, in the annual or semiannual report required in sections (3) or (4) of this rule.

(10) Additional recordkeeping and reporting requirements for affected facilities with continuous automated sampling systems for dioxin/furan or mercury monitoring. In addition to complying with the requirements specified in sections (1) through (8) of this rule, the owner or operator of an affected facility who elects to install a continuous automated sampling system for dioxin/furan or mercury, as specified in OAR 340-230-0340(16), must maintain the records in subsections (10)(a) through (j) of this rule and report the information in subsections (10)(k) and (l) of this rule, relevant to the continuous automated sampling system:

(a) All required 24-hour integrated mercury concentration or 2-week integrated dioxin/furan concentration data (including any data obtained during unavoidable system breakdowns and out-of-control periods);

(b) The date and time identifying each period during which the continuous automated sampling system was inoperative;

(c) The date and time identifying each period during which the continuous automated sampling system was out of control, as defined in OAR 340-230-0340(16)(d);

(d) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the standard, that occurs during startups, shutdowns, and malfunctions of the affected source;

(e) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the standard, that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

(f) The nature and cause of any malfunction (if known);

(g) The corrective action taken to correct any malfunction or preventive measures adopted to prevent further malfunctions;

(h) The nature of the repairs or adjustments to the continuous automated sampling system that was inoperative or out of control;

(i) All procedures that are part of a quality control program developed and implemented for the continuous automated sampling system under OAR 340-230-0340(16);

(j) When more than one continuous automated sampling system is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator must report the results as required for each system.

(k) Submit to the Department for approval, the site-specific monitoring plan required by OAR 340-230-0340(15)(k) and (16) including the site-specific performance evaluation test plan for the continuous emission monitoring system required by OAR 340-230-0340(16)(e). The owner or operator must maintain copies of the site-specific monitoring plan on record for the life of the affected source to be made available for inspection, upon request, by the Department. If the site-specific monitoring plan is revised and approved, the owner or operator must keep previous (i.e., superseded) versions of the plan on record to be made available for inspection, upon request, by the Department, for a period of 5 years after each revision to the plan.

(l) Submit information concerning all out-of-control periods for each continuous automated sampling system, including start and end dates and hours and descriptions of corrective actions taken in the annual or semiannual reports required in sections (3) or (4) of this rule.

(11) For affected facilities installing additional controls, the owner or operator must submit to the Department semi-annual progress reports on July 30 for the first six months of each calendar year and February 1 for the second six months of each calendar year..

(12) The owner or operator of an affected facility subject to OAR 340-230-0300 through 340-230-0350 must maintain records of and submit the following information with any Notice of Construction required by OAR 340-210-0200 through 340-210-0220 or Notice of Approval required by 340-218-0190:

(a) Intent to construct;

(b) Planned initial startup date;

(c) The types of fuels that the owner or operated plans to combust in the municipal waste combustor; and

(d) The municipal waste combustor unit capacity and supporting capacity calculations prepared in accordance with OAR 340-230-0340(10).

Stat. Auth.: ORS 468.020

Stats. Implemented: ORS 468A.025

Hist.: DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 4-2003, f. & cert. ef. 2-06-03DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-1000; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 15-2008, f. & cert. ef 12-31-08

340-230-0359
Compliance Schedule

(1) Compliance with the revised April 28, 2009 emission limits in OAR 340-230-0310 is required as expeditiously as practicable, but not later than April 28, 2009, except as provided in section (2) of the rule.

(2) The owner or operator of an affected facility who is planning an extensive emission control system upgrade may petition the Administrator for a longer compliance schedule and must demonstrate to the satisfaction of the Administrator the need for additional time. If approved, the schedule may exceed the schedule in section (1) of this rule, but cannot exceed May 10, 2011.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-238-0040
Definitions

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

(1) "Administrator" means the Administrator of the EPA or authorized representative.

(2) "Alternative method" means any method of sampling and analyzing for an air pollutant that is not a reference or equivalent method but that has been demonstrated to the DEQ's satisfaction to, in specific cases, produce results adequate for determination of compliance.

(3) "Capital expenditures" means an expenditure for a physical or operational change to an existing facility that exceeds the product of the applicable "annual asset guideline repair allowance percentage" specified in **Internal Revenue Service (IRS) Publication 534** and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code. However, the total expenditure for a physical or operational change to an existing facility must not be reduced by any "excluded additions" as defined in IRS Publication 534, as would be done for tax purposes.

(4) "CFR" means Code of Federal Regulations and, unless otherwise expressly identified, refers to the July 1, 2008 edition.

(5) "Closed municipal solid waste landfill" (closed landfill) means a landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under 40 CFR 60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed. A landfill is considered closed after meeting the criteria of 40 CFR 258.60.

(6) "Commenced", with respect to the definition of "new source" in section 111(a)(2) of the federal Clean Air Act, means that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

(7) "Construction" means fabrication, erection, or installation of a facility.

(8) "Department" means the Department of Environmental Quality or, in the case of Lane County, the Lane Regional Air Protection Agency.

(9) "Environmental Protection Agency" or "EPA" means the United States Environmental Protection Agency.

(10) "Existing municipal solid waste landfill" (existing landfill) means a municipal solid waste landfill that began construction, reconstruction or modification before 5/30/91 and has accepted waste at any time since 11/08/87 or has additional design capacity available for future waste deposition.

(11) "Equivalent method" means any method of sampling and analyzing for an air pollutant that has been demonstrated to the Department's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.

(12) "Existing facility", with reference to a stationary source, means any apparatus of the type for which a standard is promulgated in 40 CFR Part 60, and the construction or modification of which commenced before the date of proposal by EPA of that standard; or any apparatus that could be altered in such a way as to be of that type.

(13) "Facility" means all or part of any public or private building, structure, installation, equipment, vehicle or vessel, including, but not limited to, ships.

(14) "Fixed capital cost" means the capital needed to provide all the depreciable components.

(15) "Large municipal solid waste landfill" (large landfill) means a municipal solid waste landfill with a design capacity greater than or equal to 2.5 million megagrams or 2.5 million cubic meters.

(16) "Modification:"

(a) except as provided in subsection (b) of this section, means any physical change in, or change in the method of operation of, an existing facility that increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or that results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted;

(b) As used in OAR 340-238-0100 means an action that results in an increase in the design capacity of a landfill.

(17) "Municipal solid waste landfill" (landfill) means an entire disposal facility in a contiguous geographical space where household waste is placed in or on land. A municipal solid waste landfill may also receive other types of RCRA Subtitle D wastes such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of a municipal solid waste landfill may be separated by access roads and may be publicly or privately owned. A municipal solid waste landfill may be a new municipal solid waste landfill, an existing municipal solid waste landfill, or a lateral expansion (modification).

(18) "New municipal solid waste landfill" (new landfill) means a municipal solid waste landfill that began construction, reconstruction or modification or began accepting waste on or after 5/30/91.

(19) "Particulate matter" means any finely divided solid or liquid material, other than uncombined water, as measured by an applicable reference method, or an equivalent or alternative method.

(20) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

(a) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility; and

(b) It is technologically and economically feasible to meet the applicable standards set forth in 40 CFR Part 60.

(21) "Reference method" means any method of sampling and analyzing for an air pollutant as specified in 40 CFR Part 60 .

(22) "Small municipal solid waste landfill" (small landfill) means a municipal solid waste landfill with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters.

(23) "Standard" means a standard of performance proposed or promulgated under 40 CFR Part 60.

(24) "State Plan" means a plan developed for the control of a designated pollutant provided under 40 CFR Part 60.

(25) "Stationary source" means any building, structure, facility, or installation that emits or may emit any air pollutant subject to regulation under the federal Clean Air Act.

