

Citations from CRF 40.60 as required in WV DEP's 45CSR24

NOTE: Unofficial Document meant to summarize WV regulations, using 40-CFR-60 passed July, 2002

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY

PART 60--STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES--Table of Contents

Subpart Ec--Standards of Performance for Hospital/Medical/Infectious
Waste Incinerators for Which Construction is Commenced After June 20, 1996

Sec. 60.53c Operator training and qualification requirements.

(a) No owner or operator of an affected facility shall allow the affected facility to operate at any time unless a fully trained and qualified HMIWI operator is accessible, either at the facility or available within 1 hour. The trained and qualified HMIWI operator may operate the HMIWI directly or be the direct supervisor of one or more HMIWI operators.

(b) Operator training and qualification shall be obtained through a State-approved program or by completing the requirements included in paragraphs (c) through (g) of this section.

(c) Training shall be obtained by completing an HMIWI operator training course that includes, at a minimum, the following provisions:

- (1) 24 hours of training on the following subjects:
 - (i) Environmental concerns, including pathogen destruction and types of emissions;
 - (ii) Basic combustion principles, including products of combustion;
 - (iii) Operation of the type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;
 - (iv) Combustion controls and monitoring;
 - (v) Operation of air pollution control equipment and factors affecting performance (if applicable);
 - (vi) Methods to monitor pollutants (continuous emission monitoring systems and monitoring of HMIWI and air pollution control device operating parameters) and equipment calibration procedures (where applicable);
 - (vii) Inspection and maintenance of the HMIWI, air pollution control devices, and continuous emission monitoring systems;
 - (viii) Actions to correct malfunctions or conditions that may lead to malfunction;
 - (ix) Bottom and fly ash characteristics and handling procedures;
 - (x) Applicable Federal, State, and local regulations;
 - (xi) Work safety procedures;
 - (xii) Pre-startup inspections; and
 - (xiii) Recordkeeping requirements.
- (2) An examination designed and administered by the instructor.
- (3) Reference material distributed to the attendees covering the course topics.

(d) Qualification shall be obtained by:

- (1) Completion of a training course that satisfies the criteria under paragraph (c) of this section; and
- (2) Either 6 months experience as an HMIWI operator, 6 months experience as a direct supervisor of an HMIWI operator, or completion of at least two burn cycles under the observation of two qualified HMIWI operators.

(e) Qualification is valid from the date on which the examination is passed or the completion of the required experience, whichever is later.

(f) To maintain qualification, the trained and qualified HMIWI operator shall complete and pass an annual review or refresher course of at least 4 hours covering, at a minimum, the following:

- (1) Update of regulations;
- (2) Incinerator operation, including startup and shutdown procedures;
- (3) Inspection and maintenance;
- (4) Responses to malfunctions or conditions that may lead to malfunction; and
- (5) Discussion of operating problems encountered by attendees.

(g) A lapsed qualification shall be renewed by one of the following methods:

- (1) For a lapse of less than 3 years, the HMIWI operator shall complete and pass a standard annual refresher course described in paragraph (f) of this section.
- (2) For a lapse of 3 years or more, the HMIWI operator shall complete and pass a training course with the minimum criteria described in paragraph (c) of this section.

(h) The owner or operator of an affected facility shall maintain documentation at the facility that address the following:

- (1) Summary of the applicable standards under this subpart;
- (2) Description of basic combustion theory applicable to an HMIWI;
- (3) Procedures for receiving, handling, and charging waste;
- (4) HMIWI startup, shutdown, and malfunction procedures;
- (5) Procedures for maintaining proper combustion air supply levels;
- (6) Procedures for operating the HMIWI and associated air pollution control systems within the standards established under this subpart;
- (7) Procedures for responding to periodic malfunction or conditions that may lead to malfunction;
- (8) Procedures for monitoring HMIWI emissions;
- (9) Reporting and recordkeeping procedures; and
- (10) Procedures for handling ash.

(i) The owner or operator of an affected facility shall establish a program for reviewing the information listed in paragraph (h) of this section annually with each HMIWI operator (defined in Sec. 60.51c).

(1) The initial review of the information listed in paragraph (h) of this section shall be conducted within 6 months after the effective date of this subpart or prior to assumption of responsibilities affecting HMIWI operation, whichever date is later.

