

**§ 63.8180**

**Subpart IIIII—National Emission Standards for Hazardous Air Pollutants: Mercury Emissions From Mercury Cell Chlor-Alkali Plants**

SOURCE: 68 FR 70928, Dec. 19, 2003, unless otherwise noted.

**WHAT THIS SUBPART COVERS**

**§ 63.8180 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for affected sources of mercury emissions at mercury cell chlor-alkali plants. This subpart also establishes requirements to demonstrate initial and continuous compliance with all applicable emission limitations and work practice standards in this subpart.

**§ 63.8182 Am I subject to this subpart?**

(a) You are subject to this subpart if you own or operate a mercury cell chlor-alkali plant.

(b) You are required to obtain a title V permit, whether your affected source is a part of a major source of hazardous air pollutant (HAP) emissions or a part of an area source of HAP emissions. A major source of HAP is a source that emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year. An area source of HAP is a source that has the potential to emit HAP but is not a major source. Nothing in this subpart revises how affected sources are aggregated for purposes of determining whether an affected source is a part of an area, nonmajor, or major source under any provisions of the Clean Air Act (CAA) or EPA's regulations. For information on aggregating affected sources to determine what is a source under title V, see the definition of major source in 40 CFR 70.2, 71.2 and 63.2.

(c) Beginning on December 19, 2006, the provisions of subpart E of 40 CFR part 61 that apply to mercury chlor-alkali plants, which are listed in paragraphs (c)(1) through (3) of this section, are no longer applicable.

(1) § 61.52(a);

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(2) § 61.53(b) and (c); and  
(3) § 61.55(b), (c) and (d).

**§ 63.8184 What parts of my plant does this subpart cover?**

(a) This subpart applies to each affected source at a plant site where chlorine and caustic are produced in mercury cells. This subpart applies to two types of affected sources: the mercury cell chlor-alkali production facility, as defined in paragraph (a)(1) of this section; and the mercury recovery facility, as defined in paragraph (a)(2) of this section.

(1) The mercury cell chlor-alkali production facility designates an affected source consisting of all cell rooms and ancillary operations used in the manufacture of product chlorine, product caustic, and by-product hydrogen at a plant site. This subpart covers mercury emissions from by-product hydrogen streams, end box ventilation system vents, and fugitive emission sources associated with cell rooms, hydrogen systems, caustic systems, and storage areas for mercury-containing wastes.

(2) The mercury recovery facility designates an affected source consisting of all processes and associated operations needed for mercury recovery from wastes at a plant site. This subpart covers mercury emissions from mercury thermal recovery unit vents and fugitive emission sources associated with storage areas for mercury-containing wastes.

(b) An affected source at your mercury cell chlor-alkali plant is existing if you commenced construction of the affected source before July 3, 2002.

(c) A mercury recovery facility is a new affected source if you commence construction or reconstruction of the affected source after July 3, 2002. An affected source is reconstructed if it meets the definition of "reconstruction" in § 63.2.

**§ 63.8186 When do I have to comply with this subpart?**

(a) If you have an existing affected source, you must comply with each emission limitation, work practice standard, and recordkeeping and reporting requirement in this subpart that applies to you no later than December 19, 2006.

(b) If you have a new or reconstructed mercury recovery facility and its initial startup date is on or before December 19, 2003, you must comply with each emission limitation, work practice standard, and recordkeeping and reporting requirement in this subpart that applies to you by December 19, 2003.

(c) If you have a new or reconstructed mercury recovery facility and its initial startup date is after December 19, 2003, you must comply with each emission limitation, work practice standard, and recordkeeping and reporting requirement in this subpart that applies to you upon initial start-up.

(d) You must meet the notification and schedule requirements in § 63.8252. Several of these notifications must be submitted before the compliance date for your affected source(s).

#### EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

##### § 63.8190 What emission limitations must I meet?

(a) *Emission limits.* You must meet each emission limit in paragraphs (a)(1) through (3) of this section that applies to you.

(1) New or reconstructed mercury cell chlor-alkali production facility. Emissions of mercury are prohibited from a new or reconstructed mercury cell chlor-alkali production facility.

(2) Existing mercury cell chlor-alkali production facility. During any consecutive 52-week period, you must not discharge to the atmosphere total mercury emissions in excess of the applicable limit in paragraph (a)(2)(i) or (ii) of this section calculated using the procedures in § 63.8243(a).

(i) 0.076 grams of mercury per megagram of chlorine produced ( $1.5 \times 10^{-4}$  pounds of mercury per ton of chlorine produced) from all by-product hydrogen streams and all end box ventilation system vents when both types of emission points are present.

(ii) 0.033 grams of mercury per megagram of chlorine produced ( $6.59 \times 10^{-5}$  pounds of mercury per ton of chlorine produced) from all by-product hydrogen streams when end box ventilation systems are not present.

(3) New, reconstructed, or existing mercury recovery facility. You must not discharge to the atmosphere mercury emissions in excess of the applicable limit in paragraph (a)(3)(i) or (ii) of this section.

(i) 23 milligrams per dry standard cubic meter from each oven type mercury thermal recovery unit vent.

(ii) 4 milligrams per dry standard cubic meter from each non-oven type mercury thermal recovery unit vent.

(b) [Reserved]

##### § 63.8192 What work practice standards must I meet?

You must meet the work practice requirements specified in paragraphs (a) through (f) of this section. As an alternative to the requirements specified in paragraphs (a) through (d) of this section, you may choose to comply with paragraph (g) of this section.

(a) You must meet the work practice standards in Tables 1 through 4 to this subpart, except as specified in paragraph (g) of this section.

(b) You must adhere to the response intervals specified in Tables 1 through 4 to this subpart at all times. Non-adherence to the intervals in Tables 1 through 4 to this subpart constitutes a deviation and must be documented and reported in the compliance report, as required by § 63.8254(b), with the date and time of the deviation, cause of the deviation, a description of the conditions, and time actual compliance was achieved.

(c) As provided in § 63.6(g), you may request to use an alternative to the work practice standards in Tables 1 through 4 to this subpart.

(d) You must institute a floor-level mercury vapor measurement program to limit the amount of mercury vapor in the cell room environment through periodic measurement of mercury vapor levels and actions to be taken when a floor-level mercury concentration action level is exceeded. The program must meet the requirements listed in paragraphs (d)(1) through (4) of this section. As specified in § 63.8252(e)(1)(i) to implement this program, you must prepare and submit to the Administrator a floor-level mercury vapor measurement plan which

must contain the elements listed in Table 5 to this subpart.

(1) You must utilize a mercury measurement device described in of Table 6 to this subpart to measure the level of mercury vapor in the cell room at floor-level.

(2) You must conduct at least one floor-level mercury vapor measurement evaluation each half day. This evaluation must include three measurements of the mercury concentration at locations representative of the entire cell room floor area. The average of these measurements must be recorded as specified in § 63.8156(c)(1). At a minimum, you must measure the level of mercury vapor above mercury-containing cell room equipment, as well as areas around the cells, decomposers, or other mercury-containing equipment.

(3) You must establish a floor-level mercury concentration action level that is no higher than 0.05 milligrams per cubic meter (mg/m<sup>3</sup>).

(4) If a mercury concentration greater than the action level is measured during any floor-level mercury vapor measurement evaluation, you must meet the requirements in either paragraph (d)(4)(i) or (ii) of this section.

(i) If you determine that the cause of the elevated mercury concentration is an open electrolyzer, decomposer, or other maintenance activity, you must record the information specified in paragraphs (d)(4)(i)(A) through (C) of this section.

(A) A description of the maintenance activity resulting in elevated mercury concentration;

(B) The time the maintenance activity was initiated and completed; and

(C) A detailed explanation how all the applicable requirements of Table 1 to this subpart were met during the maintenance activity.

(ii) If you determine that the cause of the elevated mercury concentration is not an open electrolyzer, decomposer, or other maintenance activity, you must follow the procedures specified in paragraphs (d)(4)(ii)(A) and (B) of this section until the floor-level mercury concentration falls below the floor-level mercury concentration action level. You must also keep all the asso-

ciated records for these procedures as specified in Table 9 to this subpart.

(A) Within 1 hour of the time the floor-level mercury concentration action level was exceeded, you must conduct each inspection specified in Table 2 to this subpart in the area where the concentration higher than the floor-level mercury concentration action level was measured, with the exception of the cell room floor and the pillars and beam inspections. (B) You must also inspect all decomposers, hydrogen system piping up to the hydrogen header, and other potential locations of mercury vapor leaks in the area using a technique specified in Table 6 to this subpart. You must correct any problem identified during these inspections according to the requirements in Tables 2 and 3 to this subpart.

(e) You must prepare, submit, and operate according to a written washdown plan designed to minimize fugitive mercury emissions through routine washing of surfaces where liquid mercury could accumulate. The written plan must address the elements contained in Table 7 to this subpart.

(f) You must keep records of the mass of all virgin mercury added to cells on an annual basis.

(g) As an alternative to the work practice standards in paragraphs (a) through (d) of this section, you may institute a cell room monitoring program to continuously monitor the mercury vapor concentration in the upper portion of each cell room and to take corrective actions as quickly as possible when elevated mercury vapor levels are detected. As specified in § 63.8252(e)(1)(iv), if you choose this option, you must prepare and submit to the Administrator, a cell room monitoring plan containing the elements listed in Table 5 to this subpart and meet the requirements in paragraphs (g)(1) through (4) of this section.

(1) You must utilize mercury monitoring systems that meet the requirements of Table 8 to this subpart.

(2) You must establish an action level according to the requirements in paragraphs (g)(2)(i) through (iii) of this section.

(i) Beginning on the compliance date specified for your affected source in

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§ 63.8186, measure and record the mercury concentration for at least 30 days using a system that meets the requirements of paragraph (g)(1) of this section.

(ii) Using the monitoring data collected according to paragraph (g)(1)(i) of this section, establish your action level at the 75th percentile of the data set.

(iii) Submit your action level as part of your Notification of Compliance Status report according to § 63.8252(e)(1).

(3) Beginning on the compliance date specified for your affected source in § 63.8186, you must continuously monitor the mercury concentration in the cell room. Failure to monitor and record the data according to § 63.8256(c)(4)(ii) for 75 percent of the time in any 6-month period constitutes a deviation.

(4) If the average mercury concentration for any 1-hour period exceeds the action level established according to paragraph (g)(2) of this section, you must meet the requirements in either paragraph (g)(4)(i) or (ii) of this section.