(26) "Volatile organic compounds" or "VOC" means any organic compounds that participate in atmospheric photochemical reactions; or that are measured by a reference method, an equivalent method, an alternative method, or that are determined by procedures specified under any applicable rule.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 97, f. 9-2-75, ef. 9-25-75; DEQ 22-1982, f. & ef. 10-21-82; DEQ 17-1983, f. & ef. 10-19-83; DEQ 16-1984, f. & ef. 8-21-84; DEQ 15-1985, f. & ef. 10-21-85; DEQ 19-1986, f. & ef. 11-7-86; DEQ 17-1987, f. & ef. 8-24-87; DEQ 24-1989, f. & cert. ef. 10-26-89; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 8-1997, f. & cert. ef. 5-6-97; DEQ 22-1998, f. & cert. ef. 10-21-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0510; DEQ 22-2000, f. & cert. ef. 12-18-00; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 2-2006, f. & cert. ef. 3-14-06; DEQ 13-2006, f. & cert. ef. 12-22-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-238-0060
Federal Regulations Adopted by Reference

(1) Except as provided in section (2) of this rule, **40 CFR Part 60 Subparts A, D through XX, BBB through AAAA, CCCC, EEEE, IIII, and KKKK** are by this reference adopted and incorporated herein, and 40 CFR Part 60 Subpart OOO is by this reference adopted and incorporated herein for major sources only.

(2) Where "Administrator" or "EPA" appears in 40 CFR Part 60, "Department" is substituted, except in any section of 40 CFR Part 60 for which a federal rule or delegation specifically indicates that authority must not be delegated to the state.

(3) 40 CFR Part 60 Subparts adopted by this rule are titled as follows:

(a) Subpart A — General Provisions;

(b) Subpart D — Fossil-fuel-fired steam generators for which construction is commenced after August 17, 1971;

(c) Subpart Da — Electric utility steam generating units for which construction is commenced after September 18, 1978;

(d) Subpart Db — Industrial-commercial-institutional steam generating units;

(e) Subpart Dc — Small industrial-commercial-institutional steam generating units;

(f) Subpart E — Incinerators;

(g) Subpart Ea — Municipal waste combustors for which construction is commenced after December 20, 1989 and on or before September 20, 1994;

(h) Subpart Eb — Municipal waste combustors for which construction is commenced after September 20, 1994;

(i) Subpart Ec — Hospital/Medical/Infectious waste incinerators that commenced construction after June 20, 1996, or for which modification is commenced after March 16, 1998;

(j) Subpart F — Portland cement plants;

(k) Subpart G — Nitric acid plants;

(l) Subpart H — Sulfuric acid plants;

(m) Subpart I — Hot mix asphalt facilities;

(n) Subpart J — Petroleum refineries;

(o) Subpart K — Storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after June 11, 1973, and before May 19, 1978;

(p) Subpart Ka — Storage vessels for petroleum liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and before July 23, 1984;

(q) Subpart Kb — Volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984;

(r) Subpart L — Secondary lead smelters;

(s) Subpart M — Secondary brass and bronze production plants;

(t) Subpart N — Primary emissions from basic oxygen process furnaces for which construction is commenced after June 11, 1973;

(u) Subpart Na — Secondary emissions from basic oxygen process steelmaking facilities for which construction is commenced after January 20, 1983;

(v) Subpart O — Sewage treatment plants;

(w) Subpart P — Primary copper smelters;

(x) Subpart Q — Primary Zinc smelters;

(y) Subpart R — Primary lead smelters;

(z) Subpart S — Primary aluminum reduction plants;

(aa) Subpart T — Phosphate fertilizer industry: wet-process phosphoric acid plants;

(bb) Subpart U — Phosphate fertilizer industry: superphosphoric acid plants;

(cc) Subpart V — Phosphate fertilizer industry: diammonium phosphate plants;

(dd) Subpart W — Phosphate fertilizer industry: triple superphosphate plants;

(ee) Subpart X — Phosphate fertilizer industry: granular triple superphosphate storage facilities;

(ff) Subpart Y — Coal preparation plants;

(gg) Subpart Z — Ferroalloy production facilities;

(hh) Subpart AA — Steel plants: electric arc furnaces constructed after October 21, 1974 and on or before August 17, 1983;

(ii) Subpart AAa — Steel plants: electric arc furnaces and argon-oxygen decarburization vessels constructed after august 7, 1983;

(jj) Subpart BB — Kraft pulp mills;

(kk) Subpart CC — Glass manufacturing plants;

(ll) Subpart DD — Grain elevators.

(mm) Subpart EE — Surface coating of metal furniture;

(nn) Subpart GG — Stationary gas turbines;

(oo) Subpart HH — Lime manufacturing plants;

(pp) Subpart KK — Lead-acid battery manufacturing plants;

(qq) Subpart LL — Metallic mineral processing plants;

(rr) Subpart MM — Automobile and light-duty truck surface coating operations;

(ss) Subpart NN — Phosphate rock plants;

(tt) Subpart PP — Ammonium sulfate manufacture;

(uu) Subpart QQ — Graphic arts industry: publication rotogravure printing;

(vv) Subpart RR — pressure sensitive tape and label surface coating operations;

(ww) Subpart SS — Industrial surface coating: large appliances;

(xx) Subpart TT — Metal coil surface coating;

(yy) Subpart UU — Asphalt processing and asphalt roofing manufacture;

(zz) Subpart VV — Equipment leaks of VOC in the synthetic organic chemicals manufacturing industry;

(aaa) Suppart VVa – Equipment leaks of VOC in the synthetic organic chemicals manufacturing industry;

(bbb) Subpart WW — Beverage can surface coating industry;

(ccc) Subpart XX — Bulk gasoline terminals;

(ddd) Subpart BBB — Rubber tire manufacturing industry;

(eee) Subpart DDD — Volatile organic compound (VOC) emissions for the polymer manufacture industry;

(fff) Subpart FFF — Flexible vinyl and urethane coating and printing;

(ggg) Subpart GGG — Equipment leaks of VOC in petroleum refineries;

(hhh) Subpart GGGa — Equipment leaks of VOC in petroleum refineries;

(iii) Subpart HHH — Synthetic fiber production facilities;

(jjj) Subpart III — Volatile organic compound (VOC) emissions from the synthetic organic chemical manufacturing industry (SOCMI) air oxidation unit processes;

(kkk) Subpart JJJ — Petroleum dry cleaners;

(lll) Subpart KKK — Equipment leaks of VOC from onshore natural gas processing plants;

(mmm) Subpart LLL — Onshore natural gas processing; SO2 emissions;

(nnn) Subpart NNN — Volatile organic compound (VOC) emissions from synthetic organic chemical manufacturing industry (SOCMI) distillation operations;

(ooo) Subpart OOO — Nonmetallic mineral processing plants (adopted by reference for major sources only);

(ppp) Subpart PPP — Wool fiberglass insulation manufacturing plants;

(qqq) Subpart QQQ — VOC emissions from petroleum refinery wastewater systems;

(rrr) Subpart RRR — Volatile organic compound emissions from synthetic organic chemical manufacturing industry (SOCMI) reactor processes;

(sss) Subpart SSS — Magnetic tape coating facilities;

(ttt) Subpart TTT — Industrial surface coating: surface coating of plastic parts for business machines;

(uuu) Subpart UUU — Calciners and dryers in mineral industries;

(vvv) Subpart VVV -- Polymeric coating of supporting substrates facilities;

(www) Subpart WWW — Municipal solid waste landfills, as clarified by OAR 340-238-0100;

(xxx) Subpart AAAA — Small municipal waste combustion units;

(yyy) Subpart CCCC — Commercial and industrial solid waste incineration units;

(zzz) Subpart EEEE — Other solid waste incineration units;

(aaaa) Subpart IIII — Stationary compression ignition combustion engines;

(bbbb) Subpart JJJJ — Stationary spark ignition internal combustion engines;

(cccc) Subpart KKKK — Stationary combustion turbines.