(2) Subsequent reviews of the information listed in paragraph (h) of this section shall be conducted annually.

(j) The information listed in paragraph (h) of this section shall be kept in a readily accessible location for all HMIWI operators. This information, along with records of training shall be available for inspection by the EPA or its delegated enforcement agent upon request.

Sec. 60.55c Waste management plan.

The owner or operator of an affected facility shall prepare a waste management plan. The waste management plan shall identify both the feasibility and the approach to separate certain components of solid waste from the health care waste stream in order to reduce the amount of toxic emissions from incinerated waste. A waste management plan may include, but is not limited to, elements such as paper, cardboard, plastics, glass, battery, or metal recycling; or purchasing recycled or recyclable products. A waste management plan may include different goals or approaches for different areas or departments of the facility and need not include new waste management goals for every waste stream. It should identify, where possible, reasonably available additional waste management measures, taking into account the effectiveness of waste management measures already in place, the costs of additional measures, the emission reductions expected to be achieved, and any other environmental or energy impacts they might have. The American

Hospital Association publication entitled "An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities" (incorporated by reference, see Sec. 60.17) shall be considered in the development of the waste management plan.

Sec. 60.56c Compliance and performance testing.

Note: '60.56c(b)(12) and (c)(3) are excluded.

(a) The emission limits under this subpart apply at all times except during periods of startup, shutdown, or malfunction, provided that no hospital waste or medical/infectious waste is charged to the affected facility during startup, shutdown, or malfunction.

(b) The owner or operator of an affected facility shall conduct an initial performance test as required under Sec. 60.8 to determine compliance with the emission limits using the procedures and test methods listed in paragraphs (b)(1) through (b)(12) of this section. The use of the bypass stack during a performance test shall invalidate the performance test.

(1) All performance tests shall consist of a minimum of three test runs conducted under representative operating conditions.

(2) The minimum sample time shall be 1 hour per test run unless otherwise indicated.

(3) EPA Reference Method 1 of appendix A of this part shall be used to select the sampling location and number of traverse points.

(4) EPA Reference Method 3, 3A, or 3B of appendix A of this part shall be used for gas composition analysis, including measurement of oxygen concentration. EPA Reference Method 3, 3A, or 3B of appendix A of this part shall be used simultaneously with each reference method.

(5) The pollutant concentrations shall be adjusted to 7 percent oxygen using the following equation:

$C_{adj} = C_{meas} (20.9 - \%O_2) / (20.9 - 7)$ where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen;

C_{meas} = pollutant concentration measured on a dry basis (20.9 percent oxygen -- 7 percent oxygen (defined oxygen correction basis));

20.9 = oxygen concentration in air, percent; and

$\%O_2$ = oxygen concentration measured on a dry basis, percent.

(6) EPA Reference Method 5 or 29 of appendix A of this part shall be used to measure the particulate matter emissions.

(7) EPA Reference Method 9 of appendix A of this part shall be used to measure stack opacity.

(8) EPA Reference Method 10 or 10B of appendix A of this part shall be used to measure the CO emissions.

(9) EPA Reference Method 23 of appendix A of this part shall be used to measure total dioxin/furan emissions. The minimum sample time shall be 4 hours per test run. If the affected facility has selected the toxic equivalency standards for dioxin/furans, under Sec. 60.52c, the following procedures shall be used to determine compliance:

(i) Measure the concentration of each dioxin/furan tetra-through octa-congener emitted using EPA Reference Method 23.

(ii) For each dioxin/furan congener measured in accordance with paragraph (b)(9)(i) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 2 of this subpart.

(iii) Sum the products calculated in accordance with paragraph (b)(9)(ii) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(10) EPA Reference Method 26 or 26A of appendix A of this part shall be used to measure HCl emissions. If the affected facility has selected the percentage reduction standards for HCl under Sec. 60.52c, the percentage reduction in HCl emissions ($\%R_{HCl}$) is computed using the following formula:

$$(\%R_{HCl}) = ((E_i - E_o) / E_i) * 100$$

Where:

%RHCl=percentage reduction of HCl emissions achieved;