(i) If you determine that the cause of the elevated mercury concentration is an open electrolyzer, decomposer, or other maintenance activity, you must record the information specified in paragraphs (g)(4)(i)(A) through (C) of this section.

(A) A description of the maintenance activity resulting in elevated mercury concentration;

(B) The time the maintenance activity was initiated and completed; and

(C) A detailed explanation how all the applicable requirements of Table 1 to this subpart were met during the maintenance activity.

(ii) If you determine that the cause of the elevated mercury concentration is not an open electrolyzer, decomposer, or other maintenance activity, you must follow the procedures specified in paragraphs (g)(4)(ii)(A) and (B) of this section until the mercury concentration falls below the action level. You must also keep all the associated records for these procedures as specified in Table 9 to this subpart.

(A) Within 1 hour of the time the action level was exceeded, you must conduct each inspection specified in Table

2 to this subpart, with the exception of the cell room floor and the pillars and beam inspections. You must correct any problem identified during these inspections in accordance with the requirements in Table 2 and 3 to this subpart.

(B) If the Table 2 inspections and subsequent corrective actions do not reduce the mercury concentration below the action level, you must inspect all decomposers, hydrogen system piping up to the hydrogen header, and other potential locations of mercury vapor leaks using a technique specified in Table 6 to this subpart. If a mercury vapor leak is identified, you must take the appropriate action specified in Table 3 to this subpart.

### OPERATION AND MAINTENANCE REQUIREMENTS

#### § 63.8222 What are my operation and maintenance requirements?

As required by § 63.6(e)(1)(i), you must always operate and maintain your affected source(s), including air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

### GENERAL COMPLIANCE REQUIREMENTS

#### § 63.8226 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the applicable emission limitations for by-product hydrogen streams, end box ventilation system vents, and mercury thermal recovery unit vents in § 63.8190 at all times, except during periods of startup, shutdown, and malfunction. You must be in compliance with the applicable work practice standards in § 63.8192 at all times, except during periods of startup, shutdown, and malfunction.

(b) You must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3).

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## INITIAL COMPLIANCE REQUIREMENTS

**§ 63.8230 By what date must I conduct performance tests or other initial compliance demonstrations?**

(a) You must conduct a performance test no later than the compliance date that is specified in § 63.8186 for your affected source to demonstrate initial compliance with the applicable emission limit in § 63.8190(a)(2) for by-product hydrogen streams and end box ventilation system vents and the applicable emission limit in § 63.8190(a)(3) for mercury thermal recovery unit vents.

(b) For the applicable work practice standards in § 63.8192, you must demonstrate initial compliance within 30 calendar days after the compliance date that is specified for your affected source in § 63.8186.

**§ 63.8232 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits?**

You must conduct a performance test for each by-product hydrogen stream, end box ventilation system vent, and mercury thermal recovery unit vent according to the requirements in § 63.7(e)(1) and the conditions detailed in paragraphs (a) through (d) of this section.

(a) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(b) For each performance test, you must develop a site-specific test plan in accordance with § 63.7(c)(2).

(c) You must conduct at least three test runs to comprise a performance test, as specified in § 63.7(e)(3) and in either paragraph (c)(1) or (2) of this section.

(1) The sampling time and sampling volume for each run must be at least 2 hours and 1.70 dry standard cubic meters (dscm). Mercury results below the analytical laboratory's detection limit must be reported using the reported analytical detection limit to calculate the sample concentration value and, in turn, the emission rate in the units of the standard; or

(2) The sampling time for each test run must be at least 2 hours and the mercury concentration in each field sample analyzed must be at least two

times the reported analytical detection limit.

(d) You must use the test methods specified in paragraphs (d)(1) through (4) of this section and the applicable test methods in paragraphs (d)(5) through (7) of this section.

(1) Method 1 or 1A in appendix A of 40 CFR part 60 to determine the sampling port locations and the location and required number of sampling traverse points.

(2) Method 2, 2A, 2C, or 2D in appendix A of 40 CFR part 60 to determine the stack gas velocity and volumetric flow rate.

(3) Method 3, 3A, or 3B in appendix A of 40 CFR part 60 to determine the stack gas molecular weight.

(4) Method 4 in appendix A of 40 CFR part 60 to determine the stack gas moisture content.

(5) For each by-product hydrogen stream, Method 102 in appendix A of 40 CFR part 61 to measure the mercury emission rate after the last control device.

(6) For each end box ventilation system vent, Method 101 or 101A in appendix A of 40 CFR part 61 to measure the mercury emission rate after the last control device.

(7) For each mercury thermal recovery unit vent, Method 101 or 101A in appendix A of 40 CFR part 61 to measure the mercury emission rate after the last control device.

(e) During each test run for a by-product hydrogen stream and each test run for an end box ventilation system vent, you must continuously measure the electric current through the operating mercury cells and record a measurement at least once every 15 minutes.

(f) If the final control device is not a nonregenerable carbon adsorber and if you are demonstrating compliance using periodic monitoring under § 63.8240(b), you must continuously monitor the parameters listed in paragraph (f)(1) of this section and establish your maximum or minimum monitoring value (as appropriate for your control device) using the requirements in paragraph (f)(2) of this section.

(1) During the performance test specified in paragraphs (a) through (d) of this section, you must continuously

monitor the control device parameters in paragraphs (f)(1)(i) through (vii) of this section and record a measurement at least once every 15 minutes.

(i) The exit gas temperature from uncontrolled streams;

(ii) The outlet temperature of the gas stream for the final (*i.e.*, the farthest downstream) cooling system when no control devices other than coolers or demisters are used;

(iii) The outlet temperature of the gas stream from the final cooling system when the cooling system is followed by a molecular sieve or regenerative carbon adsorber;

(iv) Outlet concentration of available chlorine, pH, liquid flow rate, and inlet gas temperature of chlorinated brine scrubbers and hypochlorite scrubbers;

(v) The liquid flow rate and exit gas temperature for water scrubbers;

(vi) The inlet gas temperature of regenerative carbon adsorption systems; and

(vii) The temperature during the heating phase of the regeneration cycle for carbon adsorbers or molecular sieves.

(2) To establish a maximum monitoring value or minimum monitoring value, as appropriate for your final control device, you must average the recorded parameters in paragraphs (f)(1)(i) through (vi) of this section over the test period. If your final control device is a regenerative carbon adsorber, you must use the highest temperature reading measured in paragraph (f)(1)(vii) as the reference temperature in § 63.8244(b)(2)(v).

**§ 63.8234 What equations and procedures must I use for the initial compliance demonstration?**

(a) *By-product hydrogen streams and end box ventilation system vents.* You

must determine the total grams of mercury per Megagram of chlorine production (g Hg/Mg Cl<sub>2</sub>) of chlorine produced from all by-product hydrogen streams and all end box ventilation system vents, if applicable, at a mercury cell chlor-alkali production facility, and you must follow the procedures in paragraphs (a)(1) through (6) of this section.

(1) Determine the mercury emission rate for each test run in grams per day for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, from Method 101, 101A, or 102 (40 CFR part 61, appendix A).

(2) Calculate the average measured electric current through the operating mercury cells during each test run for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, using Equation 1 of this section as follows:

$$CL_{\text{avg, run}} = \frac{\sum_{i=1}^n CL_{i, \text{run}}}{n} \quad (\text{Eq. 1})$$

Where:

CL<sub>avg, run</sub> = Average measured cell line current load during the test run, amperes;

CL<sub>i, run</sub> = Individual cell line current load measurement (*i.e.*, 15 minute reading) during the test run, amperes; and

n = Number of cell line current load measurements taken over the duration of the test run.

(3) Calculate the amount of chlorine produced during each test run for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, using Equation 2 of this section as follows:

$$P_{\text{Cl}_2, \text{run}} = (1.3 \times 10^{-6}) (CL_{\text{avg, run}}) (n_{\text{cells, run}}) (t_{\text{run}}) \quad (\text{Eq. 2})$$

Where:

P<sub>Cl<sub>2</sub>,run</sub> = Amount of chlorine produced during the test run, megagrams chlorine (Mg Cl<sub>2</sub>);

1.3 × 10<sup>-6</sup> = Theoretical chlorine production rate factor, Mg Cl<sub>2</sub> per hour per ampere per cell;

CL<sub>avg,run</sub> = Average measured cell line current load during test run, amperes, calculated using Equation 1 of this section;

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$n_{\text{cell,run}}$  = Number of cells on-line during the test run; and  
 $t_{\text{run}}$  = Duration of test run, hours.

(4) Calculate the mercury emission rate in grams of mercury per megagram of chlorine produced for each test run for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, using Equation 3 of this section as follows:

$$E_{\text{Hg, run}} = \left[ \frac{(R_{\text{run}})(t_{\text{run}})}{(24)(P_{\text{Cl}_2, \text{run}})} \right] \quad (\text{Eq. 3})$$

Where:

$E_{\text{Hg,run}}$  = Mercury emission rate for the test run, g Hg/Mg Cl<sub>2</sub>;  
 $R_{\text{run}}$  = Measured mercury emission rate for the test run from paragraph (a)(1) of this section, grams Hg per day;  
 $t_{\text{run}}$  = Duration of test run, hours;  
 24 = Conversion factor, hours per day; and  
 $P_{\text{Cl}_2, \text{run}}$  = Amount of chlorine produced during the test run, calculated using Equation 2 of this section, Mg Cl<sub>2</sub>.

(5) Calculate the average mercury emission rate for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, using Equation 4 of this section as follows:

$$E_{\text{Hg, avg}} = \frac{\sum_{i=1}^n E_{\text{Hg, run}}}{n} \quad (\text{Eq. 4})$$

Where:

$E_{\text{Hg,avg}}$  = Average mercury emission rate for the by-product hydrogen stream or the end box ventilation system vent, if applicable, g Hg/Mg Cl<sub>2</sub>;  
 $E_{\text{Hg,run}}$  = Mercury emission rate for each test run for the by-product hydrogen stream or the end box ventilation system vent, if applicable, g Hg/Mg Cl<sub>2</sub>, calculated using Equation 3 of this section; and  
 $n$  = Number of test runs conducted for the by-product hydrogen stream or the end box ventilation system vent, if applicable.

