

1.1 **Pollution Control Agency**1.2 **Proposed Permanent Rules Relating to Mercury Emissions**1.3 **7005.0100 DEFINITIONS.**1.4 [For text of subps 1 to 3a, see M.R.]1.5 Subp. 3c. **Coal.** "Coal" has the meaning given in part 7011.1100, subpart 2.1.6 Subp. 3d. **Coal-derived fuel.** "Coal-derived fuel" means any fuel, whether in a solid,
1.7 liquid, or gaseous state, produced by the mechanical, thermal, or chemical processing of
1.8 coal.1.9 Subp. 3e. **Coal-fired.** "Coal-fired" means any emission unit, emission facility,
1.10 or stationary source that uses any amount of coal or coal-derived fuel, alone or in
1.11 combination with any amount of any other fuel.1.12 [For text of subps 4 to 7, see M.R.]1.13 Subp. 7a. **Control efficiency.** "Coal efficiency" has the meaning given in part
1.14 7011.0060, subpart 3a.1.15 [For text of subps 8 to 23, see M.R.]1.16 Subp. 23a. **Mercury.** "Mercury" means all inorganic and organic compounds of
1.17 mercury, including elemental mercury, expressed as elemental mercury.1.18 Subp. 23b. **Mercury emission source.** "Mercury emission source" means a stationary
1.19 source with actual mercury emissions of three pounds per year or more, after controls. If
1.20 the actual mercury emissions are below the threshold in this subpart for three consecutive
1.21 years, then the stationary source is no longer considered a mercury emission source.
1.22 Records of the determination that the source is no longer a mercury emission source
1.23 must be retained on site for a period of five years from the date the determination was
1.24 made. The owners or operators must make these records available for inspection and
2.1 submit them, within specified timelines, on the request of the commissioner. If a physical

2.2 or operational change causes the stationary source to again become a mercury emission
2.3 source, the owners or operators must immediately resume compliance with applicable
2.4 requirements for mercury emission sources. Mercury emission sources do not include
2.5 fugitive mercury emissions. Fugitive emissions has the meaning given in subpart 11c.
2.6 Stationary source has the meaning given in subpart 42c.

2.7 [For text of subps 24 to 45, see M.R.]

2.8 **7007.0502 MERCURY EMISSIONS REDUCTION PLANS.**

2.9 Subpart 1. Statewide mercury air emission reduction target. The statewide mercury
2.10 air emission target is 789 pounds per year from Minnesota sources, to be achieved by
2.11 December 31, 2025, as described in the agency's total maximum daily load study approved
2.12 by the United States Environmental Protection Agency on March 27, 2007.

2.13 Subp. 2. Mercury emissions reduction plan. A mercury emissions source that has
2.14 been issued an air emission permit as of the effective date of this part must prepare a
2.15 mercury emissions reduction plan as described in this part unless the mercury emission
2.16 source is:

2.17 A. a mercury emission source subject to Minnesota Statutes, sections 216B.682
2.18 to 216B.688;

2.19 B. a mercury emission source that is a stationary source that has only combustion
2.20 devices and the combustion emissions of the source are from only natural gas, liquid
2.21 propane gas, propane, or oil fuels;

2.22 C. a mercury emission source subject to a performance standard for mercury
2.23 in parts 7011.0561, 7011.1201 to 7011.1285, 7011.1350 to 7011.1355, 7011.1360 to
2.24 7011.1370, 7011.7050, or 7011.7055;

2.25 D. a mercury emission source that:

3.1 (1) holds a Minnesota industrial storm water multi-sector general permit as
3.2 required by part 7090.3010;

3.3 (2) has a primary SIC code in Sector M or Sector N of the Minnesota industrial
3.4 storm water multi-sector general permit;

3.5 (3) is required to prepare a mercury management plan under part 7090.3010; and

3.6 (4) is in compliance with the provisions of the mercury management plan; or

3.7 E. a mercury emission source that has an issued permit or an enforceable
3.8 agreement that is in effect with the commissioner that contains an enforceable schedule
3.9 of mercury reductions and the reductions are equal to or greater than the reductions
3.10 required in subpart 5.

3.11 **Subp. 3. Mercury emission reduction plan; submittal deadlines.**

3.12 A. The owners or operators of a mercury emission source that does not meet an
3.13 exception under subpart 2 must prepare and submit a mercury emissions reduction plan to
3.14 the commissioner for approval and inclusion in a permit or other enforceable document no
3.15 later than December 30, 2015, or as provided under item B.

3.16 B. The owners or operators of a mercury emission source that is a ferrous mining or
3.17 processing facility must submit a mercury emissions reduction plan by December 30, 2016.

3.18 C. The owners or operators must submit annual progress reports to the
3.19 commissioner by December 30 of each year starting with the year following plan submittal
3.20 and ending in 2024.

3.21 **Subp. 4. Mercury emissions reduction plan elements and format.** The owners or
3.22 operators of a mercury emission source must submit a mercury emissions reduction plan
3.23 that complies with items A to C:

3.24 A. the plan must be submitted in a format specified by the commissioner and
3.25 must contain:

4.1 (1) a description of the specific control equipment, processes, materials, or
4.2 work practices that will be employed to achieve the applicable control efficiencies,
4.3 reductions, or allowable emissions and work practices listed in subpart 5 and a schedule
4.4 for adopting the processes or installation of equipment;

4.5 (2) the mercury reduction, control efficiency, or emission rate that each
4.6 emission unit will achieve once the plan for that emission unit is fully implemented.
4.7 "Emission unit" has the meaning given in part 7005.0100, subpart 10b. "Control
4.8 efficiency" has the meaning given in part 7011.0060, subpart 3a;

4.9 (3) a description of how operating parameters will be optimized to maintain
4.10 the mercury control efficiency in the plan;

4.11 (4) a proposed periodic monitoring and record keeping system for proposed
4.12 control equipment, processes, materials, or work practices or citation to an applicable
4.13 requirement for monitoring and record keeping consistent with chapter 7017. An
4.14 evaluation of the use of a continuous mercury emission monitoring system must be
4.15 included in the plan;

4.16 (5) if the plan includes elements that meet the definition of a modification under
4.17 part 7007.0100, subpart 14, or require an air permit amendment under part 7007.1150,
4.18 then the plan must also include a projected schedule for submitting the appropriate
4.19 permit applications; and

4.20 (6) the date by that the mercury reductions proposed in the plan will be
4.21 demonstrated. This date must be no later than January 1, 2025, or as specified in subpart 5;

4.22 B. if the owner or operator determines that the mercury reductions listed in
4.23 subpart 5 are not technically achievable by the identified compliance date, the owners or
4.24 operators may submit an alternative plan to reduce mercury emissions. The alternative
4.25 plan must include:

5.1 (1) the plan elements in item A, substituting the owners' or operators' proposed
5.2 reduction for subpart 5 requirements;

5.3 (2) a detailed explanation of why the mercury reductions listed in subpart 5
5.4 are not achievable; and

5.5 (3) an estimate of the annual mass of mercury emitted under the requirements
5.6 of subpart 5 and the proposed alternative plan; and

5.7 C. the commissioner shall either approve the plan or identify plan deficiencies and
5.8 notify the owners or operators of the deficiencies. The owners or operators must correct
5.9 the deficiencies within 60 days of the notification.

5.10 Subp. 5. **Mercury control and work practices.** The owners or operators of a mercury
5.11 emission source in a source category listed in this subpart and required to submit a plan
5.12 under subpart 3 must include in the plan the minimum mercury control requirements
5.13 for source categories listed in this subpart.