Stat. Auth.: ORS 468.020

Stats. Implemented: ORS 468A.025

Hist.: DEQ 97, f. 9-2-75, ef. 9-25-75; DEQ 16-1981, f. & ef. 5-6-81; sections (1) thru (12) of this rule renumbered to 340-025-0550 thru 340-025-0605; DEQ 22-1982, f. & ef. 10-21-82; DEQ 17-1983, f. & ef. 10-19-83; DEQ 16-1984, f. & ef. 8-21-84; DEQ 15-1985, f. & ef. 10-21-85; DEQ 19-1986, f. & ef. 11-7-86; DEQ 17-1987, f. & ef. 8-24-87; DEQ 24-1989, f. & cert. ef. 10-26-89; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 27-1996, f. & cert. ef. 12-11-96; DEQ 8-1997, f. & cert. ef. 5-6-97; DEQ 22-1998, f. & cert. ef. 10-21-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0535; DEQ 22-2000, f. & cert. ef. 12-18-00; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 2-2006, f. & cert. ef. 3-14-06; DEQ 13-2006, f. & cert. ef. 12-22-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-238-0090
Delegation

(1) The Lane Regional Air Protection Agency (LRAPA) is authorized to implement and enforce, within its boundaries, the provisions of this division.

(2) The Commission may authorize LRAPA to implement and enforce its own provisions upon a finding that such provisions are at least as stringent as a corresponding provision in this division. LRAPA may implement and enforce provisions authorized by the Commission in place

of any or all of this division upon receipt of delegation from EPA. Delegation may be withdrawn for cause by the Commission.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: DEQ 97, f. 9-2-75, ef. 9-25-75; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 8-1997, f. & cert. ef. 5-6-97; DEQ 22-1998, f. & cert. ef. 10-21-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-025-0520; DEQ 15-2008, f. & cert. ef 12-31-08

340-242-0520
General Provisions

(1) No owner and/or operator of a gasoline-dispensing facility shall transfer or allow the transfer of gasoline into a motor vehicle fuel tank at gasoline-dispensing facilities located in Clackamas, Multnomah or Washington Counties whose annual throughput exceeds 600,000 gallons, unless the gasoline-dispensing facility is equipped with a stage II vapor collection system which must be approved by the Department before it is installed.

[NOTES: -1- Underground piping requirements are described in OAR 340-150-0001 through 340-150-0003 and 40 CFR 280.20(d). Systems installed according to American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System" or Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems" or American National Standards Institute Standard B31.4 "Liquid Petroleum Transportation Piping System" are considered approved systems.

-2- Above-ground stage II equipment requirements are based on systems recently approved in other states with established stage II program. See the Oregon Department of Environmental Quality, Air Quality Division, for the list of approved equipment. Any other proposed equivalent systems must be submitted to the Department of Environmental Quality, Air Quality Division, for approval before installation.]

(2) Owners and/or operators of gasoline-dispensing facilities subject to stage II vapor collection requirements must:

(a) Install all necessary stage II vapor collection and control systems, and make any modifications necessary to comply with the requirements;

(b) Provide adequate training and written instructions to the operator of the affected gasoline-dispensing facility and the gasoline transport vehicle;

(c) Replace, repair or modify any worn or ineffective component or design element to ensure the vapor-tight integrity and efficiency of the stage II vapor collection systems; and

(d) Connect and ensure proper operation of the stage II vapor collection systems whenever gasoline is being loaded, unloaded or dispensed.

(3) Approval of a stage II vapor collection system by the Department does not relieve the owner and/or operator of the responsibility to comply with other applicable codes and regulations pertaining to fire prevention, weights and measures and safety matters.

(4) Regarding installation and testing of piping for stage II vapor collection systems:

(a) Piping shall be installed in accordance with standards in OAR 340 division 150;

(b) Piping shall be installed by a licensed installation service provider pursuant to OAR 340 division 160; and

(c) Piping shall be tested prior to being placed into operation by an installation or tank tightness testing service provider licensed pursuant to OAR 340 division 160.

NOTE: Test methods are based on methods used in other states with established stage II programs. See the Oregon Department of Environmental Quality, Air Quality Division, for copies of the approved test methods.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 7-1991, f. & cert. ef. 5-7-91 (and corrected 6-7-91); DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 25-1994, f. & cert. ef. 11-22-94; DEQ 16-1996, f. & cert. ef. 8-14-96; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-022-0402; DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0020
Delegation of Authority

(1) The Lane Regional Air Protection Agency (LRAPA) is authorized to implement and enforce, within its boundaries, this Division.

(2) The Commission may authorize LRAPA to implement and enforce its own provisions upon a finding that such provisions are at least as stringent as a corresponding provision in this Division. LRAPA may implement and enforce provisions authorized by the Commission in place of any or all of this Division upon receipt of delegation from EPA or approval of such provisions under Section 112(1) of the Federal Clean Air Act. Authorization provided under this section may be withdrawn for cause by the Commission.

Stat. Auth.: ORS 468 & 468A
Stats. Implemented: ORS 468A.025
Hist.: DEQ 13-1993, f. & cert. ef. 9-24-93; DEQ 18-1993, f. & cert. ef. 11-4-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-032-0110; DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0030
Definitions

The definitions in OAR 340-200-0020, 340-218-0030 and this rule apply to this division. If the same term is defined in this rule and OAR 340-200-0020 or 340-218-0030, the definition in this rule applies to this division.

(1) "Accidental Release" means an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.

(2) "Act" and "FCAA" mean the Federal Clean Air Act, Public Law 88-206 as last amended by Public Law 101-549.

(3) "Annual throughput" means the amount of gasoline transferred into a gasoline dispensing facility during 12 consecutive months.

(4) "Area Source" means any stationary source which has the potential to emit hazardous air pollutants but is not a major source of hazardous air pollutants.

(5) "CFR" means Code of Federal Regulations and, unless otherwise expressly identified, refers to the July 1, 2008 edition.

(6) "Commission" means the Oregon Environmental Quality Commission.

(7) "Construct a major source" means to fabricate, erect, or install at any greenfield site a stationary source or group of stationary sources which is located within a contiguous area and under common control and which emits or has the potential to emit 10 tons per year oaf any HAPs or 25 tons per year of any combination of HAP, or to fabricate, erect, or install at any developed site a new process or production unit which in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, unless the process or production unit satisfies criteria in paragraphs (a) through (f) of this definition:

(a) All HAP emitted by the process or production unit that would otherwise be controlled under the requirements of 40 CFR Part 63, Subpart B will be controlled by emission control equipment which was previously installed at the same site as the process or production unit;

(b) The Department has determined within a period of 5 years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented the best available control technology (BACT), lowest achievable emission rate (LAER) under 40 CFR part 51 or 52, toxics-best available control technology (T-BACT), or MACT based on State air toxic rules for the category of pollutants which includes those HAP to be emitted by the process or production unit; or the Department determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT, LAER, T-BACT, or State air toxic rule MACT determination).

(c) The Department determines that the percent control efficiency for emission of HAP from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit;

(d) The Department has provided notice and an opportunity for public comment concerning its determination that criteria in paragraphs (a), (b), and (c) of this definition apply and concerning the continued adequacy of any prior LAER, BACT, T-BACT, or State air toxic rule MACT determination;

(e) If any commenter has asserted that a prior LAER, BACT, T-BACT, or State air toxic rule MACT determination is no longer adequate, the Department has determined that the level of control required by that prior determination remains adequate; and

(f) Any emission limitations, work practice requirements, or other terms and conditions upon which the above determinations by the Department are predicated will be construed by the Department as applicable requirements under section 504(a) and either have been incorporated into any existing Title V permit for the affected facility or will be incorporated into such permit upon issuance.

(8) "Department" means the Department of Environmental Quality.

(9) "Director" means the Director of the Department or Regional Agency, and authorized deputies or officers.

(10) "Dual-point vapor balance system" means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

(11) "Emission" means a release into the atmosphere of any regulated pollutant or air contaminant.

(12) "Emissions Limitation" and "Emissions Standard" mean a requirement adopted by the Department or Regional Agency, or proposed or promulgated by the Administrator of the EPA, which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operation or maintenance procedures for a source to assure continuous emission reduction.

(13) "Emissions Unit" means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant.