Ei=HCl emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis); and

Eo=HCl emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

~~(11) EPA Reference Method 29 of appendix A of this part shall be used to measure Pb, Cd, and Hg emissions. If the affected facility has selected the percentage reduction standards for metals under Sec. 60.52c, the percentage reduction in emissions (%Rmetal) is computed using the following formula:~~

$$\text{---} (\%R_{\text{metal}}) = ((E_i \text{---} E_o) / E_i) * 100$$

~~Where:~~

~~%Rmetal=percentage reduction of metal emission (Pb, Cd, or Hg) achieved;~~

~~Ei=metal emission concentration (Pb, Cd, or Hg) measured at the control device inlet, corrected to 7 percent oxygen (dry basis); and~~

~~Eo=metal emission concentration (Pb, Cd, or Hg) measured at the control device outlet, corrected to 7 percent oxygen (dry basis).~~

(12) The EPA Reference Method 22 of appendix A of this part shall be used to determine compliance with the fugitive ash emission limit under Sec. 60.52c(c). The minimum observation time shall be a series of three 1-hour observations.

(c) Following the date on which the initial performance test is completed or is required to be completed under Sec. 60.8, whichever date comes first, the owner or operator of an affected facility shall:

(1) Determine compliance with the opacity limit by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in paragraph (b) of this section.

(2) Determine compliance with the PM, CO, and HCl emission limits by conducting an annual performance test (no more than 12 months following the previous performance test) using the applicable procedures and test methods listed in paragraph (b) of this section. If all three performance tests over a 3-year period indicate compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for the subsequent 2 years. At a minimum, a performance test for PM, CO, and HCl shall be conducted every third year (no more than 36 months following the previous performance test). If a performance test conducted every third year indicates compliance with the emission limit for a pollutant (PM, CO, or HCl), the owner or operator may forego a performance test for that pollutant for an additional 2 years. If any performance test indicates noncompliance with the respective emission limit, a performance test for that pollutant shall be conducted annually until all annual performance tests over a 3-year period indicate compliance with the emission limit. The use of the bypass stack during a performance test shall invalidate the performance test.

~~(3) For large HMIWI, determine compliance with the visible emission limits for fugitive emissions from flyash/bottom ash storage and handling by conducting a performance test using EPA Reference Method 22 on an annual basis (no more than 12 months following the previous performance test).~~

(4) Facilities using a CEMS to demonstrate compliance with any of the emission limits under Sec. 60.52c shall:

(i) Determine compliance with the appropriate emission limit(s) using a 12-hour rolling average, calculated each hour as the average of the previous 12 operating hours (not including startup, shutdown, or malfunction).

(ii) Operate all CEMS in accordance with the applicable procedures under appendices B and F of this part.

(d) The owner or operator of an affected facility equipped with a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and wet scrubber shall:

(1) Establish the appropriate maximum and minimum operating parameters, indicated in Table 3 of this subpart for each control system, as site specific operating parameters during the initial performance test to determine compliance with the emission limits; and

(2) Following the date on which the initial performance test is completed or is required to be completed under Sec. 60.8, whichever date comes first, ensure that the

affected facility does not operate above any of the applicable maximum operating parameters or below any of the applicable minimum operating parameters listed in Table 3 of this subpart and measured as 3-hour rolling averages (calculated each hour as the average of the previous 3 operating hours) at all times except during periods of startup, shutdown and malfunction. Operating parameter limits do not apply during performance tests. Operation above the established maximum or below the established minimum operating parameter(s) shall constitute a violation of established operating parameter(s).

(e) Except as provided in paragraph (h) of this section, for affected facilities equipped with a dry scrubber followed by a fabric filter:

(1) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(2) Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.

(3) Operation of the affected facility above the maximum charge rate and below the minimum HCl sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(4) Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(5) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.

(f) Except as provided in paragraph (h) of this section, for affected facilities equipped with a wet scrubber:

(1) Operation of the affected facility above the maximum charge rate and below the minimum pressure drop across the wet scrubber or below the minimum horsepower or amperage to the system (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the PM emission limit.

(2) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(3) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature, and below the minimum scrubber liquor flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.

(4) Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(5) Operation of the affected facility above the maximum flue gas temperature and above the maximum charge rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(6) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.

(g) Except as provided in paragraph (h) of this section, for affected facilities equipped with a dry scrubber followed by a fabric filter and a wet scrubber:

(1) Operation of the affected facility above the maximum charge rate and below the minimum secondary chamber temperature (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the CO emission limit.