5.14 A. For ferrous mining or processing:

5.15 (1) the plan must address the indurating furnace or kiln of a taconite processing
5.16 facility or the rotary hearth furnace of a direct reduced iron facility and must demonstrate
5.17 that by January 1, 2025, mercury emissions from the indurating furnace or kiln or rotary
5.18 hearth furnace do not exceed 28 percent of the number of pounds of mercury emitted
5.19 in 2010. The emissions in 2010 are as determined by the commissioner. If the facility
5.20 was issued a construction permit but not operating in 2010, then the operating furnace
5.21 must not exceed 28 percent of the mercury potential to emit of the permit authorizing
5.22 construction; and

5.23 (2) the plan may accomplish reductions as:

5.24 (a) 28 percent of 2010 emissions for each furnace; or

6.1 (b) 28 percent of 2010 emissions across all furnaces at a single stationary
6.2 source; or

6.3 (c) 28 percent of 2010 emissions across furnaces at multiple stationary
6.4 sources. Owners of the stationary sources shall enter into an enforceable agreement as
6.5 provided by Minnesota Statutes, section 115.071, subdivision 1, to reduce mercury
6.6 emissions between the stationary sources. If this option is selected, in addition to the
6.7 requirements of this item, the reduction plan must include the enforceable agreement.

6.8 B. For lime kilns, a minimum control requirement of 70 percent applies by
6.9 January 1, 2018, calculated as the total mercury captured as a percentage of mercury
6.10 in the feedstock and fuel.

6.11 C. For iron and steel melters, the plan must demonstrate that by January 1, 2018,
6.12 mercury emissions from the iron or steel melter shall not exceed 77×10^{-6} pounds of
6.13 mercury per ton (35 milligrams per ton) of iron or steel produced. For purposes of this item:

6.14 (1) "iron or steel melter" means a stationary source where shredded motor
6.15 vehicle scrap or other undifferentiated shredded ferrous scrap are melted to produce steel
6.16 or iron products;

6.17 (2) "motor vehicle scrap" means vehicle or automobile bodies, including
6.18 automobile body hulks, which have been processed through a shredder. Motor vehicle
6.19 scrap does not include miscellaneous vehicle parts, such as wheels, bumpers, or other
6.20 components that do not contain mercury switches; and

6.21 (3) "undifferentiated shredded ferrous scrap" means white goods or industrial
6.22 equipment which have been processed through a shredder and the component parts were
6.23 not separated and sorted prior to shredding.

6.24 D. For mercury emission sources that are not otherwise identified in this subpart or
6.25 in chapter 7011, owners must submit a plan to the commissioner within 180 days from

7.1 the time that the owners or operators determine that the stationary source is a mercury
7.2 emission source. The plan must show that air pollution control equipment, work practices,
7.3 or the use of alternative fuels or raw materials has been optimized such that the source is
7.4 using the best controls for mercury that are technically feasible.

7.5 Subp. 6. **Posting of plans.** The commissioner will post mercury emissions reduction
7.6 plans submitted by the owners or operators of a mercury emission source electronically. A
7.7 person may request to receive notification from the agency of plans received.

7.8 Subp. 7. **Modifications of plans.**

7.9 A. The owners or operators of a mercury emission source may request modification
7.10 of the approved mercury emissions reduction plan or enforceable agreement by submitting
7.11 a written request to the commissioner. The request must include:

7.12 (1) a description of the modification;

7.13 (2) reasons for the modification; and

7.14 (3) if the request is to modify the mercury reduction, the information required
7.15 under subpart 4, item A, for the requested new reduction.

7.16 B. The owners and operators may not implement any proposed plan modifications
7.17 until the commissioner has issued an amended permit or revised an enforceable agreement,
7.18 as applicable.

7.19 Subp. 8. **Failure to submit a plan.** The commissioner shall propose a schedule of
7.20 compliance and mercury reduction within 180 days of the required submittal date if the
7.21 owners or operators of a mercury emission source fail to submit a mercury emissions
7.22 reduction plan by the date specified in subpart 3.

7.23 **7011.0561 CONTROL OF MERCURY FROM ELECTRIC GENERATING UNITS.**

7.24 Subpart 1. **Applicability.** The owners or operators of a coal-fired electric generating
7.25 unit must comply with the conditions of this part.

8.1 Subp. 2. **Definitions.** For purposes of this part:

8.2 A. "coal-fired electric generating unit" or "coal-fired EGU" means an electric
8.3 generating unit that burns coal either exclusively or with any fuels in any amount;

8.4 B. "electric generating unit" or "EGU" means a fossil-fuel combustion unit greater
8.5 than 25 megawatt (MW) electric that serves a generator that produces electricity for sale.

8.6 A fossil-fuel fired unit that cogenerates steam and electricity and supplies more than
8.7 one-third of its potential electric output capacity to any utility power distribution system
8.8 for sale is considered an electric generating unit;

8.9 C. "grace period" means a specified number of hours after the deadline of a
8.10 required quality assurance test has passed, in which the test may be performed without
8.11 the loss of data;

8.12 D. "minimally emitting unit" means a coal-fired electric generating unit for which
8.13 the owners or operators have demonstrated emissions of five pounds of mercury or less in
8.14 any calendar year;

8.15 E. "operating hour" means a clock hour in which an EGU combusts any fuel for
8.16 part of or for the entire hour; and

8.17 F. "operating quarter" means a calendar quarter in which there are at least 168
8.18 operating hours.

8.19 Subp. 3. **Exemptions.** The owners or operators of a coal-fired EGU are not subject
8.20 to the requirements of this part:

8.21 A. the coal-fired EGU is determined to be a minimally emitting unit as defined
8.22 in subpart ..; or

8.23 B. the coal-fired EGU did not combust coal for more than ten percent of the
8.24 average annual heat input during any three calendar years or for more than 15.0 percent of
8.25 the annual heat input during any calendar year.

9.1 Subp. 4. Performance standards for mercury emissions. Unless the commissioner
9.2 establishes an alternative mercury emissions reduction under Minnesota Statutes, section
9.3 216B.687, subdivision 3, the owners or operators of coal-fired units that do not qualify for
9.4 exemptions under subpart 3 must control mercury emissions as described in this subpart.

9.5 A. By January 1, 201., owners or operators of a coal-fired EGU with a nameplate
9.6 electricity generation capacity greater than 100 MW must:

9.7 (1) control mercury such that 90 percent of the mercury present in the fuel
9.8 when combusted is captured and not emitted; or

9.9 (2) demonstrate that the unit emits no greater than 0.8 pounds of mercury per
9.10 trillion British thermal units (lb/Tbtu) of heat input.

9.11 B. By January 1, 2025, owners or operators of a coal-fired EGU that is not a
9.12 supplemental unit as defined in Minnesota Statutes, sections 216B.682 to 216B.688, and
9.13 with a nameplate capacity less than or equal to 100 MW must:

9.14 (1) control mercury such that 70 percent of the mercury in the fuel when
9.15 combusted is captured and not emitted; or

9.16 (2) demonstrate that the unit emits no greater than 2.3 pounds of mercury per
9.17 Tbtu of heat input.

9.18 C. By January 1, 2018, owners or operators of a coal-fired EGU that is a
9.19 supplemental unit as defined in Minnesota Statutes, sections 216B.682 to 216B.688, must:

9.20 (1) control mercury such that 70 percent of the mercury in the fuel in the fuel
9.21 when combusted is captured and not emitted; or

9.22 (2) demonstrate that the unit emits no greater than 2.3 pounds of mercury
9.23 per Tbtu heat input.

9.24 Subp. 5. Monitoring mercury emissions. The owners or operators of a coal-fired
9.25 EGU must monitor mercury emissions as described in this subpart.

10.1 A. Coal-fired units with a generating capacity equal to or greater than 250 MW
10.2 (net) must continuously monitor mercury at a representative sampling location following
10.3 the outlet of the last air pollution control device. A continuous monitor is either a
10.4 continuous emissions monitoring system (CEMS) for mercury or a sorbent trap monitoring
10.5 system capable of monitoring mercury as described in this part.