(a) A part of a stationary source is any machine, equipment, raw material, product, or by-product that produces or emits air pollutants. An activity is any process, operation, action, or reaction (e.g., chemical) at a stationary source that emits air pollutants. Except as described in paragraph (d) of this definition, parts and activities may be grouped for purposes of defining an emissions unit provided the following conditions are met:

(A) The group used to define the emissions unit may not include discrete parts or activities to which a distinct emissions standard applies or for which different compliance demonstration requirements apply; and

(B) The emissions from the emissions unit are quantifiable.

(b) Emissions units may be defined on a pollutant by pollutant basis where applicable;

(c) The term "emissions unit" is not meant to alter or affect the definition of the term "unit" for purposes of Title IV of the FCAA;

(d) Parts and activities cannot be grouped for determining emissions increases from an emissions unit under OAR 340-224-0050 through 340-224-0070, or OAR 340 division 210, or for determining the applicability of a New Source Performance Standard (NSPS).

(14) "EPA" means the Administrator of the United States Environmental Protection Agency or the Administrator's designee.

(15) "Equipment leaks" means leaks from pumps, compressors, pressure relief devices, sampling connection systems, open ended valves or lines, valves, connectors, agitators, accumulator vessels, and instrumentation systems in hazardous air pollutant service.

(16) "Existing Source" means any source, the construction of which commenced prior to proposal of an applicable standard under sections 112 or 129 of the FCAA.

(17) "Facility" means all or part of any public or private building, structure, installation, equipment, or vehicle or vessel, including but not limited to ships.

(18) "Fugitive Emissions" means emissions of any air contaminant that escape to the atmosphere from any point or area that is not identifiable as a stack, vent, duct or equivalent opening.

(19) "Gasoline cargo tank" means a delivery tank truck or railcar which is loading gasoline or which has loaded gasoline on the immediately previous load.

(20) "Gasoline dispensing facility (GDF)" means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle.

(21) "Hazardous Air Pollutant" (HAP) means an air pollutant listed by the EPA pursuant to section 112(b) of the FCAA or determined by the Commission to cause, or reasonably be anticipated to cause, adverse effects to human health or the environment.

(22) "Major Source" means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. The EPA may establish a lesser quantity, or in the case of radionuclides different criteria, for a major source on the basis of the potency of the air pollutant, persistence, potential for bioaccumulation, other characteristics of the air pollutant, or other relevant factors.

(23) "Maximum Achievable Control Technology (MACT)" means an emission standard applicable to major sources of hazardous air pollutants that requires the maximum degree of reduction in emissions deemed achievable for either new or existing sources.

(24) "Monthly throughput" means the total volume of gasoline that is loaded into all gasoline storage tanks during a month, as calculated on a rolling 30-day average.

(25) "New Source" means a stationary source, the construction of which is commenced after proposal of a federal MACT or January 3, 1993 of this Division, whichever is earlier.

(26) "Person" means the United States Government and agencies thereof, any state, individual, public or private corporation, political subdivision, governmental agency, municipality, industry, co-partnership, association, firm, trust, estate, or any other legal entity whatsoever.

(27) "Potential to Emit" means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the EPA. This section does not alter or affect the use of this section for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder. Secondary emissions shall not be considered in determining the potential to emit of a source.

(28) "Reconstruct a Major Source" means the replacement of components at an existing process or production unit that in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAP, whenever: the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable process or production unit; and; it is technically and economically feasible for the reconstructed major source to meet the applicable maximum achievable control technology emission limitation for new sources established under 40 CFR Part 63 Subpart B.

(29) "Regional Agency" means Lane Regional Air Protection Agency.

(30) "Regulated Air Pollutant" as used in this Division means:

(a) Any pollutant listed under OAR 340-200-0400 or 340-244-0230; or

(b) Any pollutant that is subject to a standard promulgated pursuant to Section 129 of the Act.

(31) "Secondary Emissions" means emissions from new or existing sources which occur as a result of the construction and/or operation of a source or modification, but do not come from the source itself. Secondary emissions shall be specific, well defined, and quantifiable, and impact the same general area as the source associated with the secondary emissions. Secondary emissions may include but are not limited to:

(a) Emissions from ships and trains coming to or from a facility;

(b) Emissions from offsite support facilities which would be constructed or would otherwise increase emissions as a result of the construction of a source or modification.

(32) "Section 111" means that section of the FCAA that includes standards of performance for new stationary sources.

(33) "Section 112(b)" means that subsection of the FCAA that includes the list of hazardous air pollutants to be regulated.

(34) "Section 112(d)" means that subsection of the FCAA that directs the EPA to establish emission standards for sources of hazardous air pollutants. This section also defines the criteria to be used by EPA when establishing the emission standards.

(35) "Section 112(e)" means that subsection of the FCAA that directs the EPA to establish and promulgate emissions standards for categories and subcategories of sources that emit hazardous air pollutants.

(36) "Section 112(n)" means that subsection of the FCAA that includes requirements for the EPA to conduct studies on the hazards to public health prior to developing emissions standards for specified categories of hazardous air pollutant emission sources.

(37) "Section 112(r)" means that subsection of the FCAA that includes requirements for the EPA promulgate regulations for the prevention, detection and correction of accidental releases.

(38) "Section 129" means that section of the FCAA that requires EPA to promulgate regulations for solid waste combustion.

(39) "Solid Waste Incineration Unit" as used in this Division shall have the same meaning as given in Section 129(g) of the FCAA.

(40) "Stationary Source":

(a) As used in OAR 340 division 244 means any building, structure, facility, or installation which emits or may emit any regulated air pollutant;

(b) As used in OAR 340-244-0230 means any buildings, structures, equipment, installations, or substance emitting stationary activities:

(A) That belong to the same industrial group;

(B) That are located on one or more contiguous properties;

(C) That are under the control of the same person (or persons under common control); and

(D) From which an accidental release may occur.

(41) "Submerged filling" means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in OAR 340-244-0242(2) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

(42) “Vapor balance system” means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

(43) “Vapor-tight” means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

[Publications: Publications referenced are available from the agency.]

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

Stats. Implemented: ORS 468A.040

Hist.: DEQ 13-1993, f. & cert. ef. 9-24-93; DEQ 18-1993, f. & cert. ef. 11-4-93; DEQ 24-1994, f. & cert. ef. 10-28-94; DEQ 22-1995, f. & cert. ef. 10-6-95; DEQ 26-1996, f. & cert. ef. 11-26-96; DEQ 20-1997, f. & cert. ef. 9-25-97; DEQ 18-1998, f. & cert. ef. 10-5-98; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-032-0120; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 2-2006, f. & cert. ef. 3-14-06; DEQ 13-2006, f. & cert. ef. 12-22-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0100
Applicability

The requirements of **40 CFR Part 63, Subpart D** apply to an owner or operator of an existing source who wishes to obtain a compliance extension and an alternative emission limit from a standard issued under Section 112(d) of the FCAA. Any owner or operator of a facility who elects to comply with a compliance extension and alternative emission limit issued under this section must complete a permit application as prescribed in 40 CFR 63.77.

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

Stats. Implemented: ORS 468A.310

Hist.: DEQ 13-1993, f. & cert. ef. 9-24-93; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-032-0300; DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0210
Emissions Limitation for Existing Sources

(1) Federal MACT. Existing major and area sources must comply with the applicable emissions standards for existing sources promulgated by the EPA pursuant to section 112(d), section 112(n), or section 129 of the FCAA and adopted by rule within this Division.

(2) State MACT. If the EPA fails to meet its schedule for promulgating a MACT standard for a source category or subcategory, the Department must approve HAP emissions limitations for existing major sources within that category or subcategory according to 40 CFR Part 63, Subpart B.

(a) The owner or operator of each existing major source within that category will file permit applications in accordance with OAR 340-218-0040 and 40 CFR Part 63, Subpart B.

(b) If, after a permit has been issued, the EPA promulgates a MACT standard applicable to a source that is more stringent than the one established pursuant to this section, the Department may revise the permit upon the next renewal to reflect the standard promulgated by the EPA. The source will be given a reasonable time to comply, but no longer than 8 years after the standard is promulgated;

(c) The Department will not establish a case-by-case State MACT:

(A) For existing solid waste incineration units where an emissions standard will be established for these units by the EPA pursuant to section 111 of the FCAA. These sources are subject to applicable emissions standards under OAR chapter 340, division 230; or

(B) For existing major HAP sources where an emissions standard or alternative control strategy will be established by the EPA pursuant to section 112(n) of the FCAA.