(2) Operation of the affected facility above the maximum fabric filter inlet temperature, above the maximum charge rate, and below the minimum dioxin/furan sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the dioxin/furan emission limit.

(3) Operation of the affected facility above the maximum charge rate and below the minimum scrubber liquor pH (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the HCl emission limit.

(4) Operation of the affected facility above the maximum charge rate and below the minimum Hg sorbent flow rate (each measured on a 3-hour rolling average) simultaneously shall constitute a violation of the Hg emission limit.

(5) Use of the bypass stack (except during startup, shutdown, or malfunction) shall constitute a violation of the PM, dioxin/furan, HCl, Pb, Cd and Hg emission limits.

(h) The owner or operator of an affected facility may conduct a repeat performance test within 30 days of violation of applicable operating parameter(s) to demonstrate that the affected facility is not in violation of the applicable emission limit(s). Repeat performance tests conducted pursuant to this paragraph shall be conducted using the identical operating parameters that indicated a violation under paragraph (e), (f), or (g) of this section.

(i) The owner or operator of an affected facility using an air pollution control device other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under Sec. 60.52c shall petition the Administrator for other site-specific operating parameters to be established during the initial performance test and continuously monitored thereafter. The owner or operator shall not conduct the initial performance test until after the petition has been approved by the Administrator.

(j) The owner or operator of an affected facility may conduct a repeat performance test at any time to establish new values for the operating parameters. The Administrator may request a repeat performance test at any time.

Sec. 60.57c Monitoring requirements.

(a) The owner or operator of an affected facility shall install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the applicable maximum and minimum operating parameters listed in Table 3 of this subpart such that these devices (or methods) measure and record values for these operating parameters at the frequencies indicated in Table 3 of this subpart at all times except during periods of startup and shutdown.

(b) The owner or operator of an affected facility shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time, and duration.

(c) The owner or operator of an affected facility using something other than a dry scrubber followed by a fabric filter, a wet scrubber, or a dry scrubber followed by a fabric filter and a wet scrubber to comply with the emission limits under Sec. 60.52c shall install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor the site-specific operating parameters developed pursuant to Sec. 60.56c(i).

(d) The owner or operator of an affected facility shall obtain monitoring data at all times during HMIWI operation except during periods of monitoring equipment malfunction, calibration, or repair. At a minimum, valid monitoring data shall be obtained for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter that the affected facility is combusting hospital waste and/or medical/infectious waste.

Sec. 60.58c Reporting and recordkeeping requirements.

NOTE: '60.58c (a), (b)(2)(ii), and (b)(7) are excluded.

~~(a) The owner or operator of an affected facility shall submit notifications, as provided by Sec. 60.7. In addition, the owner or operator shall submit the following information:~~

~~(1) Prior to commencement of construction;~~
~~(i) A statement of intent to construct;~~
~~(ii) The anticipated date of commencement of construction; and~~
~~(iii) All documentation produced as a result of the siting requirements of Sec. 60.54e.~~
~~(2) Prior to initial startup;~~
~~(i) The type(s) of waste to be combusted;~~
~~(ii) The maximum design waste burning capacity;~~
~~(iii) The anticipated maximum charge rate; and~~
~~(iv) If applicable, the petition for site specific operating parameters under Sec. 60.56e(i).~~

(b) The owner or operator of an affected facility shall maintain the following information (as applicable) for a period of at least 5 years:

- (1) Calendar date of each record;
- (2) Records of the following data:
 - (i) Concentrations of any pollutant listed in Sec. 60.52c or measurements of opacity as determined by the continuous emission monitoring system (if applicable);
 - ~~(ii) Results of fugitive emissions (by EPA Reference Method 22) tests, if applicable;~~
 - (iii) HMIWI charge dates, times, and weights and hourly charge rates;
 - (iv) Fabric filter inlet temperatures during each minute of operation, as applicable;
 - (v) Amount and type of dioxin/furan sorbent used during each hour of operation, as applicable;
 - (vi) Amount and type of Hg sorbent used during each hour of operation, as applicable;
 - (vii) Amount and type of HCl sorbent used during each hour of operation, as applicable;
 - (viii) Secondary chamber temperatures recorded during each minute of operation;
 - (ix) Liquor flow rate to the wet scrubber inlet during each minute of operation, as applicable;
 - (x) Horsepower or amperage to the wet scrubber during each minute of operation, as applicable;
 - (xi) Pressure drop across the wet scrubber system during each minute of operation, as applicable,
 - (xii) Temperature at the outlet from the wet scrubber during each minute of operation, as applicable;
 - (xiii) pH at the inlet to the wet scrubber during each minute of operation, as applicable,
 - (xiv) Records indicating use of the bypass stack, including dates, times, and durations, and
 - (xv) For affected facilities complying with Secs. 60.56c(i) and 60.57c(c), the owner or operator shall maintain all operating parameter data collected.