10.6 (1) If the system is a CEMS for mercury, prepare the plan to address the
10.7 requirements of subpart 6. If the system is a sorbent trap system, the owner or operator
10.8 must prepare the plan to address the requirements of subpart 7. The plan must be
10.9 submitted within 180 days of the effective date of this part or as established by a permit or
10.10 other enforceable agreement, whichever is later.

10.11 (2) If applicable federal regulations establish requirements for installation and
10.12 operation for continuous monitoring of the coal-fired EGU, the monitoring plan must
10.13 describe the compliance procedures for the monitors according to the federal regulation in
10.14 addition to the requirements of this part.

10.15 B. If a coal-fired unit with a generating capacity less than 250 MW does not use a
10.16 CEMS or a sorbent trap monitoring system to monitor mercury, the owner or operator
10.17 must conduct performance testing for mercury according to this item at least once
10.18 every 12 months, and complete the test no more than 13 months after the previous test.
10.19 Performance stack tests for mercury may be performed less often if the performance
10.20 tests for at least three consecutive years show that mercury emissions are at or below 50
10.21 percent of the applicable limit and if there are no changes in the operation of the EGU
10.22 or air pollution control equipment that could increase emissions. In this case, owners or
10.23 operators must conduct performance testing no less frequently than once every three years,
10.24 but no longer than 37 months after the previous performance test:

10.25 (1) performance testing must be conducted using Code of Federal Regulations,
10.26 title 40, part 60, Appendix A-8, Method 30B. The initial performance test must be

11.1 conducted for 30 boiler operating days. Sorbent traps must be used no longer than ten
11.2 days. Subsequent performance tests may be ten days long;

11.3 (2) compliance is determined by calculating the average mercury concentration
11.4 from all sorbent trap results;

11.5 (3) if emissions are determined to be greater than 50 percent of the applicable
11.6 limit, annual testing must be resumed until three consecutive years demonstrate that
11.7 emissions are equal to or below 50 percent of the applicable limit; and

11.8 (4) performance tests must be conducted according to parts 7017.2001 to
11.9 7017.2060 unless modified by this subpart.

11.10 **Subp. 6. Monitoring provisions for CEMS that monitor mercury.** This subpart
11.11 applies to the measurement of mercury from a coal-fired unit using a CEMS for mercury.
11.12 A CEMS for mercury means the total equipment required to measure the total vapor
11.13 phase mercury concentration consisting of three major subsystems: sample acquisition,
11.14 transport, and conditioning; mercury converter and analyzer; and a data acquisition and
11.15 handling system.

11.16 **A. The monitoring plan for the CEMS to measure mercury must include:**

11.17 (1) a description of the CEMS span value along with justification for its
11.18 selection;

11.19 (2) methods, procedures, equations, and performance specifications, both main
11.20 and alternate, to be used to conduct a certification test of the CEMS for mercury. The
11.21 certification must include a seven-day calibration error test, a linearity check, a three-level
11.22 system integrity check, a cycle time test, and a relative accuracy test audit as described in
11.23 Code of Federal Regulations, title 40, part 60, Appendix A;

11.24 (3) methods, procedures, equations, and performance specifications to be
11.25 used for ongoing daily calibration error test, system integrity check, linearity check,

12.1 or three-level system integrity check, and a relative accuracy test audit test.. Calculate
12.2 relative accuracy as described in section 12 of Performance Specification 2 or 6 or in Code
12.3 of Federal Regulations, title 40, part 60, Appendix B;

12.4 (4) a description of calculations used to convert mercury concentration values
12.5 to the appropriate units of the emission standard; and

12.6 (5) procedures to provide substituted data in the event that monitors are not
12.7 collecting mercury emissions data and data is missing from the monitoring record.

12.8 B. CEMS must operate in compliance with parts 7017.0100, 7017.1002,
12.9 7017.1030, 7017.1080 to 7017.1130, 7017.1150, and 7017.1180.

12.10 C. Routine quality assurance and control tests must be conducted on a frequency
12.11 as follows:

12.12 (1) calibration error test must be conducted daily using either mid- or high-level
12.13 gas. The calibrations are not required when the unit is not in operation;

12.14 (2) single-level system integrity checks must be conducted weekly, meaning
12.15 once every 168 operating hours for systems with mercury converters. This test is
12.16 not required if daily calibrations are done with National Institute of Standards and
12.17 Technology-traceable source of oxidized mercury;

12.18 (3) linearity checks or three-level system integrity checks must be conducted
12.19 quarterly in each quality-assured operating quarter and no less than once every four
12.20 calendar quarters;

12.21 (4) relative accuracy test audit must be required annually, meaning once
12.22 every four quality-assured operating quarters. This deadline may be extended for
12.23 nonquality-assured operating quarters up to a maximum of eight quarters from the quarter
12.24 of the previous test; and

12.25 (5) a 720-hour grace period will be allowed for RATAs.

13.1 D. Calibration gas mercury concentrations used to conduct quality assurance tests
13.2 on CEMS must have the following concentrations:

13.3 (1) zero-level with a mercury concentration below the detectable limit of the
13.4 analyzer;

13.5 (2) low-level with a mercury concentration of 20 to 30 percent the span value
13.6 of the analyzer;

13.7 (3) mid-level with a mercury concentration of 50 to 60 percent the span value
13.8 of the analyzer;

13.9 (4) high-level with a mercury concentration of 80 to 100 percent the span
13.10 value of the analyzer; and

13.11 (5) alternative concentrations may be used if approved by the commissioner.
13.12 Approval shall be based on improved accuracy of the data collected with the alternative
13.13 concentration given the applicable limit.

13.14 E. Measurement or adjustment of CEMS mercury data for bias is not required.

13.15 F. Certify, operate, maintain, and quality-assure CEMS used to convert measured
13.16 hourly mercury concentrations to applicable emission standards according to the
13.17 applicable provisions of Code of Federal Regulations, title 40, part 75.

13.18 G. Reduce the hourly averages data from the CEMS for mercury according to
13.19 Code of Federal Regulations, title 40, part 60.13(h)(2).

13.20 H. Convert hourly emissions concentrations to 30 boiler operating day rolling
13.21 average (lb/Tbtu) according to appropriate emission rate equations of Code of Federal
13.22 Regulations, title 40, part 60, Appendix A, Method 19.

13.23 I. Using fuel sampling data generated by the procedures in subpart 8, demonstrate
13.24 that the output from item G is no greater than ten percent of the input from fuel or
13.25 demonstrate that emissions in item H are no greater than subpart 4.

14.1 J. The first 30 days of the monitoring period shall be used to determine compliance
14.2 with the mercury emissions concentration limit.

14.3 **Subp. 7. Monitoring provisions for sorbent trap monitoring system.**

14.4 A. Owners or operators of a coal-fired EGU using a sorbent trap monitoring system
14.5 must follow the monitoring provisions under this subpart for the measurement of mercury.
14.6 A sorbent trap monitoring system means the equipment necessary to monitor mercury
14.7 emissions continuously by using paired sorbent traps containing iodated charcoal or other
14.8 sorbent medium. The system consists of sample acquisition, transport, conditioning,
14.9 sorbent traps, and an automated data acquisition and handling system. The system samples
14.10 the stack gas at a constant proportional rate relative to the stack gas volumetric flow rate.
14.11 The sampling is a batch process. The average mercury concentration in the stack gas for
14.12 the sampling period is determined, in units of micrograms per dry standard cubic meter,
14.13 (ug/dscm), based on the sample volume measured by the gas flow meter and the mass of
14.14 mercury collected in the sorbent traps. The use of a sorbent trap monitor also requires
14.15 the installation and certification of a stack gas flow monitor to maintain the ratio of stack
14.16 gas flow rate to sample flow rate.