(6) Calculate the total mercury emission rate from all by-product hydrogen streams and all end box ventilation system vents, if applicable, at the mercury cell chlor-alkali production facility using Equation 5 of this section as follows:

$$E_{\text{Hg, H}_2\text{EB}} = \sum_{i=1}^n E_{\text{Hg, avg}} \quad (\text{Eq. 5})$$

Where:

$E_{\text{Hg,H}_2\text{EB}}$  = Total mercury emission rate from all by-product hydrogen streams and all end box ventilation system vents, if applicable, at the affected source, g Hg/Mg Cl<sub>2</sub>;  
 $E_{\text{Hg,avg}}$  = Average mercury emission rate for each by-product hydrogen stream and each end box ventilation system vent, if applicable, g Hg/Mg Cl<sub>2</sub>, determined using Equation 4 of this section; and  
 $n$  = Total number of by-product hydrogen streams and end box ventilation system vents at the affected source.

(b) *Mercury thermal recovery vents.* You must determine the milligrams of mercury per dscm exhaust discharged from mercury thermal recovery unit vents, using the procedures in paragraphs (b)(1) and (2) of this section.

(1) Calculate the concentration of mercury in milligrams of mercury per dscm of exhaust for each test run for each mercury thermal recovery unit vent using Equation 6 of this section as follows:

$$C_{\text{Hg, run}} = \left[ \frac{(m_{\text{Hg}})(10^{-3})}{(V_{\text{m(std)}})} \right] \quad (\text{Eq. 6})$$

Where:

$C_{\text{Hg,run}}$  = Mercury concentration for the test run, milligrams of mercury per dry standard cubic meter of exhaust;  
 $m_{\text{Hg}}$  = Mass of mercury in test run sample, from Method 101, 101A, or 102, micrograms;  
 10-3 = Conversion factor, milligrams per microgram; and  
 $V_{\text{m(std)}}$  = Dry gas sample volume at standard conditions, from Method 101, 101A, or 102, dry standard cubic meters.

(2) Calculate the average concentration of mercury in each mercury thermal recovery unit vent exhaust using Equation 7 of this section as follows:

$$C_{\text{Hg, avg}} = \frac{\sum_{i=1}^n C_{\text{Hg, run}}}{n} \quad (\text{Eq. 7})$$

Where:

$C_{\text{Hg,avg}}$  = Average mercury concentration for the mercury thermal recovery unit vent,

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milligrams of mercury per dry standard cubic meter exhaust;

$C_{\text{Hg,run}}$  = Mercury concentration for each test run, milligrams of mercury per dry standard cubic meter of exhaust, calculated using Equation 6 of this section; and

$n$  = Number of test runs conducted for the mercury thermal recovery unit vent.

### § 63.8236 How do I demonstrate initial compliance with the emission limitations and work practice standards?

(a) For each mercury cell chlor-alkali production facility, you have demonstrated initial compliance with the applicable emission limit for by-product hydrogen streams and end box ventilation system vents in § 63.8190(a)(2) if you comply with paragraphs (a)(1) and (2) of this section:

(1) Total mercury emission rate from all by-product hydrogen streams and all end box ventilation system vents, if applicable, at the affected source, determined according to §§ 63.8232 and 63.8234(a), did not exceed the applicable emission limit in § 63.8190(a)(2)(i) or (ii); and

(2) If you have chosen the periodic monitoring option specified in § 63.8240(b) and your final control device is not a nonregenerable carbon adsorber, you have established a parameter value according to § 63.8232(f)(2).

(b) For each mercury recovery facility, you have demonstrated initial compliance with the applicable emission limit for mercury thermal recovery unit vents in § 63.8190(a)(3) if you comply with paragraphs (b)(1) and (2) of this section.

(1) Mercury concentration in each mercury thermal recovery unit vent exhaust, determined according to §§ 63.8232 and 63.8234(b), did not exceed the applicable emission limit in § 63.8190(a)(3)(i) or (ii); and

(2) If you have chosen the periodic monitoring option in § 63.8240(b) and have a final control device that is not a nonregenerable carbon adsorber, you have established a maximum or minimum monitoring value, as appropriate for your control device according to § 63.8232(f)(2).

(c) For each affected source, you have demonstrated initial compliance with

the applicable work practice standards in § 63.8192 if you comply with paragraphs (c)(1) through (7) of this section.

(1) You certify in your Notification of Compliance Status that you are operating according to the work practice standards in § 63.8192(a) through (d).

(2) You choose the continuous cell room monitoring program option, you certify in your Notification of Compliance Status that you are operating according to the continuous cell room monitoring program under § 63.8192(g) and you have established your action level according to § 63.8192(g)(2).

(3) You certify in your Notification of Compliance Status that you are operating according to your washdown plan.

(4) You have submitted your washdown plan as part of your Notification of Compliance Status.

(5) You have submitted your continuous cell room monitoring plan, if applicable, as part of your Notification of Compliance Status.

(6) You have submitted your floor-level cell room monitoring plan, if applicable, as part of your Notification of Compliance Status.

(7) You have submitted records of the mass of virgin mercury added to cells for the 5 years preceding the applicable compliance date for your affected source as a part of the Notification of Compliance Status.

(d) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.8252(e).

### CONTINUOUS COMPLIANCE REQUIREMENTS

#### § 63.8240 What are my monitoring requirements?

For each by-product hydrogen stream, each end box ventilation system vent, and each mercury thermal recovery unit vent, you must monitor the mercury emissions using the procedures in paragraph (a) or (b) of this section.

(a) You must continuously monitor the mercury concentration using a mercury continuous emissions monitor according to the requirements in §§ 63.8242(a) and 63.8244(a); or

(b) You must periodically monitor the mercury emissions according to the



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requirements in §§ 63.8242(b) and 63.8244(b).

### **§ 63.8242 What are the installation, operation, and maintenance requirements for my continuous monitoring systems?**

(a) If you choose the continuous mercury monitoring option under § 63.8240(a), you must install, operate, and maintain each mercury continuous emissions monitor according to paragraphs (a)(1) through (5) of this section.

(1) Each mercury continuous emissions monitor must sample, analyze, and record the concentration of mercury at least once every 15 minutes.

(2) Each mercury continuous emissions monitor analyzer must have a detector with the capability to detect a mercury concentration at or below 0.5 times the mercury concentration level measured during the performance test conducted according to § 63.8232.

(3) In lieu of a promulgated performance specification as required in § 63.8(a)(2), you must develop a site-specific monitoring plan that addresses the elements in paragraphs (a)(3)(i) through (vi) of this section.

(i) Installation and measurement location downstream of the final control device for each by-product hydrogen stream, end box ventilation system vent, and mercury thermal recovery unit vent.

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration analyzer, and the data collection and reduction system.

(iii) Performance evaluation procedures and acceptance criteria (*i.e.*, calibrations).

(iv) Ongoing operation and maintenance procedures according to the requirements of § 63.8(c)(1), (3), and (4)(ii).

(v) Ongoing data quality assurance procedures according to the requirements of § 63.8(d).

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c), (e)(1), and (e)(2)(i).

(4) You must conduct a performance evaluation of each mercury continuous emissions monitor according to your site-specific monitoring plan.

(5) You must operate and maintain each mercury continuous emissions

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monitor in continuous operation according to the site-specific monitoring plan.

(b) If you choose the periodic monitoring option and your final control device is not a nonregenerable carbon adsorber, you must install, operate, and maintain a continuous parameter monitoring system (CPMS) for each parameter specified in § 63.8232(f)(1), according to § 63.8(c).

### **§ 63.8243 What equations and procedures must I use to demonstrate continuous compliance?**

(a) *By-product hydrogen streams and end box ventilation system vents.* For each consecutive 52-week period, you must determine the g Hg/Mg Cl<sub>2</sub> produced from all by-product hydrogen streams and all end box ventilation system vents, if applicable, at a mercury cell chlor-alkali production facility using the procedures in paragraphs (a)(1) through (3) of this section. You must begin collecting data on the compliance date that is specified in § 63.8186 for your affected source and calculate your first 52-week average mercury emission rate at the end of the 52nd week after the compliance date.

(1) Each week, you must determine the weekly mercury emission rate in grams per week for each by-product hydrogen stream and for each end box ventilation system vent, if applicable, using one of the monitoring options in paragraph (a)(1)(i) or (ii) of this section.

(i) Continuous mercury monitoring according to §§ 63.8242 and 63.8244(a).

(ii) Periodic monitoring according to § 63.8244(b).

(2) Each week, you must determine the chlorine production and keep records of the production rate as required under § 63.8256(b)(6).

(3) Beginning 52 weeks after the compliance date specified in § 63.8186 for your affected source, you must calculate the 52-week average mercury emission rate from all by-product hydrogen steam and all end box ventilation system vents, if applicable, using Equation 1 of this section as follows:

$$E_{\text{Hg}} = \sum_{i=1}^{52} \left[ \frac{(R_{\text{week}_i})}{(P_{\text{Cl}_2, \text{week}_i})} \right] \quad (\text{Eq. 1})$$

Where:

$E_{\text{Hg}}$  = 52-week average mercury emission rate for week<sub>i</sub>, g Hg/Mg Cl<sub>2</sub>;

$R_{\text{week}_i}$  = Mercury emission rate for week<sub>i</sub> from paragraph (a)(1) of this section, g Hg per week;

$P_{\text{Cl}_2, \text{week}_i}$  = Amount of chlorine produced during week<sub>i</sub>, from paragraph (a)(2) of this section, Mg Cl<sub>2</sub> per week.

(b) *Mercury thermal recovery units.* If you choose the continuous monitoring option in § 63.8240(a), you must demonstrate continuous compliance using paragraph (b)(1) of this section. If you choose the periodic monitoring option in § 63.8240(b), you must demonstrate continuous compliance using paragraph (b)(2) of this section.

(1) You must calculate the daily average mercury concentration using Equation 2 of this section as follows:

$$C_{\text{Hg, dailyavg}} = \frac{\left( \sum_{i=1}^n C_{\text{Hg, } i} \right)}{n} \quad (\text{Eq. 2})$$

Where:

$C_{\text{Hg, dailyavg}}$  = Average mercury concentration for the operating day, milligrams per dry standard cubic meter;

$C_{\text{Hg, } i}$  = Concentration of mercury measured at the interval  $i$  (i.e., 15 minute reading) using a mercury continuous emission monitor, milligrams per dry standard cubic meter; and

$n$  = Number of concentration measurements taken during the operating day.

(2) You must calculate the daily average mercury concentration using the procedures in § 63.8234(b).

#### § 63.8244 How do I monitor and collect data to demonstrate continuous compliance?

(a) *Continuous monitoring option.* You must monitor mercury concentration according to § 63.8242(a) at all times that the affected source is operating with the exception of paragraphs (a)(1) and (2) of this section.