(3) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (b)(2) of this section have not been obtained, with an identification of the emission rates or operating parameters not measured, reasons for not obtaining the data, and a description of corrective actions taken.

(4) Identification of calendar days, times and durations of malfunctions, a description of the malfunction and the corrective action taken.

(5) Identification of calendar days for which data on emission rates or operating parameters specified under paragraph (b)(2) of this section exceeded the applicable limits, with a description of the exceedances, reasons for such exceedances, and a description of corrective actions taken.

(6) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating parameters, as applicable.

~~(7) All documentation produced as a result of the siting requirements of Sec. 60.54e;~~

(8) Records showing the names of HMIWI operators who have completed review of the information in Sec. 60.53c(h) as required by Sec. 60.53c(i), including the date of the initial review and all subsequent annual reviews;

(9) Records showing the names of the HMIWI operators who have completed the operator training requirements, including documentation of training and the dates of the training;

(10) Records showing the names of the HMIWI operators who have met the criteria for qualification under Sec. 60.53c and the dates of their qualification; and

(11) Records of calibration of any monitoring devices as required under Sec. 60.57c (a), (b), and (c).

(c) The owner or operator of an affected facility shall submit the information specified in paragraphs (c)(1) through (c)(3) of this section no later than 60 days following the initial performance test. All reports shall be signed by the facilities manager.

(1) The initial performance test data as recorded under Sec. 60.56c (b)(1) through (b)(12), as applicable.

(2) The values for the site-specific operating parameters established pursuant to Sec. 60.56c (d) or (i), as applicable.

(3) The waste management plan as specified in Sec. 60.55c.

(d) An annual report shall be submitted 1 year following the submission of the information in paragraph (c) of this section and subsequent reports shall be submitted no more than 12 months following the previous report (once the unit is subject to permitting requirements under Title V of the Clean Air Act, the owner or operator of an affected facility must submit these reports semiannually). The annual report shall include the information specified in paragraphs (d)(1) through (d)(8) of this section. All reports shall be signed by the facilities manager.

(1) The values for the site-specific operating parameters established pursuant to Sec. 60.56c (d) or (i), as applicable.

(2) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable, for each operating parameter recorded for the calendar year being reported, pursuant to Sec. 60.56c(d) or (i), as applicable.

(3) The highest maximum operating parameter and the lowest minimum operating parameter, as applicable for each operating parameter recorded pursuant to Sec. 60.56c (d) or (i) for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

(4) Any information recorded under paragraphs (b)(3) through (b)(5) of this section for the calendar year being reported.

(5) Any information recorded under paragraphs (b)(3) through (b)(5) of this section for the calendar year preceding the year being reported, in order to provide the Administrator with a summary of the performance of the affected facility over a 2-year period.

(6) If a performance test was conducted during the reporting period, the results of that test.

(7) If no exceedances or malfunctions were reported under paragraphs (b)(3) through (b)(5) of this section for the calendar year being reported, a statement that no exceedances occurred during the reporting period.

(8) Any use of the bypass stack, the duration, reason for malfunction, and corrective action taken.

(e) The owner or operator of an affected facility shall submit semiannual reports containing any information recorded under paragraphs (b)(3) through (b)(5) of this section no later than 60 days following the reporting period. The first semiannual reporting period ends 6 months following the submission of information in paragraph (c) of this section. Subsequent reports shall be submitted no later than 6 calendar months following the previous report. All reports shall be signed by the facilities manager.

(f) All records specified under paragraph (b) of this section shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Administrator.