14.17 B. The monitoring plan for the sorbent trap monitoring system must include:

14.18 (1) methods, procedures, equations, and performance specifications, both main
14.19 and alternate, to be used to conduct a certification test of the sorbent trap monitoring system;

14.20 (2) methods, procedures, equations, and performance specifications, both main
14.21 and alternate, to be used for ongoing relative accuracy test audit tests;

14.22 (3) rationale for the minimum acceptable data collection period for the size of
14.23 the sorbent trap selected;

14.24 (4) procedures used to monitor system integrity and data quality;

15.1 (5) a description of calculations used to convert mercury concentration values
15.2 to the appropriate units of the emission standard;

15.3 (6) procedures for inscribing or permanently marking a unique identification
15.4 number on each sorbent trap for tracking purposes. A record system must be developed
15.5 to track the ID of the monitoring system along with dates and hours for each collection
15.6 period; and

15.7 (7) procedures for providing substituted data in the event that monitors are not
15.8 available to measure mercury emissions and data is missing from the monitoring record.

15.9 C. The continuous monitor must be operated in compliance with parts 7017.0100,
15.10 7017.1002, 7017.1030, 7017.1080 to 7017.1130, 7017.1150, and 7017.1180.

15.11 D. Owners or operators must conduct the routine quality assurance and control
15.12 tests on a frequency as follows:

15.13 (1) relative accuracy test audits are required annually meaning once every four
15.14 quality-assured operating quarters. This deadline may be extended for nonquality-assured
15.15 operating quarters up to a maximum of eight quarters from the quarter of the previous
15.16 test; and

15.17 (2) a 720-hour grace period will be allowed for RATAs.

15.18 E. Measurement or adjustment of mercury continuous monitor data for bias is not
15.19 required.

15.20 F. Monitoring systems that are used to measure stack gas volumetric flow rate,
15.21 diluent gas concentration, or stack gas moisture content, either for routine operation of a
15.22 sorbent trap monitoring system or to convert mercury concentration data to units of the
15.23 applicable emission limit, must be certified in accordance with the applicable provisions
15.24 of Code of Federal Regulations, title 40, part 75.

16.1 G. Determine the mercury concentration for each data collection period and assign
16.2 this concentration value to each operating hour in the data collection period.

16.3 H. Convert hourly emissions concentrations to 30 boiler operating day rolling
16.4 average (lb/Tbtu) according to appropriate emission rate equations of Code of Federal
16.5 Regulations, title 40, part 60, Appendix A, Method 19.

16.6 I. Using fuel sampling data generated by the procedures in subpart 8, demonstrate
16.7 that the output from item H is no greater than ten percent of the input from fuel or
16.8 demonstrate that emissions in item .. are no greater than subpart 4.

16.9 J. The first 30 days of the monitoring period will be the first period used to
16.10 determine compliance with the mercury emissions concentration limit.

16.11 **Subp. 8. Procedures for determining mercury content of fuel.** When the mercury
16.12 content of fuel is needed to determine total mercury emission reductions, owners or
16.13 operators of a coal-fired EGU must use the fuel sampling and measuring fuel content
16.14 procedures in items A to F. The mercury content of fuel used for start-up, unit shutdown,
16.15 or transient flame stability dose not need to be measured:

16.16 A. identify all fuels burned at the EGU;

16.17 B. collect samples of each fuel using ASTM D2234/D2234M;

16.18 C. prepare composited sample for each fuel type using ASTM D2013/D2913M;

16.19 D. determine heat content of fuel using ASTM D5865;

16.20 E. determine moisture content of fuel using ASTM D3173; and

16.21 F. measure mercury in fuel sample using ASTM D6722-01 or SW-846-7471, for
16.22 solid samples, and report in terms of lb./ton of fuel burned.

16.23 **Subp. 9. Demonstrating EGU is minimally emitting unit.** To be classified as a
16.24 minimally emitting unit, by January 1, 2014, the owners or operators of a coal-fired

17.1 EGU must conduct a 28 to 30 operating day performance test, using Code of Federal
17.2 Regulations, title 40, part 60, Appendix A-8, Method 30B, to determine mercury
17.3 concentration with the procedures of this subpart:

17.4 A. identify all fuels used at the unit. Fuels which result in the highest likely
17.5 mercury content must be burned during the performance test;

17.6 B. locate the Method 30B sampling probe tip at a point within the ten percent
17.7 centroidal area of the duct at a location that meets Method 1 in Code of Federal Regulations,
17.8 title 40, part 60, Appendix A-8, and conduct at least three nominally equal length test runs
17.9 over the 28-30 day test period. Collect diluents gas data over the corresponding time period,
17.10 and if preferred for calculation of pounds per year of mercury, stack flow rate data using
17.11 Method 2 in Code of Federal Regulations, title 40, part 60, Appendix A-1, or a certified
17.12 flow rate monitor and moisture data using Method 4 in Code of Federal Regulations, title
17.13 40, part 60, Appendix A-1, or a certified moisture monitor. The owner or operator may not
17.14 use a pair of sorbent traps for more than ten days when sampling the stack gas;

17.15 C. calculate the average mercury concentration, in ug/m³, for the 28-30 day
17.16 performance test, as the arithmetic average of all sorbent trap results. Calculate
17.17 the average CO₂ or O₂ concentration for the test period. Use the average mercury
17.18 concentration and diluents gas values to express the performance test results in units of lb.
17.19 of mercury/Tbtu and pounds of mercury per year, using the expected fuel input over a year
17.20 period. Alternatively, calculate pounds of mercury per year using the average mercury
17.21 concentration, average stack gas flow rate, average stack gas moisture, and maximum
17.22 operating hours per year;

17.23 D. record parametric data for air pollution control devices in place during the
17.24 performance test; and

17.25 E. repeat the performance test once every five years to demonstrate that the EGU
17.26 remains a minimally emitting unit.

18.1 Subp. 10. **Incorporation by reference.** For the purposes of this part, the methods
18.2 listed in items A and B are incorporated by reference, as amended. These documents are
18.3 not subject to frequent change.

18.4 A. The Annual Book of American Society for Testing and Materials International
18.5 (ASTM) methods D2234/D2234M (Standard Practice for Collection of a Gross Sample
18.6 of Coal), D2013/D2013M (Standard Practice for Preparing Coal Samples for Analysis),
18.7 D5865 (Standard Test Method for Gross Calorific Value of Coal and Coke), D3173
18.8 (Standard Test Method for Moisture in the Analysis Sample of Coal and Coke), and
18.9 D6722 (Standard Test Method for Total mercury in Coal and Coal Combustion Residues
18.10 by Direct Combustion Analysis). These methods are published in the Annual Book of
18.11 ASTM Standards; Volume 05.06 Gaseous Fuels; Coal and Coke, 2012 edition. These
18.12 documents are available through the Minitex interlibrary loan system.

18.13 B. Test Methods for Evaluating Solid Waste, EPA SW-846, Third Edition,
18.14 November 1986, issued by the United States Environmental Protection Agency (EPA).
18.15 Method 7471 Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique) is
18.16 available electronically from EPA and through the Minitex interlibrary loan system.

18.17 **7011.0563 INCORPORATION OF EMISSION STANDARDS FOR HAZARDOUS**
18.18 **AIR POLLUTANTS FROM COAL AND OIL-FIRED ELECTRIC UTILITY**
18.19 **STEAM GENERATORS.**

18.20 Code of Federal Regulations, title 40, part 63, subpart UUUUU, as amended,
18.21 entitled "National Emission Standards for Hazardous Air Pollutants from Coal- and
18.22 Oil-fired Electric Utility Steam Generating Units" is incorporated by reference, except
18.23 that the authorities identified in, section 63.10041(b), are not delegated to the
18.24 commissioner and are retained by the administrator.

18.25 **7011.1201 DEFINITIONS.**

18.26 [For text of subps 1 to 11, see M.R.]