(1) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks

and required zero and span adjustments), you must monitor mercury emissions continuously (or collect data at all required intervals) at all times that the affected source is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(2) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels or to fulfill a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing compliance.

(b) *Periodic monitoring option.* If you choose the periodic monitoring option under § 63.8240(b), you must monitor according to the procedures in paragraph (b)(1) or (2) of this section.

(1) If your final control device is a nonregenerable carbon adsorber, then you must conduct at least three test runs per week meeting the criteria specified in § 63.8232(c)(1) and (2) to measure mercury emissions using the test methods specified in § 63.8232(d). Alternatively, you may use any other method that has been validated using the applicable procedures in Method 301, 40 CFR part 63, appendix A.

(2) If your final control device is anything other than a nonregenerable carbon adsorber, you must monitor according to the requirements of paragraphs (b)(2)(i) through (v) of this section.

(i) You must conduct at least three test runs per week meeting the criteria specified in § 63.8232(c)(1) and (2) to measure mercury emissions using the test methods specified in § 63.8232(d). Alternatively, you may use any other method that has been validated using the applicable procedures in Method 301, 40 CFR part 63, appendix A.

(ii) Except as specified in paragraph (b)(2)(iii) of this section, you must continuously collect data at least once every 15 minutes using a CPMS installed and operated according to

§ 63.8242(b) and record each 1-hour average from all measured data values during each 1-hour period for the applicable parameter identified in § 63.8232(f)(1) using the methods specified in § 63.8244(a).

(iii) As appropriate, you must continuously monitor the temperature specified in § 63.8232(f)(1)(vii) during each heating phase of the regeneration cycle of your carbon adsorber.

(iv) If the hourly average monitoring value of any applicable parameter recorded under paragraph (b)(2)(ii) of this section is below the minimum monitoring value or above the maximum monitoring value of that same parameter established under § 63.8232(f)(2) for 24 consecutive hours, your monitoring value is out of range and you must take corrective action as soon as practicable. The hourly average monitoring value must be above the minimum monitoring value or below the maximum monitoring value as appropriate for that parameter, within 48 hours of the period that the monitoring value is out of range.

(v) If your final control device is a regenerative carbon adsorber, when the maximum hourly value of the temperature measured according to paragraph (b)(2)(iii) of this section is below the reference temperature determined according to § 63.8232(f)(2) for three consecutive regeneration cycles, your monitoring value is out of range and you must take corrective action as soon as practicable. During the first regeneration cycle following the period that your monitoring value is out of range, the maximum hourly value must be above the reference temperature recorded according to § 63.8232(f)(2).

**§ 63.8246 How do I demonstrate continuous compliance with the emission limitations and work practice standards?**

(a) *By-product hydrogen streams and end box ventilation system vents.* (1) For all by-product hydrogen streams and all end box ventilation system vents, if applicable, you must demonstrate continuous compliance with the applicable mercury emission limit by reducing the mercury emissions data to 52-week averages using Equation 1 of § 63.8243

and maintaining the 52-week average mercury emissions no higher than the applicable mercury emissions limit in § 63.8190(a)(2). To obtain the data to calculate these 52-week averages, you must monitor in accordance with paragraph (a)(1)(i) or (ii) of this section.

(i) *Continuous monitoring option.* You must collect mercury emissions data according to § 63.8244(a), representing at least 75 percent of the 15-minute periods in each operating day of the 52-week compliance period (with data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities not counting toward the 75 percent requirement);

(ii) *Periodic monitoring option.* You must conduct at least three test runs per week to collect mercury emissions samples according to § 63.8244(b)(1) and (2)(i) and, if your final control device is not a nonregenerable carbon adsorber, you must collect data for monitoring values according to § 63.8244(b)(2)(ii) through (v).

(2) You must maintain records of mercury emissions and 52-week average values, as required in § 63.8256(b)(3) and (4). If your final control device is not a nonregenerable carbon adsorber, you must maintain records according to § 63.8256(d).

(b) *Mercury thermal recovery unit vents.* (1) For each mercury thermal recovery unit vent, you must demonstrate continuous compliance with the applicable emission limit specified in § 63.8190(a)(3) by maintaining the outlet mercury hourly-average concentration no higher than the applicable limit. To determine the outlet mercury concentration, you must monitor according to paragraph (b)(1)(i) or (ii) of this section.

(i) *Continuous monitoring option.* You must collect mercury concentration data according to § 63.8244(a), representing at least 75 percent of the 15-minute periods in the operating day (with data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities not counting toward the 75 percent requirement).

(ii) *Periodic monitoring option.* You must conduct at least three test runs per week to collect mercury emissions

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samples according to § 63.8244(b)(1) and (2)(i) and, if your final control device is not a nonregenerable carbon adsorber, you must collect data for monitoring values according to § 63.8244(b)(2)(ii) through (v).

(2) You must maintain records of mercury emissions and daily average values as required in § 63.8256(b)(3). If your final control device is not a nonregenerable carbon adsorber, you must maintain records according to § 63.8256(d).

(c) You must demonstrate continuous compliance with the applicable work practice standards in § 63.8192 by maintaining records in accordance with § 63.8256(c).

### § 63.8248 What other requirements must I meet?

(a) *Deviations.* The instances specified in paragraphs (a)(1) through (4) of this section are deviations and must be reported according to the requirements in § 63.8254.

(1) You must report each instance in which you did not meet each emission limitation in § 63.8190 that applies to you. This includes periods of startup, shutdown, and malfunction.

(2) You must report each instance in which you did not meet each work practice standard in § 63.8192 that applies to you. This includes periods of startup, shutdown, and malfunction.

(3) You must report each instance in which the corrective actions taken according to § 63.8244(b)(2)(iv) did not result in average monitoring values being within range within 48 hours of the period that the monitoring value is out of range.

(4) You must report each instance in which the corrective action taken according to § 63.8244(b)(2)(v) did not result in the maximum hourly temperature being above the reference temperature during the first regeneration cycle following the period that the monitoring value was out of range.

(b) *Startups, shutdowns, and malfunctions.* (1) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1).

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

(3) By-passing the control device for maintenance activities is not considered a startup, shutdown, or malfunction event.

[68 FR 70928, Dec. 19, 2003, as amended at 71 FR 20469, Apr. 20, 2006]

### NOTIFICATION, REPORTS, AND RECORDS

### § 63.8252 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e) and (f) and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in § 63.9(b)(2), if you start up your affected source before December 19, 2003, you must submit an Initial Notification no later than 120 calendar days after December 19, 2003, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(c) As specified in § 63.9(b)(3), if you start up your new or reconstructed mercury recovery facility on or after December 19, 2003, you must submit your initial notification not later than 120 days after you become subject to this subpart.

(d) For each performance test that you are required to conduct for by-product hydrogen streams and end box ventilation system vents and for mercury thermal recovery unit vents, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in § 7(b)(1).

(e) You must submit a Notification of Compliance Status according to paragraphs (e)(1) and (2) of this section.

(1) For each initial compliance demonstration that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration. The Notification of Compliance Status must contain the items in paragraphs (e)(1)(i) through (iv) of this section:

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(i) If you choose not to implement a cell room monitoring program according to § 63.8192(g), a certification that you are operating according to the applicable work practice standards in § 63.8192(a) through (d) and your floor-level mercury vapor measurement plan required by § 63.8192(d).

(ii) The washdown plan, and you must certify that you are operating according to the washdown plan specified in § 63.8192(f).

(iii) The mass of virgin mercury added to cells for the 5 years preceding the compliance date.

(iv) If you choose to implement a cell room monitoring program according to § 63.8192(g), your cell room monitoring plan.

(2) For each initial compliance demonstration that does include a performance test, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2). The Notification of Compliance Status must contain the information in § 63.9(h)(2)(ii)(A) through (G). The site-specific monitoring plan required in § 63.8242(a)(3) must also be submitted.

[68 FR 70928, Dec. 19, 2003, as amended at 85 FR 73914, Nov. 19, 2020, 85 FR 84262, Dec. 28, 2020]

### § 63.8254 What reports must I submit and when?

(a) *Compliance report due dates.* You must submit a semiannual compliance report to your permitting authority according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.8186 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your affected source in § 63.8186.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance reporting period.

(3) Each subsequent compliance report must cover the semiannual report-

ing period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(b) *Compliance report contents.* Each compliance report must contain the information in paragraphs (b)(1) through (3) of this section, and as applicable, paragraphs (b)(4) through (12) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from the continuous compliance requirements in § 63.8246 that apply to you, a statement that there were no deviations from the emission limitations, work practice standards, and operation and maintenance standards during the reporting period.

(6) If there were no periods during which the mercury continuous emission monitor or CPMS (if applicable) were out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during the which the mercury continuous emissions monitor or CPMS (if applicable) were out-of-control during the reporting period.

(7) For each deviation from the requirements for work practice standards in Tables 1 through 4 to this subpart that occurs at an affected source (including deviations where the response intervals were not adhered to as described in § 63.8192(b)), the compliance report must contain the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(7)(i) and (ii) of this section. This includes periods of startup, shutdown, and malfunction.

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(i) The total operating time of each affected source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(8) For each deviation from an emission limitation occurring at an affected source where you are using a mercury continuous emission monitor, according to the site-specific monitoring plan required in § 63.8242(a)(3), to comply with the emission limitation in this subpart, you must include the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(8)(i) through (xii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time of each instance in which a continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration of each instance in which a continuous monitoring system was out-of-control, including the information in § 63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period including those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) An identification of each hazardous air pollutant that was monitored at the affected source.

(ix) A brief description of the process units.

(x) A brief description of the continuous monitoring system.

(xi) The date of the latest continuous monitoring system certification or audit.

(xii) A description of any changes in monitoring system, processes, or controls since the last reporting period.

(9) For each deviation from an operation and maintenance standard occurring at an affected source where you are using the periodic monitoring option specified in § 63.8240(b) and your final control device is not a nonregenerable carbon adsorber, the compliance report must include the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(9)(i) through (x) of this section. This includes periods of startups, shutdowns and malfunctions.

(i) The total operating time of each affected source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, whether the deviation occurred during a period of startup, shutdown, or malfunction, or other period, and the corrective action taken.

(iii) The date and time of each instance in which a CPMS was inoperative, except for zero (low-level) and high-level checks.

(iv) The date, time, and duration of each instance in which a CPMS was out-of-control, including the information specified in § 63.8(c)(8).