(3) Compliance schedule:

(a) The owner or operator of the source must comply with the emission limitation:

(A) Within the time frame established in the applicable Federal MACT standard, but in no case later than three years from the date of federal promulgation of the applicable MACT requirements; or

(B) Within the time frame established by the Department where a state-determined MACT has been established or a case-by-case determination has been made.

(b) Notwithstanding the requirements of this section, no existing source that has installed Best Available Control Technology or has been required to meet Lowest Achievable Emission Rate before the promulgation of a federal MACT applicable to that emissions unit is be required to comply with such MACT standard until 5 years after the date on which such installation or reduction has been achieved, as determined by the Department.

Stat. Auth.: ORS 468 & 468A

Stats. Implemented: ORS 468A.310

Hist.: DEQ 13-1993, f. & cert. ef. 9-24-93; DEQ 7-1998, f. & cert. ef. 5-5-98; DEQ 18-1998, f. & cert. ef. 10-5-98, Renumbered from 340-032-2500; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-032-0505; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0220
Federal Regulations Adopted by Reference

(1) Except as provided in sections (2) and (3) of this rule, **40 CFR Part 61, Subparts A, C through F, J, L, N through P, V, and Y through FF and 40 CFR Part 63, Subparts A, F through BBBBBB, DDDDDD through GGGGGG, and LLLLLL through TTTTTT** are adopted by reference and incorporated herein.

(2) Where “Administrator” or “EPA” appears in 40 CFR Part 61 or 63, “Department” is substituted, except in any section of 40 CFR Part 61 or 63, for which a federal rule or delegation specifically indicates that authority will not be delegated to the state.

(3) 40 CFR Part 63 Subpart M — Dry Cleaning Facilities using Perchloroethylene: The exemptions in 40 CFR 63.320(d) and (e) do not apply.

(4) 40 CFR Part 61 Subparts adopted by this rule are titled as follows:

(a) Subpart A — General Provisions;

(b) Subpart C — Beryllium;

(c) Subpart D — Beryllium Rocket Motor Firing;

(d) Subpart E — Mercury;

(e) Subpart F — Vinyl Chloride;

(f) Subpart J — Equipment Leaks (Fugitive Emission Sources) of Benzene;

(g) Subpart L — Benzene Emissions from Coke By-Product Recovery Plants;

(h) Subpart N — Inorganic Arsenic Emissions from Glass Manufacturing Plants;

(i) Subpart O — Inorganic Arsenic Emissions from Primary Copper Smelters;

(j) Subpart P — Inorganic Arsenic Emissions from Arsenic Trioxide and Metal Arsenic Facilities;

(k) Subpart V — Equipment Leaks (Fugitive Emission Sources);

(l) Subpart Y — Benzene Emissions from Benzene Storage Vessels;

(m) Subpart BB — Benzene Emissions from Benzene Transfer Operations; and

(n) Subpart FF — Benzene Waste Operations.

(5) 40 CFR Part 63 Subparts adopted by this rule are titled as follows:

(a) Subpart A — General Provisions;

(b) Subpart F — SOCMI;

(c) Subpart G — SOCMI — Process Vents, Storage Vessels, Transfer Operations, and Wastewater;

(d) Subpart H — SOCMI — Equipment Leaks;

(e) Subpart I — Certain Processes Subject to the Negotiated Regulation for Equipment Leaks;

(f) Subpart J — Polyvinyl Chloride and Copolymers Production;

(g) Subpart L — Coke Oven Batteries;

(h) Subpart M — Perchloroethylene Air Emission Standards for Dry Cleaning Facilities (as codified in the July 1, 2006 CFR);

(i) Subpart N — Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks;

(j) Subpart O — Ethylene Oxide Emissions Standards for Sterilization Facilities;

(k) Subpart Q — Industrial Process Cooling Towers;

(l) Subpart R — Gasoline Distribution (Bulk Gasoline Terminals and Pipeline Breakout Stations);

(m) Subpart S — Pulp and Paper Industry;

(n) Subpart T — Halogenated Solvent Cleaning;

(o) Subpart U — Group I Polymers and Resins;

(p) Subpart W — Epoxy Resins and Non-Nylon Polyamides Production;

(q) Subpart X — Secondary Lead Smelting;

(r) Subpart Y — Marine Tank Vessel Loading Operations;

(s) Subpart AA — Phosphoric Acid Manufacturing Plants;

(t) Subpart BB — Phosphate Fertilizer Production Plants;

(u) Subpart CC — Petroleum Refineries;

(v) Subpart DD — Off-Site Waste and Recovery Operations;

(w) Subpart EE — Magnetic Tape Manufacturing Operations;

(x) Subpart GG — Aerospace Manufacturing and Rework Facilities;

(y) Subpart HH — Oil and Natural Gas Production Facilities;

(z) Subpart II — Shipbuilding and Ship Repair (Surface Coating);

(aa) Subpart JJ — Wood Furniture Manufacturing Operations;

(bb) Subpart KK — Printing and Publishing Industry;

(cc) Subpart LL — Primary Aluminum Reduction Plants;

(dd) Subpart MM — Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite and Stand-Alone Semi-Chemical Pulp Mills;

(ee) Subpart OO — Tanks — Level 1;

(ff) Subpart PP — Containers;

(gg) Subpart QQ — Surface Impoundments;

(hh) Subpart RR — Individual Drain Systems;

(ii) Subpart SS — Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process;

(jj) Subpart TT — Equipment Leaks — Control Level 1;

(kk) Subpart UU — Equipment Leaks — Control Level 2;

(ll) Subpart VV — Oil-Water Separators and Organic-Water Separators;

(mm) Subpart WW — Storage Vessels (Tanks) — Control Level 2;

(nn) Subpart XX — Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations;

(oo) Subpart YY — Generic Maximum Achievable Control Technology Standards;

(pp) Subpart CCC — Steel Pickling — HCl Process Facilities and Hydrochloric Acid Regeneration Plants;

(qq) Subpart DDD — Mineral Wool Production;

(rr) Subpart EEE — Hazardous Waste Combustors;

(ss) Subpart GGG — Pharmaceuticals Production;

(tt) Subpart HHH — Natural Gas Transmission and Storage Facilities;

(uu) Subpart III — Flexible Polyurethane Foam Production;

(vv) Subpart JJJ — Group IV Polymers and Resins;

(ww) Subpart LLL — Portland Cement Manufacturing Industry;

(xx) Subpart MMM — Pesticide Active Ingredient Production;

(yy) Subpart NNN — Wool Fiberglass Manufacturing;

(zz) Subpart OOO — Manufacture of Amino/Phenolic Resins;

(aaa) Subpart PPP — Polyether Polyols Production;

(bbb) Subpart QQQ — Primary Copper Smelting;

(ccc) Subpart RRR — Secondary Aluminum Production;

(ddd) Subpart TTT — Primary Lead Smelting;

(eee) Subpart UUU — Petroleum Refineries — Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units;

(fff) Subpart VVV — Publicly Owned Treatment Works;

(ggg) Subpart XXX — Ferroalloys Production: Ferromanganese and Silicomanganese;

(hhh) Subpart AAAA — Municipal Solid Waste Landfills;

(iii) Subpart CCCC — Manufacturing of Nutritional Yeast;

(jjj) Subpart DDDD — Plywood and Composite Wood Products;

(kkk) Subpart EEEE — Organic Liquids Distribution (non-gasoline);

(lll) Subpart FFFF — Miscellaneous Organic Chemical Manufacturing;

(mmm) Subpart GGGG — Solvent Extraction for Vegetable Oil Production;

(nnn) Subpart HHHH — Wet Formed Fiberglass Mat Production;

(ooo) Subpart IIII — Surface Coating of Automobiles and Light-Duty Trucks;

(ppp) Subpart JJJJ — Paper and Other Web Coating;