19.1 Subp. 12. [See repealer.]

19.2 Subp. 13. **Class I waste combustor.** "Class I waste combustor" means that the design
19.3 capacity for a municipal waste combustor unit is 93.75×10^6 Btu/hr or more, and that
19.4 construction of the unit is commenced after September 20, 1994, or modification or
19.5 reconstruction is commenced after June 19, 1996.

19.6 Subp. 14. **Class II waste combustor.** "Class II waste combustor" means that the
19.7 design capacity for a municipal waste combustor unit is 15×10^6 Btu/hr or more and less
19.8 than 93.75×10^6 Btu/hr, and that construction of the unit is commenced after September
19.9 20, 1994, or modification or reconstruction is commenced after June 19, 1996.

19.10 Subp. 15. **Class III waste combustor.** "Class III waste combustor" means that the
19.11 design capacity for a waste combustor unit is 3.0×10^6 Btu/hr or more and less than $15 \times$
19.12 10^6 Btu/hr, the waste combustor unit burns municipal or medical waste, and the waste
19.13 combustor is issued a permit for construction after December 20, 1989.

19.14 [For text of subp 16, see M.R.]

19.15 Subp. 16a. **Commercial or industrial solid waste incinerator.** A "commercial or
19.16 industrial solid waste incinerator" means any distinct operating unit at a commercial or
19.17 industrial solid waste facility that combusts, or has combusted in the preceding six months,
19.18 any solid waste as that term is defined in Code of Federal Regulations, title 40, part 241.

19.19 [For text of subps 17 to 50, see M.R.]

19.20 **7011.1215 APPLICABILITY OF STANDARDS OF PERFORMANCE FOR**
19.21 **WASTE COMBUSTORS.**

19.22 Subpart 1. **Waste combustors.** A person who constructs, modifies, reconstructs, or
19.23 operates a waste combustor shall comply with parts 7011.1201 to 7011.1290, except as
19.24 provided in subparts 2, ~~2a,~~ and to 3.

20.1 Subp. 2. **Cofired facilities.** A person who constructs, modifies, reconstructs, or
20.2 operates a cofired unit is not a waste combustor, ~~and shall comply with the applicable~~
20.3 ~~requirements of parts 7011.0500 to 7011.0551 or 7011.0600 to 7011.0625~~ under parts
20.4 7011.1201 to 7011.1285.

20.5 [For text of subps 2a and 2b, see M.R.]

20.6 Subp. 2c. **Commercial and industrial solid waste incinerators.** A person who
20.7 constructs, modifies, or reconstructs a waste combustor such that it becomes a commercial
20.8 or industrial solid waste incinerator is not subject to parts 7011.1225 to 7011.1285 and
20.9 shall comply with parts 7011.1360 to 7011.1370.

20.10 [For text of subp 3, see M.R.]

20.11 Subp. 4. **Standards.** The standards of parts 7011.1227, 7011.1228, 7011.1229,
20.12 7011.1230, ~~7011.1231~~, 7011.1233, 7011.1240, subpart 2, and 7011.1272, subpart 2,
20.13 apply at all times when waste is being continuously burned, except during periods of
20.14 start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or
20.15 malfunction does not exceed three hours. Fugitive emissions standards applicable to
20.16 ash conveying systems do not apply during maintenance and repair of ash conveying
20.17 systems. "Malfunction" means any sudden and unavoidable failure of air pollution control
20.18 equipment or process equipment or of a process to operate in a normal or usual manner.
20.19 Failures that are caused entirely or in part by poor maintenance, careless operation, or
20.20 any other preventable upset condition or preventable equipment breakdown are not
20.21 considered malfunctions.

20.22 The start-up period commences when the waste combustor begins the continuous
20.23 burning of solid waste and does not include any warm-up period when the waste
20.24 combustor is combusting fossil fuel or other solid fuel.

20.25 Continuous burning is the continuous, semicontinuous, or batch feeding of solid waste
20.26 for purposes of waste disposal, energy production, or providing heat to the combustion

21.1 system in preparation for waste disposal or energy production. The use of solid waste
21.2 solely to provide thermal protection of the grate or hearth during the start-up period when
21.3 municipal solid waste is not being fed to the grate is not considered to be continuous
21.4 burning.

21.5 [For text of subps 5 and 5a, see M.R.]

21.6 Subp. 6. [See repealer.]

21.7 **7011.1350 INCORPORATION OF NEW SOURCE PERFORMANCE STANDARD**
21.8 **FOR SEWAGE SLUDGE INCINERATORS BY REFERENCE.**

21.9 The following new source performance standards are incorporated by reference:

21.10 A. Code of Federal Regulations, title 40, part 60, subpart O, as amended, entitled
21.11 "Standards of Performance for Sewage Treatment Plants," is adopted and incorporated
21.12 by reference, except that decisions made by the administrator under Code of Federal
21.13 Regulations, title 40, section 60.153(e), are not delegated to the commissioner and must be
21.14 made by the administrator; and

21.15 B. Code of Federal Regulations, title 40, part 60, subpart LLLL, as amended,
21.16 entitled "Standards of Performance for New Sewage Sludge Incinerators" is incorporated
21.17 by reference, except that decisions made by the administrator under Code of Federal
21.18 Regulations, title 40, section 60.4785(c), are not delegated to the commissioner and must
21.19 be made by the administrator.

21.20 **7011.1355 STANDARDS OF PERFORMANCE FOR EXISTING SEWAGE**
21.21 **SLUDGE COMBUSTION FACILITIES - COMPLIANCE WITH CLEAN AIR**
21.22 **ACT SECTION 129 STANDARDS.**

21.23 Subpart 1. **Applicability.** The owners or operators of each sewage sludge incineration
21.24 unit as defined in Code of Federal Regulations, title 40, section 60.5250, for which
21.25 construction commenced on or before October 14, 2010, must comply with this part, except:

22.1 A. combustion units that incinerate sewage sludge and are not located at a
22.2 wastewater treatment facility designed to treat domestic sewage sludge are exempt from
22.3 this part. The owners or operators of the combustion unit must notify the United States
22.4 Environmental Protection Agency and the commissioner of an exemption claim under
22.5 this subpart;

22.6 B. if the owners or operators of a sewage sludge incineration unit make changes
22.7 that meet the definition of modification incorporated in subpart 2 after September 21, 2011:

22.8 (1) the sewage sludge incineration unit becomes subject to Code of Federal
22.9 Regulations, title 40, part 60, subpart LLLL; and

22.10 (2) this part no longer applies to that sewage sludge incineration unit; and

22.11 C. physical or operational changes made to a sewage sludge incineration unit for
22.12 which construction commenced on or before September 21, 2011, primarily to comply
22.13 with this part:

22.14 (1) are not considered modifications or reconstructions; and

22.15 (2) do not result in a sewage sludge incineration unit becoming subject to Code
22.16 of Federal Regulations, title 40, part 60, subpart LLLL.