(v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period including those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of monitoring system downtime as a percent of the

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total source operating time during the reporting period.

(viii) A brief description of the CPMS.

(ix) The date of the latest CPMS certification or audit.

(x) A description of any changes in monitoring system, processes, or controls since the last reporting period.

(10) The compliance report must contain the mass of virgin mercury added to cells for the reporting period.

(11) The compliance report must contain each instance in which corrective actions taken under § 63.8244(b)(2)(iv) did not result in average monitoring values being within range within 48 hours of the period that the monitoring value is out of range.

(12) The compliance report must contain each instance in which corrective action taken according to § 63.8244(b)(2)(v) did not result in the maximum hourly temperature being above the reference temperature during the first regeneration cycle following the period that the monitoring value was out of range.

(c) *Immediate startup, shutdown, and malfunction report.* If you took an action during a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan required in § 63.8226(b), and the source exceeded any applicable emission limitation in this subpart, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in § 63.10(d)(5)(ii).

(d) *Title V monitoring report.* After your affected source has been issued a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations from permit requirements and provide reports of any required monitoring in your semiannual monitoring report as required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a semiannual compliance report for an affected source as required by this subpart as part of the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the semiannual compliance report includes all information required by the 40 CFR part 70 or

40 CFR part 71 semiannual monitoring report for the deviations that are reported in the semiannual compliance report, submission of the semiannual compliance report satisfies your obligation to report the same deviation information in the semiannual monitoring report. However, in such situations, the semiannual monitoring report must cross-reference the semiannual compliance report, and submission of a semiannual compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an affected source to your permitting authority under 40 CFR part 70 or 40 CFR part 71.

**§ 63.8256 What records must I keep?**

(a) *General records.* You must keep the records in paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or Notification of Compliance Status that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(b) Records associated with the by-product hydrogen stream and end box ventilation system vent emission limitations and the mercury thermal recovery unit vent emission limitations. You must keep the records in paragraphs (b)(1) through (5) of this section related to the emission limitations in § 63.8190(a)(2) through (3) and (b).

(1) Records of performance tests as required in § 63.10(b)(2)(viii).

(2) Records of the mercury emissions monitoring conducted during the performance tests.

(3) Records of the continuous or periodic mercury emissions monitoring data.

(4) Records of the 52-week rolling average mercury emissions.

(5) Records associated with your site-specific monitoring plan required in § 63.8242(a)(3) (*i.e.*, results of inspections, calibrations, and validation checks of each mercury concentration continuous monitoring system (CMS)).

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(6) Records of chlorine production on a weekly basis.

(c) Records associated with the work practice standards.

(1) If you choose not to institute a cell room monitoring program according to §63.8192(g) of this subpart, you must keep the records specified in paragraphs (c)(1)(i) through (v) of this section.

(i) Records specified in Table 9 to this subpart related to the work practice standards in Tables 1 through 4 of this subpart.

(ii) Your current floor-level mercury vapor measurement plan.

(iii) Records of the average value calculated from at least three measurements taken according to your floor-level mercury vapor measurement plan.

(iv) Records indicated in §63.8192(d)(4)(i) for maintenance activities that cause the floor-level mercury concentration to exceed the action level.

(v) Records of all inspections and corrective actions taken in response to a non-maintenance related situation in which the mercury vapor concentration exceeds the floor-level mercury concentration action level.

(2) You must maintain a copy of your current washdown plan and records of when each washdown occurs.

(3) You must maintain records of the mass of virgin mercury added to cells for each reporting period.

(4) If you choose to institute a cell room monitoring program according to §63.8192(g) of this subpart, you must keep your current cell room monitoring plan and the records specified in paragraphs (c)(4)(i) through (v) of this section.

(i) Records of the monitoring conducted in accordance with §63.8192(g)(2)(i) to establish your action level, and records demonstrating the development of this action level.

(ii) Records of the cell room mercury concentration monitoring data collected.

(iii) Instances when the action level is exceeded.

(iv) Records specified in §63.8192(g)(4)(i) for maintenance activities that cause the mercury vapor concentration to exceed the action level.

(v) Records of all inspections and corrective actions taken in response to a non-maintenance related situation in which the mercury vapor concentration exceeds the action level.

(d) Records associated with the periodic monitoring option if your final control device is not a nonregenerable carbon adsorber. You must keep the records in paragraph (d)(1) through (3) of this section.

(1) Records of the CPMS data collected during the performance test as specified in §63.8232(f)(1).

(2) Records documenting the development of the maximum monitoring value or minimum monitoring value, as appropriate, according to §63.8232(f)(2).

(3) Records of hourly average values of applicable parameters monitored as specified in §63.8244(b)(2)(ii) or (iii).

### **§ 63.8258 In what form and how long must I keep my records?**

(a) Your records must be in a form suitable and readily available for expeditious inspection and review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

### **OTHER REQUIREMENTS AND INFORMATION**

#### **§ 63.8262 What parts of the General Provisions apply to me?**

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.13 apply to you.

#### **§ 63.8264 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by us, the United States Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State,



local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities in paragraphs (c)(1) through (4) of this section will not be delegated to State, local, or tribal agencies.

(1) Approval of alternatives under § 63.6(g) to the non-opacity emission limitations in § 63.8190 and work practice standards in § 63.8192.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

#### § 63.8266 What definitions apply to this subpart?

Terms used in this subpart are defined in the CAA, in § 63.2, and in this section as follows:

*Aqueous liquid* means a liquid mixture in which water is the predominant component.

*Brine* means an aqueous solution of alkali metal chloride, as sodium chloride salt solution or potassium chloride salt solution, that is used in the electrolyzer as a raw material.

*By-product hydrogen stream* means the hydrogen gas from each decomposer that passes through the hydrogen system and is burned as fuel, transferred to another process as raw material, or discharged directly to the atmosphere.

*Caustic* means an aqueous solution of alkali metal hydroxide, as sodium hydroxide or potassium hydroxide, that is produced in the decomposer.

*Caustic basket* means a fixture adjacent to the decomposer that contains a serrated funnel over which the caustic from the decomposer passes, breaking

into droplets such that electric current is interrupted.

*Caustic system* means all vessels, piping, and equipment that convey caustic and remove mercury from the caustic stream. The caustic system begins at the decomposer and ends after the primary filters.

*Cell room* means a building or other structure in which one or more mercury cells are located.

*Continuous parameter monitoring system, or CPMS*, means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of process of control system parameters.

*Control device* means a piece of equipment (such as condensers, coolers, chillers, heat exchangers, mist eliminators, absorption units, and adsorption units) that removes mercury from gaseous streams.

*Decomposer* means the component of a mercury cell in which mercury amalgam and water react in bed of graphite packing (within a cylindrical vessel), producing caustic and hydrogen gas and returning mercury to its elemental form for re-use in the process.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the title V operating permit for any affected source required to obtain such a permit;

(3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart; or

(4) Fails to take corrective actions within 48 hours that result in parameter monitoring values being within range.

*Electrolyzer* means the main component of the mercury cell that consists of an elongated, shallow steel trough that holds a layer of mercury as a flowing cathode. The electrolyzer is enclosed by side panels and a top that suspends metal anodes. In the electrolyzer, brine is fed between a flowing mercury cathode and metal anodes in the presence of electricity to produce chlorine gas and an alkali metal-mercury amalgam (mercury amalgam).

*Emission limitation* means any emission limit or operating limit.

*End box* means a component of a mercury cell for transferring materials between the electrolyzer and the decomposer. The inlet end box collects and combines raw materials at the inlet end of the cell, and the outlet end box separates and directs various materials either into the decomposer or out of the cell.

*End box ventilation system* means all vessels, piping, and equipment that evacuate the head space of each mercury cell end box (and possibly other vessels and equipment) to the atmosphere. The end box ventilation system begins at the end box (and other vessel or equipment which is being evacuated) and terminates at the end box ventilation system vent. The end box ventilation system includes all control devices.

*End box ventilation system vent* means the discharge point of the end box ventilation system to the atmosphere after all control devices.

*Hydrogen leak* means hydrogen gas (containing mercury vapor) that is escaping from the decomposer or hydrogen system.

*Hydrogen system* means all vessels, piping, and equipment that convey a by-product hydrogen stream. The hydrogen system begins at the decomposer and ends at the point just downstream of the last control device. The hydrogen system includes all control devices.

*In liquid mercury service* means containing or coming in contact with liquid mercury.

*Liquid mercury accumulation* means one or more liquid mercury droplets, or a pool of liquid mercury, present on the

floor or other surface exposed to the atmosphere.

*Liquid mercury leak* means the liquid mercury that is dripping or otherwise escaping from process equipment.

*Liquid mercury spill* means a liquid mercury accumulation resulting from a liquid mercury that leaked from process equipment or that dripped during maintenance or handling.

*Mercury cell* means a device consisting of an electrolyzer and decomposer, with one or more end boxes, a mercury pump, and other components linking the electrolyzer and decomposer.

*Mercury cell amalgam seal pot* means a compartment through which mercury amalgam passes from an outlet end box to a decomposer.

*Mercury cell chlor-alkali plant* means all contiguous or adjoining property that is under common control, where mercury cells are used to manufacture product chlorine, product caustic, and by-product hydrogen and where mercury may be recovered from wastes.

*Mercury cell chlor-alkali production facility* means an affected source consisting of all cell rooms and ancillary operations used in the manufacture of product chlorine, product caustic, and by-product hydrogen at a mercury cell chlor-alkali plant.

*Mercury concentration CMS, or mercury concentration continuous monitoring system*, means a CMS, as defined in § 63.2, that continuously measures the concentration of mercury.

*Mercury-containing wastes* means waste materials containing mercury, which are typically classified under Resource Conservation and Recovery Act (RCRA) solid waste designations. K071 wastes are sludges from the brine system. K106 are wastewater treatment sludges. D009 wastes are non-specific mercury-containing wastes, further classified as either debris or nondebris (*i.e.*, cell room sludges and carbon from decomposes).

*Mercury pump* means a component of a mercury cell for conveying elemental mercury re-created in the decomposer to the beginning of the mercury cell. A mercury pump is typically found either as an in-line mercury pump (near a mercury suction pot or mercury seal pot) or submerged mercury pump

(within a mercury pump tank or mercury pump seal).

*Mercury recovery facility* means an affected source consisting of all processes and associated operations needed for mercury recovery from wastes at a mercury cell chlor-alkali plant.