TABLE 1 TO SUBPART EC—EMISSION LIMITS FOR SMALL, MEDIUM, AND LARGE HMIWI

Pollutant	Units (7 percent oxygen, dry basis)	Emission limits		
		HMIWI size		
		Small	Medium	Large
Particulate matter	Miligrams per dry standard cubic meter (grains per dry standard cubic foot).	69 (0.03)	34 (0.015)	34 (0.015).
Carbon monoxide	Parts per million by volume	40	40	40.
Dioxins/furans	<p>Nanograms per dry standard cubic meter total dioxins/furans (grains per billion dry standard cubic foot) or nanograms per dry standard cubic meter total dioxins/furans TEQ (grains per billion dry standard cubic foot).</p> <p>Parts per million or percent reduction</p>	<p>125 (55) or 2.3 (1.0).</p> <p>15 or 99%</p>	<p>25 (11) or 0.6 (0.26).</p> <p>15 or 99%</p>	<p>25 (11) or 0.6 (0.26).</p> <p>15 or 99%.</p>
Hydrogen chloride	Parts per million or percent reduction	15 or 99%	15 or 99%	15 or 99%.
Sulfur dioxide	Parts per million by volume	55	55	55.
Nitrogen oxides	Parts per million by volume	250	250	250.
Lead	<p>Miligrams per dry standard cubic meter (grains per thousand dry standard cubic foot) or percent reduction.</p> <p>Parts per million or percent reduction</p>	<p>1.2 (0.52) or 70%.</p> <p>15 or 99%</p>	<p>0.07 (0.03) or 98%.</p> <p>15 or 99%</p>	<p>0.07 (0.03) or 98%.</p> <p>15 or 99%.</p>
Cadmium	<p>Miligrams per dry standard cubic meter (grains per thousand dry standard cubic foot) or percent reduction.</p> <p>Parts per million or percent reduction</p>	<p>0.16 (0.07) or 65%.</p> <p>15 or 99%</p>	<p>0.04 (0.02) or 90%.</p> <p>15 or 99%</p>	<p>0.04 (0.02) or 90%.</p> <p>15 or 99%.</p>
Mercury	<p>Miligrams per dry standard cubic meter (grains per thousand dry standard cubic foot) or percent reduction.</p> <p>Parts per million or percent reduction</p>	<p>0.55 (0.24) or 85%.</p> <p>15 or 99%</p>	<p>0.55 (0.24) or 85%.</p> <p>15 or 99%</p>	<p>0.55 (0.24) or 85%.</p> <p>15 or 99%.</p>

TABLE 2 TO SUBPART EC—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
Octachlorinated dibenzofuran	0.001

TABLE 3 TO SUBPART EC—OPERATING PARAMETERS TO BE MONITORED AND MINIMUM MEASUREMENT AND RECORDING FREQUENCIES

Operating parameters to be monitored	Minimum frequency		Control system		
	Data measurement	Data recording	Dry scrubber followed by fabric filter	Wet scrubber	Dry scrubber followed by fabric filter and wet scrubber
Maximum operating parameters:					
Maximum charge rate	Continuous	1-hour	✓	✓	✓
Maximum fabric filter inlet temperature.	Continuous	1-minute	✓		✓
Maximum flue gas temperature.	Continuous	1-minute	✓	✓	
Minimum operating parameters:					
Minimum secondary chamber temperature.	Continuous	1-minute	✓	✓	✓
Minimum dioxin/furan sorbent flow rate.	Hourly	1-hour	✓		✓
Minimum HCl sorbent flow rate.	Hourly	1-hour	✓		✓
Minimum mercury (Hg) sorbent flow rate.	Hourly	1-hour	✓		✓
Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber.	Continuous	1-minute		✓	✓
Minimum scrubber liquor flow rate.	Continuous	1-minute		✓	✓
Minimum scrubber liquor pH.	Continuous	1-minute		✓	✓

Sec. 60.52c Emission limits.

Note: '60.52c (b) ONLY.

(b) On and after the date on which the initial performance test is completed or is required to be completed under Sec. 60.8, whichever date comes first, no owner or operator of an affected facility shall cause to be discharged into the atmosphere from the stack of that affected facility any gases that exhibit greater than 10 percent opacity (6-minute block average).