22.17 **Subp. 2. Incorporation of federal performance standards for existing sewage**
22.18 **sludge incinerators.** The following requirements from Code of Federal Regulations, title
22.19 40, part 60, subpart MMMM, Emission Guidelines and Compliance Times for Existing
22.20 Sewage Sludge Incineration Units are incorporated by reference, as amended:

22.21 A. increments of progress: Code of Federal Regulations, title 40, sections 60.5085
22.22 to 60.5125. The deadlines for each increment of progress are found in Table 1 of the
22.23 federal regulation and is as follows:

22.24 (1) owners or operators must submit the final control plan to the commissioner
22.25 by one year after the effective date of this part; and

23.1 (2) owners or operators of an affected unit must demonstrate compliance with
23.2 the emission guidelines adopted herein by March 21, 2016;

23.3 B. operator training and qualification: Code of Federal Regulations, title 40,
23.4 sections 60.5130 to 60.5160;

23.5 C. emission limits, emission standards, and operating limits and requirements:
23.6 Code of Federal Regulations, title 40, sections 60.5165 to 60.5181;

23.7 D. initial compliance requirement: Code of Federal Regulations, title 40, sections
23.8 60.5185 to 60.5200;

23.9 E. continuous compliance requirements: Code of Federal Regulations, title 40,
23.10 sections 60.5205 to 60.5215;

23.11 F. performance testing, monitoring, and calibration requirements: Code of Federal
23.12 Regulations, title 40, sections 60.5220 to 60.5225;

23.13 G. recordkeeping and reporting: Code of Federal Regulations, title 40, sections
23.14 60.5230 to 60.5235;

23.15 H. Title V operating permits: Code of Federal Regulations, title 40, sections
23.16 60.5240 to 60.5245. For sewage sludge incinerators that do not hold Title V operating
23.17 permits, submit an application for a Title V permit by one year after the effective date of
23.18 this part;

23.19 I. definitions: Code of Federal Regulations, title 40, section 60.5250; and

23.20 J. for purposes of this subpart, the terms used in Code of Federal Regulations, title
23.21 40, sections 60.5085 to 60.5250, are defined as follows:

23.22 (1) "administrator" means the commissioner; and

23.23 (2) "you" means the owner or operator of an affected sewage sludge
23.24 incineration unit.

24.1 Subp. 3. Mercury emission limitations for sewage sludge incinerators not subject
24.2 to federal sewage sludge incinerator regulations. Owners or operators of sewage sludge
24.3 incinerators that are not subject to Code of Federal Regulations, title 40, part 60, subpart
24.4 LLLL, nor Code of Federal Regulations, title 40, part 60, subpart MMMM, because the
24.5 incinerator is not a fluidized bed incinerator nor a multihearth incinerator must comply
24.6 with the mercury emission limits in parts 7011.1360 to 7011.1370.

24.7 Subp. 4. Exceedance of continuously monitored emission limits. If accurate and
24.8 valid data results collected from continuous emission monitors exceed emission limits
24.9 established in subpart 2 or in the waste combustor's permit after normal start-up, the waste
24.10 combustor owner or operator must undertake the following actions:

24.11 A. the exceedance must be reported to the commissioner as soon as reasonably
24.12 possible giving consideration to matters of plant or worker safety, or access to
24.13 communications;

24.14 B. appropriate repairs or modifications to return the waste combustor to compliance
24.15 must be commenced within 72 hours of the exceedance;

24.16 C. if the waste combustor cannot be returned to compliance within 72 hours of the
24.17 occurrence of the exceedance, the waste combustor must be shut down; and

24.18 D. when repairs or modifications have been completed, the waste combustor
24.19 owner or operator must demonstrate to the commissioner that the waste combustor is in
24.20 compliance. The waste combustor may be started up after the owner or operator has
24.21 notified the commissioner in writing of the date the owner or operator plans to start up the
24.22 waste combustor. Notification shall be given at least 24 hours prior to resuming operation.
24.23 Compliance is demonstrated by providing to the commissioner written results from the
24.24 continuous monitor showing compliance with the emission limit.

24.25 Subp. 5. Exceedance of emission limits. If accurate and valid data results of a
24.26 performance test demonstrate an exceedance of an emissions standard described in subpart

25.1 2 or in the facility air emissions permit after normal start-up, the owners or operators of a
25.2 commercial and industrial solid waste incinerator must undertake the actions in items A
25.3 to D.

25.4 A. The owners or operators must immediately report the exceedance to the
25.5 commissioner and must comply with the applicable reporting provisions of part
25.6 7007.0800, subpart 6.

25.7 B. The owners or operators must undertake appropriate steps to return the
25.8 commercial and industrial solid waste incinerator to compliance, and must demonstrate
25.9 compliance within 60 days of the initial report of the exceedance.

25.10 C. If the commissioner determines that compliance has not been achieved within
25.11 60 days of the initial report of exceedance, the commercial and industrial solid waste
25.12 incinerator must be shut down.

25.13 D. If shutdown was required under item C, the commercial and industrial solid
25.14 waste incinerator may be restarted under the conditions specified by the commissioner.
25.15 The owners or operators must notify the commissioner in writing of the date on which the
25.16 owners or operators plan to start up and to begin compliance testing. Notification must be
25.17 at least ten days in advance of the compliance test date.

25.18 E. Normal start-up means the period of time between the initial start-up of a new,
25.19 modified, retrofitted, or reconstructed emissions unit of a waste combustor, or emissions
25.20 unit of a waste combustor that is modified, retrofitted, or reconstructed to meet the
25.21 requirements of parts 7011.1360 to 7011.1370 and the lesser of 60 days after achieving
25.22 the maximum production rate at which the emissions unit will operate or 180 days after
25.23 initial start-up.

25.24 F. Accurate and valid data means data which provides the measurement of
25.25 emissions of an air contaminant from the incinerator or operating parameters of a
25.26 component of the incinerator. For continuously monitored emissions, data must be

26.1 considered accurate and valid immediately upon recording. For emissions for which
26.2 a performance test is conducted, data must be considered accurate and valid 14 days
26.3 after the incinerator owners or operators receive the performance test report, unless the
26.4 incinerator owners or operators notify the commissioner within the same 14 days that the
26.5 owners or operators can show reason for rejecting the data.

26.6 **7011.1360 EXISTING COMMERCIAL AND INDUSTRIAL SOLID WASTE**
26.7 **INCINERATORS COMPLIANCE REQUIREMENTS.**

26.8 Subpart 1. **Applicability.** Except as provided in items A to H, the owners or operators
26.9 of a commercial and industrial solid waste incineration unit as defined in Code of Federal
26.10 Regulations, title 40, section 60.2875, that commences construction on or before June
26.11 4, 2010, must comply with this part and part 7011.1365. The following units are not
26.12 commercial and industrial solid waste incineration units:

26.13 A. **pathological waste units;**

26.14 B. **units subject to Code of Federal Regulations, title 40, part 60, subparts Ea, Eb,**
26.15 **Cb, AAAA, and BBBB, standards of performance for existing or new municipal waste**
26.16 **combustors (or federal plan);**

26.17 C. **units subject to Code of Federal Regulations, title 40, part 60, subpart Ec or Ca,**
26.18 **standards of performance for existing or new medical waste incinerators (or federal plan);**

26.19 D. **small power production units that meet each of the following criteria:**

26.20 (1) **the unit qualifies as a small power-production facility under section**
26.21 **3(17)(C) of the Federal Power Act, United States Code, title 16, section 796(17)(C);**

26.22 (2) **the unit burns homogeneous waste (not including refuse-derived fuel) to**
26.23 **produce electricity; and**

26.24 (3) **the commissioner approves a determination that the qualifying cogeneration**
26.25 **facility is combusting homogeneous waste as that term is defined in Code of Federal**

27.1 Regulations, title 40, section 60.2875. The request for a determination must include
27.2 sufficient information to document that the unit meets the criteria of the definition of a
27.3 small power production facility and that the waste material the unit is proposed to burn is
27.4 homogeneous;

27.5 E. cogeneration facility units that meet each of the following criteria:

27.6 (1) the unit qualifies as a cogeneration facility under section 3(18)(B) of the
27.7 Federal Power Act, United States Code, title 16, section 796(18)(B);

27.8 (2) the unit burns homogeneous waste (not including refuse-derived fuel) to
27.9 produce electricity and steam or other forms of energy used for industrial solid waste,
27.10 commercial, heating, or cooling purposes; and

27.11 (3) the commissioner approves a determination that the qualifying cogeneration
27.12 facility is combusting homogeneous waste as that term is defined in Code of Federal
27.13 Regulations, title 40, section 60.2875. The request for a determination must include
27.14 sufficient information to document that the unit meets the criteria of the definition
27.15 of a cogeneration facility and that the waste material the unit is proposed to burn is
27.16 homogeneous;

27.17 F. units that are required to obtain a permit under section 3005 of the Solid Waste
27.18 Disposal Act, United States Code, title ..., section ...;

27.19 G. units that combust waste for the primary purpose of recovery metals, such
27.20 as primary and secondary smelters; and

27.21 H. air curtain incinerators, provided that the incinerator burn only 100 percent
27.22 wood waste, 100 percent clean lumber, or 100 percent mixture of clean lumber, wood
27.23 waste, and/or yard waste.