*Mercury thermal recovery unit* means the retort(s) where mercury-containing wastes are heated to volatilize mercury and the mercury recovery/control system (control devices and other equipment) where the retort off-gas is cooled, causing mercury to condense and liquid mercury to be recovered.

*Mercury thermal recovery unit vent* means the discharge point of the mercury thermal recovery unit to the atmosphere after all recovery/control devices. This term encompasses both oven type vents and non-oven type vents.

*Mercury vacuum cleaner* means a cleanup device used to draw a liquid mercury spill or accumulation (via suction pressure) into a closed compartment.

*Non-oven type mercury thermal recovery unit vent* means the discharge point to the atmosphere after all recovery/control devices of a mercury thermal recovery unit in which the retort is either a rotary kiln or single hearth retort.

*Open-top container* means any container that does not have a tight-fitting cover that keeps its contents from being exposed to the atmosphere.

*Oven type mercury thermal recovery unit vent* means the discharge point to the atmosphere after all recovery/control devices of a mercury thermal re-

covery unit in which each retort is a batch oven retort.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Retort* means a furnace where mercury-containing wastes are heated to drive mercury into the gas phase. The types of retorts used as part of mercury thermal recovery units at mercury cell chlor-alkali plants include batch oven retorts, rotary kilns, and single hearth retorts.

*Spalling* means fragmentation by chipping.

*Sump* means a large reservoir or pit for wastewaters (primarily washdown waters).

*Trench* means a narrow channel or depression built into the length of a cell room floor that leads washdown materials to a drain.

*Vent hose* means a connection for transporting gases from the mercury cell.

*Virgin mercury* means mercury that has not been processed in an onsite mercury thermal recovery unit or otherwise recovered from mercury-containing wastes onsite.

*Washdown* means the act of rinsing a floor or surface with a stream of aqueous liquid to cleanse it of a liquid mercury spill or accumulation, generally by driving it into a trench.

*Week* means any consecutive seven-day period.

*Work practice standard* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

TABLE 1 TO SUBPART IIII OF PART 63—WORK PRACTICE STANDARDS—DESIGN, OPERATION, AND MAINTENANCE REQUIREMENTS

As stated in §63.8192, you must meet the work practice standards in the following table:

For . . .	You must . . .
1. Cell rooms .....	a. For new or modified cell rooms, construct each cell room interior using materials that are resistant to absorption of mercury, resistant to corrosion, facilitate the detection of liquid mercury spills or accumulations, and are easy to clean. b. Limit access around and beneath mercury cells in each cell room to prevent liquid mercury from being tracked into other areas. c. Provide adequate lighting in each cell room to facilitate the detection of liquid mercury spills or accumulations. d. Minimize the number of items stored around and beneath cells in each cell room.
2. Mercury cells and electrolyzers.	a. Operate and maintain each electrolyzer, decomposer, end box, and mercury pump to minimize leakage of mercury.

For . . .	You must . . .
	<ul style="list-style-type: none"> <li>b. Prior to opening an electrolyzer for maintenance, do the following: (1) Complete work that can be done before opening the electrolyzer in order to minimize the time required to complete maintenance when the electrolyzer is open; (2) fill the electrolyzer with an aqueous liquid, when possible; (3) allow the electrolyzer to cool before opening; and (4) schedule and staff maintenance of the electrolyzer to minimize the time the electrolyzer is open.</li> <li>c. When the electrolyzer top is raised and before moving the top and anodes, thoroughly flush all visible mercury from the top and the anodes with an aqueous liquid, when possible.</li> <li>d. While an electrolyzer is open, keep the bottom covered with an aqueous liquid or maintain a continuous flow of aqueous liquid, when possible.</li> <li>e. During an electrolyzer side panel change, take measures to ensure an aqueous liquid covers or flows over the bottom, when possible.</li> <li>f. Each time an electrolyzer is opened, inspect and replace components, as appropriate.</li> <li>g. If you step into an electrolyzer bottom, either remove all visible mercury from your footwear or replace them immediately after stepping out of the electrolyzer.</li> <li>h. If an electrolyzer is disassembled for overhaul maintenance or for any other reason, chemically clean the bed plate or thoroughly flush it with an aqueous liquid.</li> <li>i. Before transporting each electrolyzer part to another work area, remove all visible mercury from the part or contain the part to prevent mercury from dripping during transport.</li> <li>j. After completing maintenance on an electrolyzer, check any mercury piping flanges that were opened for liquid mercury leaks.</li> <li>k. If a liquid mercury spill occurs during any maintenance activity on an electrolyzer, clean it up in accordance with the requirements in Table 3 to this subpart.</li> </ul>
3. Vessels in liquid mercury service.	<p>If you replace a vessel containing mercury that is intended to trap and collect mercury after December 19, 2003, replace it with a vessel that has a cone shaped bottom with a drain valve or other design that readily facilitates mercury collection.</p>
4. Piping and process lines in liquid mercury service.	<ul style="list-style-type: none"> <li>a. To prevent mercury buildup after December 19, 2003, equip each new process line and piping system with smooth interiors and adequate low point drains or mercury knock-out pots to avoid liquid mercury buildup within the pipe and to facilitate mercury collection and recovery.</li> </ul>
5. Cell room floors .....	<ul style="list-style-type: none"> <li>a. Maintain a coating on cell room floors that is resistant to absorption of mercury and that facilitates the detection of liquid mercury spills or accumulations.</li> <li>b. Maintain cell room floors such that they are smooth and free of cracking and spalling.</li> <li>c. Maintain the cell room floor to prevent mercury accumulation in the corners.</li> <li>d. Maintain a layer of aqueous liquid on liquid mercury contained in trenches or drains and replenish the aqueous layer at least once per day.</li> <li>e. Keep the cell room floor clean and free of debris.</li> <li>f. If you step into a liquid mercury spill or accumulation, either remove all visible mercury from your footwear or replace your footwear immediately.</li> </ul>
6. End boxes .....	<ul style="list-style-type: none"> <li>a. Either equip each end box with a fixed cover that is leak tight, or route the end box head space to an end box ventilation system.</li> <li>b. For each end box ventilation system: maintain a flow of aqueous liquid over the liquid mercury in the end box and maintain the temperature of the aqueous liquid below its boiling point, maintain a negative pressure in the end box ventilation system, and maintain the end box ventilation system in good condition.</li> <li>c. Maintain each end box cover in good condition and keep the end box closed when the cell is in service and when liquid mercury is flowing down the cell, except when operation or maintenance activities require short-term access.</li> <li>d. Keep all bolts and C-clamps used to hold the covers in place when the cell is in service and when liquid mercury is flowing down the cell.</li> <li>e. Maintain each access port stopper in an end box cover in good sealing condition and keep each end box access port closed when the cell is in service and when liquid mercury is flowing down the cell.</li> </ul>
7. Decomposers .....	<ul style="list-style-type: none"> <li>a. Maintain each decomposer cover in good condition and keep each decomposer closed and sealed, except when maintenance activities require the cover to be removed.</li> <li>b. Maintain connections between the decomposer and the corresponding cell components, hydrogen system piping, and caustic system piping in good condition and keep the connections closed/tight, except when maintenance activities require opening/loosening these connections.</li> <li>c. Keep each mercury cell amalgam seal pot closed and sealed, except when operation or maintenance activities require short-term access.</li> <li>d. Prior to opening a decomposer, do the following: fill the decomposer with an aqueous liquid or drain the decomposer liquid mercury into a container that meets requirements in Table 1, Item 9 or 10, allow the decomposer to cool before opening, and complete work that can be done before opening the decomposer.</li> <li>e. Take precautions to avoid mercury spills when changing graphite grids or balls in horizontal decomposers or graphite packing in vertical decomposers. If a spill occurs, you must clean it up in accordance with the requirements in Table 3 to this subpart.</li> <li>f. After each maintenance activity, use an appropriate technique (Table 6 to this subpart) to check for hydrogen leaks.</li> <li>g. Before transporting any internal part from the decomposer (such as the graphite basket) to another work area, remove all visible mercury from the part or contain the part to prevent mercury from dripping during transport.</li> <li>h. Store carbon from decomposers in accordance with the requirements in 40 CFR part 265, subparts I and CC, until the carbon is treated or is disposed.</li> </ul>

For . . .	You must . . .
8. Submerged mercury pumps	<ul style="list-style-type: none"> <li>a. Provide a vapor outlet connection from each submerged pump to an end box ventilation system. The connection must be maintained under negative pressure.</li> <li>b. Keep each mercury pump tank closed, except when maintenance or operation activities require the cover to be removed.</li> <li>c. Maintain a flow of aqueous liquid over the liquid mercury in each mercury pump tank and maintain the aqueous liquid at a temperature below its boiling point.</li> </ul>
9. Open-top containers holding liquid mercury.	Maintain a layer of aqueous liquid over liquid mercury in each open-top container. Replenish the aqueous layer at least once per day and, when necessitated by operating procedures or observation, collect the liquid mercury from the container in accordance with the requirements in Table 4 to this subpart.
10. Closed containers used to store liquid mercury.	<ul style="list-style-type: none"> <li>a. Store liquid mercury in containers with tight fitting covers.</li> <li>b. Maintain the seals on the covers in good condition.</li> <li>c. Keep each container securely closed when mercury is not being added to, or removed from, the container.</li> </ul>
11. Caustic systems	<ul style="list-style-type: none"> <li>a. Maintain the seal between each caustic basket cover and caustic basket by using gaskets and other appropriate material.</li> <li>b. Do not allow solids and liquids collected from back-flushing primary caustic filters to contact floors or run into open trenches.</li> <li>c. Collect solids and liquids from back-flushing each primary caustic filter and collect these mercury-containing wastes in process vessels or in accordance with the requirements in 40 CFR part 265, subparts I and CC.</li> <li>d. Keep each caustic basket closed and sealed, except when operation or maintenance activities require short term access.</li> </ul>
12. Hydrogen systems	<ul style="list-style-type: none"> <li>a. Collect drips from each hydrogen seal pot and compressor seal in containers meeting the requirements in this table for open containers. These drips should not be allowed to run on the floor or in open trenches.</li> <li>b. Minimize purging of hydrogen from a decomposer into the cell room by either sweeping the decomposer with an inert gas or by routing the hydrogen to the hydrogen system.</li> <li>c. Maintain hydrogen piping gaskets in good condition.</li> <li>d. After any maintenance activities, use an appropriate technique (Table 6 to this subpart) to check all hydrogen piping flanges that were opened for hydrogen leaks.</li> </ul>