(qqq) Subpart KKKK — Surface Coating of Metal Cans;

(rrr) Subpart MMMM — Surface Coating of Miscellaneous Metal Parts and Products;

(sss) Subpart NNNN — Surface Coating of Large Appliances;

(ttt) Subpart OOOO — Printing, Coating, and Dyeing of Fabrics and Other Textiles;

(uuu) Subpart PPPP — Surface Coating of Plastic Parts and Products;

(vvv) Subpart QQQQ — Surface Coating of Wood Building Products;

(www) Subpart RRRR — Surface Coating of Metal Furniture;

(xxx) Subpart SSSS — Surface Coating of Metal Coil;

(yyy) Subpart TTTT — Leather Finishing Operations;

(zzz) Subpart UUUU — Cellulose Production Manufacturing;

(aaaa) Subpart VVVV — Boat Manufacturing;

(bbbb) Subpart WWWW — Reinforced Plastics Composites Production;

(cccc) Subpart XXXX — Rubber Tire Manufacturing;

(dddd) Subpart YYYY — Stationary Combustion Turbines;

(eeee) Subpart ZZZZ — Reciprocating Internal Combustion Engines;

(ffff) Subpart AAAAA — Lime Manufacturing;

(gggg) Subpart BBBBB — Semiconductor Manufacturing;

(hhhh) Subpart CCCCC — Coke Ovens: Pushing, Quenching & Battery Stacks;

(jjjj) Subpart EEEEE — Iron and Steel Foundries;

(kkkk) Subpart FFFFF — Integrated Iron and Steel Manufacturing Facilities;

(llll) Subpart GGGGG — Site Remediation;

(mmmm) Subpart HHHHH — Misc. Coating Manufacturing;

(nnnn) Subpart IIIII — Mercury Cell Chlor-Alkali Plants;

(oooo) Subpart JJJJJ — Brick and Structural Clay Products Manufacturing;

(pppp) Subpart KKKKK — Clay Ceramics Manufacturing;

(qqqq) Subpart LLLLL — Asphalt Processing & Asphalt Roofing Manufacturing;

(rrrr) Subpart MMMMM — Flexible Polyurethane Foam Fabrication Operations;

(ssss) Subpart NNNNN — Hydrochloric Acid Production;

(tttt) Subpart PPPPP — Engine Tests Cells/Stands;

(uuuu) Subpart QQQQQ — Friction Materials Manufacturing Facilities;

(vvvv) Subpart RRRRR — Taconite Iron Ore Processing;

(wwww) Subpart SSSSS — Refractory Products Manufacturing;

(xxxx) Subpart TTTTT — Primary Magnesium Refining;

(yyyy) Subpart WWWWW — Area Sources: Hospital Ethylene Oxide Sterilization;

(zzzz) Subpart YYYYY – Area Sources: Electric Arc Furnace Steelmaking Facilities;

(aaaaa) Subpart ZZZZZ — Area Sources: Iron and Steel Foundries;

(bbbbb) Subpart BBBBBB — Area Sources: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities;

(ccccc) Subpart DDDDDD — Area Sources: Polyvinyl Chloride and Copolymers Production;

(ddddd) Subpart EEEEEE — Area Sources: Primary Copper Smelting;

(eeeee) Subpart FFFFFF — Area Sources: Secondary Copper Smelting;

(fffff) Subpart GGGGGG — Area Sources: Primary Nonferrous Metals – Zinc, Cadmium, and Beryllium;

(ggggg) Subpart LLLLLL — Area Sources: Acrylic and Modacrylic Fibers Production;

(hhhhh) Subpart MMMMMM — Area Sources: Carbon Black Production;

(iiiii) Subpart NNNNNN — Area Sources: Chemical Manufacturing: Chromium Compounds;

(jjjjj) Subpart OOOOOO — Area Sources: Flexible Polyurethane Foam Production;

(kkkkk) Subpart PPPPPP — Area Sources: Lead Acid Battery Manufacturing;

(lllll) Subpart QQQQQQ — Area Sources: Wood Preserving;

(mmmmm) Subpart RRRRRR — Area Sources: Clay Ceramics Manufacturing;

(nnnnn) Subpart SSSSSS — Area Sources: Glass Manufacturing;

(ooooo) Subpart TTTTTT — Area Sources: Secondary Nonferrous Metals Processing.

Stat. Auth.: ORS 468.020
Stats. Implemented: ORS 468A.025
Hist.: [DEQ 16-1995, f. & cert. ef. 6-21-95; DEQ 28-1996, f. & cert. ef. 12-19-96; DEQ 18-1998, f. & cert. ef. 10-5-98]; [DEQ 18-1993, f. & cert. ef. 11-4-93; DEQ 32-1994, f. & cert. ef. 12-22-94]; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-032-0510, 340-032-5520; DEQ 11-2000, f. & cert. ef. 7-27-00; DEQ 15-2001, f. & cert. ef. 12-26-01; DEQ 4-2003, f. & cert. ef. 2-06-03; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 2-2006, f. & cert. ef. 3-14-06; DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0232
Purpose

This rule establishes emission limitations and management practices for hazardous air pollutants (HAP) and volatile organic compounds (VOC) emitted from the loading of gasoline storage tanks and dispensing of fuel at gasoline dispensing facilities (GDF). This rule also establishes requirements to demonstrate compliance with the emission limitations and management practices.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0234
Affected Sources

(1) The affected source to which the emission standards apply is each GDF. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.(2) The emissions standards in OAR 340-244-0236 through 0252 do not apply to

agricultural operations as defined in ORS 468A.020. Agricultural operations are however required to comply with the Gasoline Dispensing NESHAP, if applicable (40 CFR part 63 subpart CCCCCC).

(3) All GDFs must comply with the requirements of OAR 340-244-0240.

(4) The owner or operator of a GDF must comply with the requirements of OAR 340-244-0242 for the following gasoline storage tanks:

(a) All tanks with a capacity of 250 gallons or more located at GDFs:

(A) Whose annual throughput exceeds 480,000 gallons of gasoline or more;

(B) Whose average monthly throughput exceeds 100,000 gallons of gasoline or more; or

(C) In Clackamas, Multnomah, or Washington County whose annual throughput exceeds 120,000 gallons of gasoline or more.

(b) All tanks with a capacity of 1,500 gallons or more located at GDFs in the Portland AQMA, Medford AQMA, or Salem SATS.

(5) The owner or operator of a GDF must comply with the requirements of OAR 340-244-0242(4) for any gasoline storage tank equipped with a vapor balance system.

(6) An affected source must, upon request by the Department, demonstrate their annual or average monthly throughput.

(7) The owner or operator of an affected source, as defined in section (1) of this rule, is not required to obtain a Title V Operating Permit. However, the owner or operator must still apply for and obtain a Title V Operating Permit if meeting one or more of the applicability criteria found in OAR 340-218-0020.

(8) The loading of aviation gasoline storage tanks at airports is not subject to this rule and the aviation gasoline is not included in the gasoline throughput specified in sections (2) through (5) of this rule.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0236
Affected Equipment or Processes

(1) The emission sources to which this rule applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in OAR 340-244-0234. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this rule.

(2) An affected source is a new affected source if construction commenced on the affected source after November 9, 2006, and the applicability criteria in OAR 340-244-0234 are met at the time operation commenced.

(3) An affected source is reconstructed if meeting the criteria for reconstruction as defined in 40 CFR 63.2.

(4) An affected source is an existing affected source if it is not new or reconstructed.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & ORS 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0238
Compliance Dates

(1) For a new or reconstructed affected source, the owner or operator must comply with the standards in OAR 340-244-0240 and 0242, as applicable, no later than January 10, 2008 or upon startup, whichever is later, except as follows:

(a) The owner or operator of a new or reconstructed GDF must comply with OAR 340-244-0240(1)(b) and (c) no later than July 1, 2009 or upon startup, whichever is later.

(b) For tanks located at a GDF with average monthly throughput less than 100,000 gallons of gasoline and not listed in OAR 340-244-0234(4)(a)(C) or (4)(b) must comply with OAR 340-244-0242, as applicable, no later than December 13, 2009 or upon startup, whichever is later.