27.24 Subp. 2. **Modifications.** If the owners or operators of a commercial and industrial
27.25 solid waste incineration unit make changes after September 21, 2011, that meet the

28.1 definition of modification in Code of Federal Regulations, title 40, section 60.2875, as
28.2 incorporated in part 7011.1365:

28.3 A. the commercial and industrial solid waste incineration unit becomes subject to
28.4 part 7011.1370; and

28.5 B. do not result in a commercial and industrial solid waste incineration unit
28.6 becoming subject to part 7011.1370.

28.7 Subp. 3. **Physical or operational changes.** Physical or operational changes made by
28.8 owners or operators to a commercial and industrial solid waste incineration unit for which
28.9 construction commenced on or before June 4, 2010, primarily to comply with this part:

28.10 A. are not considered modifications or reconstructions; and

28.11 B. do not result in a commercial and industrial solid waste incineration unit
28.12 becoming subject to part 7011.1370.

28.13 Subp. 4. **Exceedance of continuously monitored emission limits.** If accurate and
28.14 valid data results collected from continuous emission monitors exceed emission limits
28.15 established in subpart 2 or in the waste combustor's permit after normal start-up, the waste
28.16 combustor owner or operator must undertake the following actions:

28.17 A. the exceedance must be reported to the commissioner as soon as reasonably
28.18 possible giving consideration to matters of plant or worker safety, or access to
28.19 communications;

28.20 B. appropriate repairs or modifications to return the waste combustor to compliance
28.21 must be commenced within 72 hours of the exceedance;

28.22 C. if the waste combustor cannot be returned to compliance within 72 hours of the
28.23 occurrence of the exceedance, the waste combustor must be shut down;

28.24 D. when repairs or modifications have been completed, the waste combustor
28.25 owner or operator must demonstrate to the commissioner that the waste combustor is in

29.1 compliance. The waste combustor may be started up after the owner or operator has
29.2 notified the commissioner in writing of the date the owner or operator plans to start up the
29.3 waste combustor. Notification must be given at least 24 hours prior to resuming operation.
29.4 Compliance is demonstrated by providing to the commissioner written results from the
29.5 continuous monitor showing compliance with the emission limit.

29.6 **Subp. 5. Exceedances of emission limits.**

29.7 **A. If accurate and valid data results of a performance test demonstrate an**
29.8 **exceedance of an emissions standard described in part 7011.1365 or in the facility air**
29.9 **emissions permit after normal start-up, the owners or operators of a commercial and**
29.10 **industrial solid waste incinerator must undertake the following actions:**

29.11 **(1) the owners or operators must immediately report the exceedance to**
29.12 **the commissioner and must comply with the applicable reporting provisions of part**
29.13 **7007.0800, subpart 6;**

29.14 **(2) the owners or operators must undertake appropriate steps to return the**
29.15 **commercial and industrial solid waste incinerator to compliance, and must demonstrate**
29.16 **compliance within 60 days of the initial report of the exceedance;**

29.17 **(3) if the commissioner determines that compliance has not been achieved**
29.18 **within 60 days of the initial report of exceedance, the commercial and industrial solid**
29.19 **waste incinerator must be shut down; and**

29.20 **(4) if shutdown was required under subitem (3), the commercial and**
29.21 **industrial solid waste incinerator may be restarted under the conditions specified by the**
29.22 **commissioner. The owners or operators must notify the commissioner in writing of the**
29.23 **date on which the owners or operators plan to start-up and to begin compliance testing.**
29.24 **Notification must be at least ten days in advance of the compliance test date.**

29.25 **B. For the purposes of this subpart:**

30.1 (1) "Normal start-up" means the period of time between the initial start-up
 30.2 of a new, modified, retrofitted, or reconstructed emissions unit of a waste combustor,
 30.3 or emissions unit of a waste combustor that is modified, retrofitted, or reconstructed to
 30.4 meet the requirements of parts 7011.1360 to 7011.1370 and the lesser of 60 days after
 30.5 achieving the maximum production rate at which the emissions unit will operate or 180
 30.6 days after the initial start-up.

30.7 (2) "Accurate and valid data" means data that provides the measurement
 30.8 of emissions of an air contaminant from the incinerator or operating parameters of a
 30.9 component of the incinerator. For continuously monitored emissions, data must be
 30.10 considered accurate and valid immediately upon recording. For emissions for which a
 30.11 performance test is conducted, data is considered accurate and valid 14 days after the
 30.12 incinerator owners or operators receive the performance test report, unless the incinerator
 30.13 owners or operators notify the commissioner within the same 14 days that the owners or
 30.14 operators can show reason for rejecting the data.

30.15 **7011.1365 INCORPORATION OF STANDARDS OF PERFORMANCE FOR**
 30.16 **EXISTING COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATORS**
 30.17 **BY REFERENCE.**

30.18 Code of Federal Regulations, title 40, subpart DDDD, sections 60.2575 to 60.2875,
 30.19 as amended, entitled "Emission Guidelines and Compliance Times for Commercial and
 30.20 Industrial Solid Waste Incineration Units" is incorporated by reference as amended:

30.21 A. increments of progress: Code of Federal Regulations, title 40, sections 60.2575 to
 30.22 60.2615. The deadlines for each increment of progress and the dates to be included in
 30.23, Table 1 of subpart DDDD:

30.24 (1) owners or operators must submit a final control plan to the commissioner by
 30.25 the effective date of this part; and

31.1 (2) owners or operators of an affected unit must demonstrate compliance with
 31.2 the emission guidelines adopted herein by March 21, 2016;

31.3 B. waste management plan: Code of Federal Regulations, title 40, sections 60.2620
31.4 to 60.2630;

31.5 C. operator training and qualification: Code of Federal Regulations, title 40, sections
31.6 60.2635 to 60.2665;

31.7 D. emission limits, emission standards, and operating limits and requirements: Code
31.8 of Federal Regulations, title 40, sections 60.2670 to 60.2685;

31.9 E. performance testing: Code of Federal Regulations, title 40, sections 60.2690 to
31.10 60.2695;

31.11 F. initial compliance requirements: Code of Federal Regulations, title 40, sections
31.12 60.2700 to 60.2706;

31.13 G. continuous compliance requirements: Code of Federal Regulations, title 40,
31.14 sections 60.2710 to 60.2725;

31.15 H. monitoring: Code of Federal Regulations, title 40, sections 60.2730 to 60.2735;

31.16 I. recordkeeping and reporting: Code of Federal Regulations, title 40, sections
31.17 60.2740 to 60.2800;

31.18 J. Title V operating permits: Code of Federal Regulations, title 40, section 60.2805.
31.19 For CISWI that do not hold Title V operating permits, submit an application for a Title
31.20 V permit by one year after the effective date of this part;

31.21 K. air curtain incinerators: Code of Federal Regulations, title 40, sections 60.2810 to
31.22 60.2870;

31.23 L. definitions: Code of Federal Regulations, title 40, section 60.2875; and

32.1 M. for the purposes of this subpart, the terms used in Code of Federal Regulations,
32.2 title 40, sections 60.2572 to 60.2875, are defined as follows:

32.3 (1) "administrator" means the commissioner; and

32.4 (2) "you" means the owner or operator of an affected sewage sludge incineration
32.5 unit.