TABLE 2 TO SUBPART IIIII OF PART 63—WORK PRACTICE STANDARDS—REQUIRED INSPECTIONS

As stated in §63.8192, you must meet the work practice standards in the following table:

You must inspect . . .	At least once each . . .	And if you find . . .	You must . . .
1. Each vent hose on each mercury cell.	Half day	A leaking vent hose	Take action immediately to correct the leak.
2. Each open-top container holding liquid mercury.	Half day	Liquid mercury that is not covered by an aqueous liquid.	Take action immediately to cover the liquid mercury with an aqueous liquid.
3. Each end box	Half day	<ul style="list-style-type: none"> <li>a. An end box cover not securely in place.</li> <li>b. An end box stopper not securely in place.</li> <li>c. Liquid mercury in an end box that is not covered by an aqueous liquid at a temperature below boiling.</li> </ul>	<ul style="list-style-type: none"> <li>Take action immediately to put the end box cover securely in place.</li> <li>Take action immediately to put the end box stopper securely in place.</li> <li>Take action immediately to cover the liquid mercury with an aqueous liquid.</li> </ul>
4. Each mercury amalgam seal pot.	Half day	A seal pot cover that is not securely in place.	Take action immediately to put the seal pot cover securely in place.
5. Each mercury seal pot	Half day	A mercury seal pot stopper not securely in place.	Take action immediately to put the mercury seal pot stopper securely in place.
6. Cell room floors	Month	Cracks, spalling, or other deficiencies that could cause liquid mercury to become trapped.	Repair the crack, spalling, or other deficiency within 1 month from the time you identify the deficiency.
7. Pillars and beams	6 months	Cracks, spalling, or other deficiencies that could cause liquid mercury to become trapped.	Repair the crack, spalling, or other deficiency within 1 month from the time you identify the deficiency.
8. Each caustic basket	Half day	A caustic basket cover that is not securely in place.	Take action immediately to put the caustic basket cover securely in place.

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You must inspect . . .	At least once each . . .	And if you find . . .	You must . . .
9. All equipment and piping in the caustic system.	Day .....	Equipment that is leaking caustic	Initiate repair of the leaking equipment within 72 hours from the time that you identify the caustic leak.
10. All floors and other surfaces where liquid mercury could accumulate in cell rooms and other production facilities and in mercury recovery facilities.	Half day .....	A liquid mercury spill or accumulation.	Take the required action specified in Table 3 to this subpart.
11. Each electrolyzer bottom, electrolyzer side panel, end box, mercury amalgam seal pot, decomposer, mercury pump, and hydrogen cooler, and all other vessels, piping, and equipment in liquid mercury service in the cell room.	Day .....	Equipment that is leaking liquid mercury.	Take the required action specified in Table 3 to this subpart.
12. Each decomposer and all hydrogen piping up to the hydrogen header.	Half day .....	Equipment that is leaking hydrogen and/or mercury vapor.	Take the required action specified in Table 3 to this subpart.
13. All equipment in the hydrogen system from the start of the header to the last control device.	3 months .....	Equipment that is leaking hydrogen and/or mercury vapor.	Take the required action specified in Table 3 to this subpart.

TABLE 3 TO SUBPART IIIII OF PART 63—WORK PRACTICE STANDARDS—REQUIRED ACTIONS FOR LIQUID MERCURY SPILLS AND ACCUMULATIONS AND HYDROGEN AND MERCURY VAPOR LEAKS

As stated in §63.8192, you must meet the work practice standards in the following table:

During a required inspection or at any other time, if you find . . .	You must . . .
1. A liquid mercury spill or accumulation ...	<ul style="list-style-type: none"> <li>a. Initiate clean up of the liquid mercury spill or accumulation as soon as possible, but no later than 1 hour from the time you detect it.</li> <li>b. Clean up liquid mercury using a mercury vacuum cleaner or by using an alternative method. If you use an alternative method to clean up liquid mercury, you must submit a description of the method to the Administrator in your Notification of Compliance Status report.</li> <li>c. If you use a mercury vacuum cleaner, the vacuum cleaner must be designed to prevent generation of airborne mercury; you must cap the ends of hoses after each use; and after vacuuming, you must wash down the area.</li> <li>d. Inspect all equipment in liquid mercury service in the surrounding area to identify the source of the liquid mercury within 1 hour from the time you detect the liquid mercury spill or accumulation.</li> <li>e. If you identify leaking equipment as the source of the spill or accumulation, contain the dripping mercury, stop the leak, and repair the leaking equipment as specified below.</li> <li>f. If you cannot identify the source of the liquid mercury spill or accumulation, re-inspect the area within 6 hours of the time you detected the liquid mercury spill or accumulation, or within 6 hours of the last inspection of the area.</li> </ul>
2. Equipment that is leaking liquid mercury	<ul style="list-style-type: none"> <li>a. Contain the liquid mercury dripping from the leaking equipment by placing a container under the leak within 30 minutes from the time you identify the liquid mercury leak.</li> <li>b. The container must meet the requirement for open-top containers in Table 1 to this subpart.</li> <li>c. Make a first attempt at stopping the leak within 1 hour from the time you identify the liquid mercury leak.</li> <li>d. Stop the leak and repair the leaking equipment within 4 hours from the time you identify the liquid mercury leak.</li> <li>e. You can delay repair of equipment leaking liquid mercury if you either isolate the leaking equipment from the process so that it does not remain in mercury service; or determine that you cannot repair the leaking equipment without taking the cell off line, provided that you contain the dripping mercury at all times as described above, and take the cell off line as soon as practicable, but no later than 48 hours from the time you identify the leaking equipment. You cannot place the cell back into service until the leaking equipment is repaired.</li> </ul>
3. A decomposer or hydrogen system piping up to the hydrogen header that is leaking hydrogen and/or mercury vapor.	<ul style="list-style-type: none"> <li>a. Make a first attempt at stopping the leak within 1 hour from the time you identify the hydrogen and/or mercury vapor leak.</li> <li>b. Stop the leak and repair the leaking equipment within 4 hours from the time you identify the hydrogen and/or mercury vapor leak.</li> </ul>

During a required inspection or at any other time, if you find . . .	You must . . .
4. Equipment in the hydrogen system, from the start of the hydrogen header to the last control device, that is leaking hydrogen and/or mercury vapor.	<p>c. You can delay repair of an equipment leaking hydrogen and/or mercury vapor if you isolate the leaking equipment or take the cell off line until you repair the leaking equipment.</p> <p>a. Make a first attempt at stopping the leak within 4 hours from the time you identify the hydrogen and/or mercury vapor leak.</p> <p>b. Stop the leak and repair the header within 24 hours from the time you identify the hydrogen and/or mercury vapor leak.</p> <p>c. You can delay repair of equipment leaking hydrogen and/or mercury vapor if you isolate the leaking equipment.</p>

TABLE 4 TO SUBPART IIIII OF PART 63—WORK PRACTICE STANDARDS—REQUIREMENTS FOR MERCURY LIQUID COLLECTION

As stated in §63.8192, you must meet the work practice standards in the following table:

You must collect liquid mercury from . . .	At the following intervals	When collecting the mercury, you must meet these requirements		
1. Open-top containers.	a. At least once each 72 hours.	i. If you spill liquid mercury during collection or transport, you must take the action specified in Table 3 to this subpart for liquid mercury spills and accumulations.	ii. From the time that you collect liquid mercury into a temporary container until the time that you store the liquid mercury, you must keep it covered by an aqueous liquid.	iii. Within 4 hours from the time you collect the liquid mercury, you must transfer it from each temporary container to a storage container that meets the specifications in Table 1 to this subpart.
2. Vessels, low point drains, mercury knock-out pots, and other closed mercury collection points.	a. At least once each week.	See 1.a.i through iii above.		
3. All other equipment.	a. Whenever maintenance activities require the opening of the equipment.	See 1.a.i through iii above.		

TABLE 5 TO SUBPART IIIII OF PART 63—REQUIRED ELEMENTS OF FLOOR-LEVEL MERCURY VAPOR MEASUREMENT AND CELL ROOM MONITORING PLANS

Your Floor-Level Mercury Vapor Measurement Plan required by §63.8192(d) and Cell Room Monitoring Plan required by §63.8192(g) must contain the elements listed in the following table:

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You must specify in your plan . . .	Additional requirements
<b>Floor-Level Mercury Vapor Measurement Plan</b>	
1. Locations in the cell room where you will measure the level of mercury vapor.	The locations must be representative of the entire cell room floor area. At a minimum you must measure the level of mercury vapor above mercury-containing cell room equipment, as well as areas around the cells, decomposes, or other mercury-containing equipment.
2. Equipment or sampling and analytical methods that you will use to measure the level of mercury vapor.	If an instrument or other equipment is used, the plan must include manufacturer specifications and calibration procedures. The plan must also include a description of how you will ensure that the instrument will be calibrated and maintained according to manufacturer specifications.
3. Measurement frequency .....	Measurements must take place at least once each half day.
4. Number of measurements .....	At least three readings must be taken at each sample location and the average of these readings must be recorded.
5. A floor-level mercury concentration action level	The action level may not be higher than 0.05 mg/m <sup>3</sup> .
<b>Cell Room Monitoring Plan</b>	
1. Details of your mercury monitoring system.	Include some pre-plan measurements to demonstrate the profile of mercury concentration in the cell room and how the selected sampling locations ensure conducted representativeness.
2. How representative sampling will be conducted	
3. Quality assurance/quality control procedures for your mercury monitoring system.	Include a description of how you will keep records or other means to demonstrate that the system is operating properly.
4. Your action level .....	Include the background data used to establish your level.