(c) The owner or operator of a GDF subject to Table 4 of this division must comply no later than September 23, 2008 or upon startup, whichever is later.

(2) For an existing affected source, the owner or operator must comply with the standards in OAR 340-244-0240 and 0242, as applicable, by no later than January 10, 2011, except as follows:

(a) For tanks with a capacity between 1,500 and 40,000 gallons and located in the Portland AQMA, Medford AQMA, or Salem SATS, the owner or operator must comply with the standards in OAR 340-244-0240(2) and 0242 no later than December 13, 2008.

(b) For tanks located at an affected source in Clackamas, Multnomah, or Washington County, whose annual throughput exceeds 120,000 gallons, the owner or operator must comply with the standards in OAR 340-244-0240(2) and 0242 no later than December 13, 2008.

(c) The owner or operator of an existing GDF must comply with OAR 340-244-0240(1)(b) and (c) no later than July 1, 2009 or upon startup, whichever is later.

(3) For an existing affected source that becomes subject to the control requirements in this rule because of an increase in the average monthly throughput, as specified in OAR 340-244-0234(4), the owner or operator must comply with the standards in this rule no later than January 10, 2011 or within 2 years after the affected source becomes subject to the control requirements in this rule, whichever is later.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0240
Work Practice and Submerged Fill Requirements

(1) The owner or operator of a GDF must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(a) Minimize gasoline spills;

(b) Do not top off or overfill vehicle tanks;

(c) Post a sign at the GDF instructing attendants not to top off vehicle tanks;

(d) Clean up spills as expeditiously as practicable;

(e) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(f) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(g) Ensure that cargo tanks unloading at the GDF comply with subsections (1)(a) through (e) of this rule.

(2) Any cargo tank unloading at a GDF equipped with a functional vapor balance system must connect to the vapor balance system whenever gasoline is being loaded.

(3) The owner or operator must only load gasoline into storage tanks at the facility by utilizing submerged filling, as defined in OAR 340-244-0030, and as specified in subsection (2)(a) or (2)(b) of this rule.

(a) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the storage tank.

(b) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the storage tank.

(4) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in section (2) of this rule.

(5) The owner or operator must submit the applicable notifications as required under OAR 340-244-0246.

(6) The owner or operator must have records available within 24 hours of a request by the Department to document gasoline throughput.

(7) The owner or operator must comply with the requirements of this rule by the applicable dates specified in OAR 340-244-0238.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0242
Vapor Balance Requirements

(1) Except as provided in section (2) of this rule, the owner or operator of gasoline storage tank listed in OAR 340-244-0234(4), must meet the requirements in either subsection (1)(a) or (1)(b) of this rule.

(a) Each management practice in Table 4 of this division that applies to the GDF.

(b) If, prior to January 10, 2008, the owner or operator operates a vapor balance system at the GDF that meets the requirements of either paragraph (2)(b)(A) or (2)(b)(B) of this rule, the owner or operator will be deemed in compliance with this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 4 of this division.

(2) Gasoline storage tanks equipped with floating roofs or the equivalent are not required to comply with the control requirements in section (1) of this rule.

(3) Cargo tanks unloading at a GDF must comply with the requirements of OAR 340-244-0240(1) and management practices in Table 5 of this division.

(4) The owner or operator of a GDF subject to section (1) of this rule or having a gasoline storage tank equipped with a vapor balance system, must comply with the following requirements on and after the applicable compliance date in OAR 340-244-0238:

(a) When loading a gasoline storage tank equipped with a vapor balance system, connect and ensure the proper operation of the vapor balance system whenever gasoline is being loaded.

(b) Maintain all equipment associated with the vapor balance system to be vapor tight and in good working order.

(c) In order to ensure that the vapor balance equipment is maintained to be vapor tight and in good working order, have the vapor balance equipment inspected on an annual basis to discover potential or actual equipment failures.

(d) Replace, repair or modify any worn or ineffective component or design element within 24 hours to ensure the vapor-tight integrity and efficiency of the vapor balance system. If repair parts must be ordered, either a written or verbal order for those parts must be initiated within 2 working days of detecting such a leak. Such repair parts must be installed within 5 working days after receipt.

(5) The owner or operator of a GDF subject to section (1) of this rule must also comply with the following requirements:

(a) The applicable testing requirements contained in OAR 340-244-0244.

(b) The applicable notification requirements under OAR 340-244-0246.

(c) The applicable recordkeeping and reporting requirements as specified in OAR 340-244-0248 and 0250.

(d) The owner or operator must have records available within 24 hours of a request by the Department to document gasoline throughput.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0244
Testing and Monitoring Requirements

(1) If required to install a vapor balance system under OAR 340-244-0242, the owner or operator must comply with the requirements in subsections (1)(a) and (b) of this rule at the time of installation of a vapor balance system or a new gasoline storage tank. Each owner or operator of a GDF with monthly throughput of 100,000 gallons of gasoline or more must comply the requirements in subsections (1)(a) and (b) of this rule every 3 years following the time of installation of a vapor balance system or a new gasoline storage tank.

(a) The owner or operator must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 4 of this division, for pressure-vacuum vent valves installed on gasoline storage tanks using the test methods identified in paragraph (1)(a)(A) or (B) of this rule.

(A) California Air Resources Board Vapor Recovery Test Procedure TP–201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see 40 CFR 63.14).

(B) Use alternative test methods and procedures in accordance with the alternative test method requirements in 40 CFR 63.7(f).

(b) The owner or operator must demonstrate compliance with the static pressure performance requirement, specified in item 1(h) of Table 4 of this division, for the vapor balance system by conducting a static pressure test on the gasoline storage tanks using the test methods identified in paragraph (1)(b)(A) or (B) of this rule.

(A) California Air Resources Board Vapor Recovery Test Procedure TP–201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see 40 CFR 63.14).

(B) Use alternative test methods and procedures in accordance with the alternative test method requirements in 40 CFR 63.7(f).

(2) Each owner or operator of a GDF, choosing, under the provisions of 40 CFR 63.6(g), to use a vapor balance system other than that described in Table 4 of this division, must demonstrate to the Department the equivalency of their vapor balance system to that described in Table 4 of this division using the procedures specified in subsections (2)(a) through (c) of this rule.

(a) The owner or operator must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP–201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see 40 CFR 63.14).

(b) The owner or operator must, during the initial performance test required under subsection (2)(a) of this rule, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 4 of this division and for the static pressure performance requirement in item 1(h) of Table 4 of this division.

(c) The owner or operator must comply with the testing requirements specified in section (1) of this rule.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0246
Notifications

(1) Each owner or operator subject to the control requirements in OAR 340-244-0240(2) must comply with subsections (1)(a) through (c) of this rule.

(a) The owner or operator must submit an Initial Notification that the owner or operator is subject to the Gasoline Dispensing Facilities NESHAP by May 9, 2008, or at the time the owner or operator becomes subject to the control requirements in OAR 340-244-0240(2), unless the owner or operator meets the requirements in subsection (1)(c) of this rule. The Initial Notification must contain the information specified in paragraphs (1)(a)(A) through (C) of this rule. The notification must be submitted to EPA's Region 10 Office and the Department as specified in 40 CFR 63.13.

(A) The name and address of the owner and the operator.

(B) The address (i.e., physical location) of the GDF.

(C) A statement that the notification is being submitted in response to the Gasoline Dispensing Facilities NESHAP and identifying the requirements in OAR 340-244-0240(1) through (3) that apply to the owner or operator.

(b) The owner or operator must submit a Notification of Compliance Status to EPA's Region 10 Office and the Department, as specified in 40 CFR 63.13, by the compliance date specified in OAR 340-244-0238 unless the owner or operator meets the requirements in subsection (1)(c) of this rule. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy and must indicate whether the source has complied with the requirements of OAR 340-244-0232 through 0252. If the facility is in compliance with the requirements of OAR 340-244-0232 through 0252 at the time the Initial Notification required under subsection (1)(a) of this rule is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under subsection (1)(a) of this rule.