TABLE 6 TO SUBPART IIIII OF PART 63—EXAMPLES OF TECHNIQUES FOR EQUIPMENT PROBLEM IDENTIFICATION, LEAK DETECTION AND MERCURY VAPOR

As stated in Tables 1 and 2 of Subpart IIIII, examples of techniques for equipment problem identification, leak detection and mercury vapor measurements can be found in the following table:

To detect . . .	You could use . . .	Principle of detection . . .
1. Leaking vent hoses; liquid mercury that is not covered by an aqueous liquid in open-top containers or end boxes; end box covers or stoppers, amalgam seal pot stoppers, or caustic basket covers not securely in place; cracks or spalling in cell room floors, pillars, or beams; caustic leaks; liquid mercury accumulations or spills; and equipment that is leaking liquid mercury.	Visual inspections	
2. Equipment that is leaking hydrogen and/or mercury vapor during inspections required by Table 2 to this subpart.	a. Auditory and visual inspections  b. Portable mercury vapor analyzer—ultraviolet light absorption detector.  c. Portable mercury vapor analyzer—gold film amalgamation detector.  d. Portable short-wave ultraviolet light, fluorescent background—visual indication.  e. Portable combustible gas meter.	A sample of gas is drawn through a detection cell where ultraviolet light at 253.7 nanometers (nm) is directed perpendicularly through the sample toward a photodetector. Elemental mercury absorbs the incident light in proportion to its concentration in the air stream.  A sample of gas is drawn through a detection cell containing a gold film detector. Elemental mercury amalgamates with the gold film, changing the resistance of the detector in proportion to the mercury concentration in the air sample.  Ultraviolet light is directed toward a fluorescent background positioned behind a suspected source of mercury emissions. Elemental mercury vapor absorbs the ultraviolet light, projecting a dark shadow image on the fluorescent background.



To detect . . .	You could use . . .	Principle of detection . . .
3. Level of mercury vapor in the cell room and other areas.	a. Portable mercury vapor analyzer—ultraviolet light absorption detector. b. Portable mercury vapor analyzer—gold film amalgamation detector. c. Permanganate impingement .....	See Item 2.b. See Item 2.c. A known volume of gas sample is absorbed in potassium permanganate solution. Elemental mercury in the solution is determined using a cold vapor adsorption analyzer, and the concentration of mercury in the gas sample is calculated.

TABLE 7 TO SUBPART IIIII OF PART 63—REQUIRED ELEMENTS OF WASHDOWN PLANS

As stated in §63.8192, your written washdown plan must address the elements contained in the following table:

For each of the following areas . . .	You must establish the following as part of your plan . . .
1. Center aisles of cell rooms ..... 2. Electrolyzers 3. End boxes and areas under end boxes 4. Decomposers and areas under decomposers 5. Caustic baskets and areas around caustic baskets 6. Hydrogen system piping 7. Basement floor of cell rooms 8. Tanks 9. Pillars and beams in cell rooms 10. Mercury cell repair areas 11. Maintenance shop areas 12. Work tables 13. Mercury thermal recovery units 14. Storage areas for mercury-containing wastes	A description of the manner of washdown of the area, and the washdown frequency for the area.

TABLE 8 TO SUBPART IIIII OF PART 63—REQUIREMENTS FOR CELL ROOM MONITORING PROGRAM

As stated in §63.8192(g)(1), your mercury monitoring system must meet the requirements contained in the following table:

If you utilize an . . .	Your . . .	Must . . .
1. Extractive cold vapor spectroscopy system.	a. Mercury vapor analyzer .....	Be capable of continuously monitoring the elemental mercury concentration with a detection level at least two times lower than the baseline mercury concentration in the cell room.
	b. Sampling system .....	Obtain measurements at three or more locations along the center aisle of the cell room at a height sufficient to ensure that sample is representative of the entire cell room. One sampling location must be above the midpoint of the center aisle, and the other two an equidistance between the midpoint and the end of the cells.
2. Open path differential optical absorption spectroscopy system.	a. Mercury vapor analyzer .....	Be capable of continuously monitoring the elemental mercury concentration with a detection level at least two times lower than the baseline mercury concentration in the cell room.
	b. Path .....	Be directed along the center aisle at a height sufficient to ensure that the sample is representative of the entire cell room.

TABLE 9 TO SUBPART IIIII OF PART 63—REQUIRED RECORDS FOR WORK PRACTICE STANDARDS

As stated in §63.8256(c), you must keep the records (related to the work practice standards) specified in the following table:

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For each . . .	You must record the following information . . .
1. Inspection required by Table 2 to this subpart . . . . .	Date and time the inspection was conducted.
2. Situation found during an inspection required by Table 2 to this subpart: leaking vent hose; open-top container where liquid mercury is not covered by an aqueous liquid; end box cover that is not securely in place; end box stopper that is not securely in place; end box where liquid mercury is not covered by an aqueous liquid at a temperature below boiling; seal pot cover that is not securely in place; open or mercury seal pot stopper that is not securely in place; crack, spalling, or other deficiency in a cell room floor, pillar, or beam that could cause liquid mercury to become trapped; or caustic basket that is not securely in place.	a. Description of the condition. b. Location of the condition. c. Date and time you identify the condition. d. Description of the corrective action taken. e. Date and time you successfully complete the corrective action.
3. Caustic leak during an inspection required by Table 2 to this subpart.	a. Location of the leak. b. Date and time you identify the leak. c. Date and time you successfully stop the leak and repair the leaking equipment.
4. Liquid mercury spill or accumulation identified during an inspection required by Table 2 to this subpart or at any other time.	a. Location of the liquid mercury spill or accumulation. b. Estimate of the weight of liquid mercury. c. Date and time you detect the liquid mercury spill or accumulation. d. Method you use to clean up the liquid mercury spill or accumulation. e. Date and time when you clean up the liquid mercury spill or accumulation. f. Source of the liquid mercury spill or accumulation. g. If the source of the liquid mercury spill or accumulation is not identified, the time when you reinspect the area.
5. Liquid mercury leak or hydrogen leak identified during an inspection required by Table 2 to this subpart or at any other time.	a. Location of the leak. b. Date and time you identify the leak. c. If the leak is a liquid mercury leak, the date and time that you successfully contain the dripping liquid mercury. d. Date and time you first attempt to stop the leak. e. Date and time you successfully stop the leak and repair the leaking equipment. f. If you take a cell off line or isolate the leaking equipment, the date and time you take the cell off line or isolate the leaking equipment, and the date and time you put the cell or isolated equipment back into service.
6. Occasion for which it is not possible to perform the design, operation and maintenance procedures required by Item 2 of Table 1 to this subpart.	a. Reason for not being able to perform each procedure determined to be not possible. b. Actions taken to reduce or prevent mercury emissions, in lieu of the requirements in Table 1 to this subpart.

**TABLE 10 TO SUBPART IIIII OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART IIIII**

As stated in § 63.8262, you must comply with the applicable General Provisions requirements according to the following table:

Citation	Subject	Applies to Subpart IIIII	Explanation
§ 63.1 . . . . .	Applicability . . . . .	Yes.	
§ 63.2 . . . . .	Definitions . . . . .	Yes.	
§ 63.3 . . . . .	Units and Abbreviations . . . . .	Yes.	
§ 63.4 . . . . .	Prohibited Activities . . . . .	Yes.	
§ 63.5 . . . . .	Construction/Reconstruction . . . . .	Yes.	
§ 63.6(a)–(g), (i), (j) . . . . .	Compliance with Standards and Maintenance Requirements.	Yes.	
§ 63.6(h) . . . . .	Compliance with Opacity and Visible Emission Standards.	No . . . . .	Subpart IIIII does not have opacity and visible emission standards.
§ 63.7(a)(1), (b)–(h) . . . . .	Performance Testing Requirements.	Yes . . . . .	Subpart IIIII specifies additional requirements related to site-specific test plans and the conduct of performance tests.
§ 63.7(a)(2) . . . . .	Applicability and Performance Test Dates.	No . . . . .	Subpart IIIII requires the performance test to be performed on the compliance date.

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Citation	Subject	Applies to Subpart IIII	Explanation
§ 63.8(a)(1), (a)(3); (b); (c)(1)–(4), (6)–(8); (d); (e); and (f)(1)–(5).	Monitoring Requirements .....	Yes.	
§ 63.8(a)(2) .....	Continuous Monitoring System (CMS) Requirements.	No .....	Subpart IIII requires a site-specific monitoring plan in lieu of a promulgated performance specification for a mercury concentration CMS.
§ 63.8(a)(4) .....	Additional Monitoring Requirements for Control Devices in § 63.11.	No .....	Subpart IIII does not require flares.
§ 63.8(c)(5) .....	COMS Minimum Procedures	No .....	Subpart IIII does not have opacity and visible emission standards.
§ 63.8(f)(6) .....	Alternative to Relative Accuracy Test.	No .....	Subpart IIII does not require CEMS.
§ 63.8(g) .....	Data Reduction .....	No .....	Subpart IIII specifies mercury concentration CMS data reduction requirements.
§ 63.9(a)–(e), (g)–(j) .....	Notification Requirements .....	Yes.	
§ 63.9(f) .....	Notification of VE/Opacity Test.	No .....	Subpart IIII does not have opacity and visible emission standards.
§ 63.9(k) .....	Electronic reporting procedures.	Yes .....	Only as specified in § 63.9(j).
§ 63.10(a); (b)(1); (b)(2)(i)–(xii), (xiv); (b)(3); (c); (d)(1)–(2), (4)–(5); (e); (f).	Recordkeeping/Reporting .....	Yes.	
§ 63.10(b)(2)(xiii) .....	CMS Records for RATA Alternative.	No .....	Subpart IIII does not require CEMS.
§ 63.10(d)(3) .....	Reporting Opacity or VE Observations.	No .....	Subpart IIII does not have opacity and visible emission standards.
§ 63.11 .....	Flares .....	No .....	Subpart IIII does not require flares.
§ 63.12 .....	Delegation .....	Yes.	
§ 63.13 .....	Addresses .....	Yes.	
§ 63.14 .....	Incorporation by Reference .....	Yes.	
§ 63.15 .....	Availability of Information .....	Yes.	

[68 FR 70928, Dec. 19, 2003, as amended at 85 FR 73914, Nov. 19, 2020]

**Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing**

SOURCE: 80 FR 65520, Oct. 26, 2015, unless otherwise noted.

WHAT THIS SUBPART COVERS

**§ 63.8380 What is the purpose of this subpart?**

This subpart establishes national emission limitations for hazardous air pollutants (HAP) emitted from brick and structural clay products (BSCP) manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

**§ 63.8385 Am I subject to this subpart?**

You are subject to this subpart if you own or operate a BSCP manufacturing

facility that is, is located at, or is part of, a major source of HAP emissions according to the criteria in paragraphs (a) and (b) of this section.

(a) A BSCP manufacturing facility is a plant site that manufactures brick (including, but not limited to, face brick, structural brick, and brick pavers); clay pipe; roof tile; extruded floor and wall tile; and/or other extruded, dimensional clay products. Brick and structural clay products manufacturing facilities typically process raw clay and shale, form the processed materials into bricks or shapes, and dry and fire the bricks or shapes. A plant