(c) If, prior to January 10, 2008, the owner or operator is operating in compliance with an enforceable State rule or permit that requires submerged fill as specified in OAR 340-244-0240(2), the owner or operator is not required to submit an Initial Notification or a Notification of Compliance Status under subsection (1)(a) or (b) of this rule.

(2) Each owner or operator subject to the control requirements in OAR 340-244-0242 must comply with subsections (2)(a) through (e) of this rule.

(a) The owner or operator must submit an Initial Notification that the owner or operator is subject to the Gasoline Dispensing Facilities NESHAP by May 9, 2008, or at the time the owner or operator becomes subject to the control requirements in OAR 340-244-0242. The Initial Notification must contain the information specified in paragraphs (2)(a)(A) through (C) of this rule. The notification must be submitted to EPA's Region 10 Office and the Department as specified in 40 CFR 63.13.

(A) The name and address of the owner and the operator.

(B) The address (i.e., physical location) of the GDF.

(C) A statement that the notification is being submitted in response to the Gasoline Dispensing Facilities NESHAP and identifying the requirements in OAR 340-244-0242 that apply to the owner or operator.

(b) The owner or operator must submit a Notification of Compliance Status to EPA's Regional 10 Office and the Department, as specified in 40 CFR 63.13, by the compliance date specified in OAR 340-244-0238. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy and must indicate whether the source has complied with the requirements of OAR 340-244-0232 through 0252. If the facility is in compliance with the requirements OAR 340-244-0232 through 0252 at the time the Initial Notification required under subsection (2)(a) of this rule is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under subsection (2)(a) of this rule.

(c) If, prior to January 10, 2008, the owner or operator satisfies the requirements in both paragraphs (2)(c)(A) and (B) of this rule, the owner or operator is not required to submit an Initial Notification or a Notification of Compliance Status if the owner or operator operates a vapor balance system at the gasoline dispensing facility that meets the requirements of either paragraphs (2)(c)(A) or (B) of this rule.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 4 of this division.

(d) The owner or operator must submit a Notification of Performance Test, as specified in 40 CFR 63.9(e), prior to initiating testing required by OAR 340-244-0244(1) and (2).

(e) The owner or operator must submit additional notifications specified in 40 CFR 63.9, as applicable.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0248
Recordkeeping Requirements

(1) Each owner or operator must keep the following records:

(a) Records of all tests performed under OAR 340-244-0244(1) and (2);

(b) Records related to the operation and maintenance of vapor balance equipment required under OAR 340-244-0242. Any vapor balance component defect must be logged and tracked by station personnel using forms provided by the Department or a reasonable facsimile.

(c) Records of total throughput volume of gasoline, in gallons, for each calendar month.

(d) Records of permanent changes made at the GDF and vapor balance equipment which may affect emissions.

(2) Records required under section (1) of this rule must be kept for a period of 5 years and must be made available for inspection by the Department during the course of a site visit.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & ORS 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0250
Reporting Requirements

Each owner or operator subject to the management practices in OAR 340-244-0242 must report to the Department the results of all volumetric efficiency tests required under OAR 340-244-0244(1) and (2). Reports submitted under this rule must be submitted within 30 days of the completion of the performance testing.

NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the Environmental Quality Commission under OAR 340-200-0040.
Stat. Auth.: ORS 468.020 & ORS 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

340-244-0252
General Provision Applicability

Table 3 to 40 CFR part 63 subpart CCCCCC shows which parts of the General Provisions apply to the owner or operator.

[ED. NOTE: Tables referenced are available from the agency.]
Stat. Auth.: ORS 468.020 & 468A.025
Stats. Implemented: ORS 468A.025
Hist.: DEQ 15-2008, f. & cert. ef 12-31-08

Department of Fish and Wildlife
Chapter 635

Rule Caption: Set 2009 Sturgeon and Smelt Seasons for the Columbia and lower Willamette rivers.
Adm. Order No.: DFW 148-2008(Temp)
Filed with Sec. of State: 12-19-2008
Certified to be Effective: 1-1-09 thru 6-29-09
Notice Publication Date:
Rules Amended: 635-017-0095, 635-023-0095, 635-042-0130, 635-042-0135
Subject: Amended rules set commercial fishing seasons for smelt and sturgeon in the Columbia River below Bonneville Dam and establish recreational sturgeon fishing seasons in the Columbia River and the Willamette River downstream of Willamette Falls (including Multnomah Channel). Revisions are consistent with the action taken December 18, 2008 by the Columbia River Compact agencies of Oregon and Washington.
Rules Coordinator: Therese Kucera—(503) 947-6033

635-017-0095
Sturgeon Season

(1) The **2009 Oregon Sport Fishing Regulations** provide requirements for the Willamette Zone. However, additional regulations may be adopted in this rule division from time to time and to the extent of any inconsistency, they supersede the **2009 Oregon Sport Fishing Regulations**.

(2) The Willamette River downstream of Willamette Falls (including Multnomah Channel) is open to the retention of white sturgeon three days per week, Thursday, Friday, and Saturday during the following periods:

(a) January 1 through July 31; and

(b) October 1 through December 31.

(3) The retention of white sturgeon in the areas identified in section (2) of this rule is prohibited August 1 through September 30.

(4) Only white sturgeon with a 38-inch minimum and 54-inch maximum fork length may be retained. Retention of green sturgeon is prohibited all year in all areas.

[Publications: Publications referenced are available from the agency.]
Stat. Auth.: ORS 496.138, 496.146 & 506.119
Stats. Implemented: ORS 496.162 & 506.129
Hist.: DFW 2-2005(Temp), f. & cert. ef. 1-21-05 thru 7-19-05; DFW 55-2005, f. & cert. ef. 6-17-05; DFW 136-2005, f. 12-7-05, cert. ef. 1-1-06; DFW 145-2005(Temp), f. 12-21-05, cert. ef. 1-1-06 thru 3-31-06; DFW 5-2006, f. & cert. ef. 2-15-06; DFW 79-2006, f. 8-11-06, cert. ef. 1-1-07; DFW 131-2006(Temp), f. 12-20-06, cert. ef. 1-1-07 thru 6-29-07; DFW 7-2007(Temp), f. 1-31-07, cert. ef. 2-1-07 thru 7-30-07; DFW 24-2007, f. 4-16-07, cert. ef. 5-1-07; DFW 74-2007(Temp), f. 8-17-07, cert. ef. 8-18-07 thru 12-31-07; DFW 135-2007(Temp), f. 12-28-07, cert. ef. 1-1-08 thru 6-28-08; DFW 136-2007, f. 12-31-07, cert. ef. 1-1-08; DFW 7-2008, f. & cert. ef. 2-11-08; DFW 86-2008(Temp), f. & cert. ef. 7-25-08 thru 12-31-08; DFW 148-2008(Temp), f. 12-19-08, cert. ef. 1-1-09 thru 6-29-09

635-023-0095
Sturgeon Season

(1) The **2009 Oregon Sport Fishing Regulations** provide requirements for the Columbia River Zone and the Snake River Zone. However, additional regulations may be adopted in this rule division from time to time, and, to the extent of any inconsistency, they supersede the **2009 Oregon Sport Fishing Regulations**.

(2) The Columbia River from Wauna powerlines (River Mile 40) upstream to Bonneville Dam is open to the retention of white sturgeon with a 38-inch minimum and 54-inch maximum fork length restriction, three days per week, Thursdays through Saturdays, during the following periods:

(a) January 1 through July 31; and

(b) October 1 through December 31.

(3) The retention of white sturgeon in the area identified in section (2) of this rule is prohibited August 1 through September 30.

(4) The Columbia River from Wauna powerlines (River Mile 40) downstream to the mouth at Buoy 10, including Youngs Bay is open to the retention of white sturgeon seven days per week during the following periods:

(a) January 1 through April 30;

(b) May 9 through June 28; and

(c) July 2 through July 5 (or until guideline is met).

(5) The retention of white sturgeon in the area identified in section (4) of this rule is prohibited May 1 through May 8, June 29 through July 1, and from July 6 through December 31.