32.6 **7011.1370 INCORPORATION OF NEW SOURCE PERFORMANCE STANDARD**
32.7 **FOR NEW COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATORS**
32.8 **BY REFERENCE.**

32.9 Subpart 1. **Incorporation by reference.** Code of Federal Regulations, title 40, part
32.10 60, subpart CCCC, as amended, entitled "Standards of Performance for Commercial
32.11 and Industrial Solid Waste Incineration Units" is incorporated by reference, except that
32.12 decisions made by the administrator under Code of Federal Regulations, title 40, section
32.13 60.2030(c) are not delegated to the commissioner and must be made by the administrator.

32.14 Subp. 2. **Exceedance of emission limits.**

32.15 A. If accurate and valid data results of a performance test demonstrate an
32.16 exceedance of an emissions standard described in subpart 1 or in the facility air emissions
32.17 permit after normal start-up, the owners or operators of a commercial and industrial solid
32.18 waste incinerator must undertake the following actions:

32.19 (1) the owners or operators must immediately report the exceedance to
32.20 the commissioner and must comply with the applicable reporting provisions of part
32.21 7007.0800, subpart 6;

32.22 (2) the owners or operators must undertake appropriate steps to return the
32.23 commercial and industrial solid waste incinerator to compliance, and must demonstrate
32.24 compliance within 60 days of the initial report of the exceedance;

33.1 (3) if the commissioner determines that compliance has not been achieved
33.2 within 60 days of the initial report of exceedance, the commercial and industrial solid
33.3 waste incinerator must be shut down; and

33.4 (4) if shutdown was required under subitem (3), the commercial and
33.5 industrial solid waste incinerator may be restarted under the conditions specified by the

33.6 commissioner. The owners or operators must notify the commissioner in writing of the
33.7 date on which the owners or operators plan to start-up and to begin compliance testing.
33.8 Notification must be at least ten days in advance of the compliance test date.

33.9 B. For the purposes of this subpart:

33.10 (1) "Normal start-up" means the period of time between the initial start-up
33.11 of a new, modified, retrofitted, or reconstructed emissions unit of a waste combustor,
33.12 or emissions unit of a waste combustor that is modified, retrofitted, or reconstructed to
33.13 meet the requirements of parts 7011.1360 to 7011.1370 and the lesser of 60 days after
33.14 achieving the maximum production rate at which the emissions unit will operate or 180
33.15 days after the initial start-up.

33.16 (2) "Accurate and valid data" means data that provides the measurement
33.17 of emissions of an air contaminant from the incinerator or operating parameters of a
33.18 component of the incinerator. For continuously monitored emissions, data must be
33.19 considered accurate and valid immediately upon recording. For emissions for which
33.20 a performance test is conducted, data must be considered accurate and valid 14 days
33.21 after the incinerator owners or operators receive the performance test report, unless the
33.22 incinerator owners or operators notify the commissioner within the same 14 days that the
33.23 owners or operators can show reason for rejecting the data.

34.1 **7011.7050 INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS**
34.2 **AND PROCESS HEATERS - MAJOR SOURCES.**

34.3 Code of Federal Regulations, title 40, part 63, subpart DDDD, as amended, entitled
34.4 "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial,
34.5 Commercial, and Institutional Boilers and Process Heaters," is incorporated by reference,
34.6 except that the authorities identified in, section 63.313(d), are not delegated to
34.7 the commissioner and are retained by the administrator.

34.8 **7011.7055 INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS -**
34.9 **AREA SOURCES.**

34.10 Code of Federal Regulations, title 40, part 63, subpart JJJJJ, as amended, entitled
34.11 "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial,
34.12 and Institutional Boilers Area Sources," is incorporated by reference, except that
34.13 the authorities identified in, section 63.11236(c), are not delegated to the
34.14 commissioner and are retained by the administrator.

34.15 **7019.3000 EMISSION INVENTORY.**

34.16 [For text of subps 1 and 2, see M.R.]

34.17 Subp. 3. **Mercury emission sources.** Owners or operators of a mercury emission
34.18 source as defined in part 7005.0100, subpart 23b, must submit an annual emission
34.19 inventory report of the mercury emissions to the commissioner in a format specified by the
34.20 commissioner. The report must be submitted on or before April 1 of the year following the
34.21 year being reported. Stationary sources with air emissions of mercury and that are not
34.22 a mercury emission source will report every three years.

34.23 Subp. 4. **Possible mercury emission sources.** If the commissioner determines that a
34.24 stationary source has activity levels or emission factors which indicate that the source may
34.25 be a mercury emission source, the commissioner may request that the owners or operators
34.26 quantify the source's mercury emissions using the methods listed in part 7019.3030, item
35.1 A. The owners or operators must complete the quantification and submit a report to the
35.2 commissioner within 120 days of the commissioner's request.

35.3 **7019.3020 CALCULATION OF ACTUAL EMISSIONS FOR EMISSION**
35.4 **INVENTORY.**

35.5 [For text of items A to E, see M.R.]

35.6 F. All owners or operators of an emission reporting facility submitting an emission
35.7 inventory based in whole, or in part, on a material balance calculation shall submit a sample

35.8 material balance calculation with the emission inventory. Such facilities shall also maintain
35.9 a record of the material safety data sheets or vendor certification of the VOC, mercury,
35.10 or sulfur content of the material for each material or fuel used and the material balance
35.11 calculations for a period of five years after the date of submittal of the emission inventory.

35.12 [For text of item G, see M.R.]

35.13 **7019.3050 PERFORMANCE TEST DATA.**

35.14 A. If an emission reporting facility or mercury emission source as defined in part
35.15 7005.0100, subpart 23b, has collected representative emission data through the use of
35.16 performance tests in compliance with the preconditions in items B and C, and if CEM data
35.17 under part 7019.3040 is not available, the facility shall calculate its emissions based on
35.18 performance tests. If the emission data is unrepresentative because fuel or material feed
35.19 used under the test conditions is substantially different than the conditions under which the
35.20 emissions unit is normally operated or because the emissions unit has been modified, the
35.21 facility shall calculate its emissions based on the next highest available method. Emissions
35.22 unit operating load variation from test load does not make the data unrepresentative. In
35.23 the event that the facility has collected emission data through the use of performance tests
35.24 and determines that the data is unrepresentative for any reason, the facility shall submit
35.25 an explanation of why the data is unrepresentative with the emissions calculated using
36.1 the next highest available method. The commissioner shall determine if the conditions
36.2 of the performance test were representative based upon the operating data supplied by
36.3 the facility for the year of the inventory.

36.4 [For text of items B and C, see M.R.]

36.5 D. If the most recently conducted performance test data is more than ten years older
36.6 than the last date of the emission inventory period, then the emission factor derived
36.7 from the performance test shall be used if it results in higher calculated emissions than
36.8 any default emission factor allowed under part 7019.3060, 7019.3070, or 7019.3080,

36.9 as applicable, unless an alternative factor is approved by the commissioner under part
36.10 7019.3100 (facility proposal) or unless continuous emission monitor data that satisfies
36.11 the conditions of part 7019.3040 is available. The performance test data must be
36.12 representative of operating conditions during the calendar year for which the emission
36.13 inventory is being submitted. Mercury emission sources as defined in part 7005.0100,
36.14 subpart 23b, must follow the testing schedule in item E.

36.15 E. Unless a mercury emission source as defined in part 7005.0100, subpart 23b, is
36.16 already subject to a compliance demonstration for mercury under another applicable
36.17 requirement, operating permit, or enforceable agreement, the owners or operators of the
36.18 source must test in accordance with subitems (1) to (5):

36.19 (1) the owners or operators of a mercury emission source in operation on or
36.20 before the effective date of this part must conduct an initial performance test for mercury
36.21 emissions on the emission units and processes described in subitem (2):

36.22 (a) the owners or operators submit the test report to the commissioner within
36.23 365 days of the effective date of this part; and

36.24 (b) the test must be conducted in compliance with parts 7017.2001 to
36.25 7017.2060;

37.1 (2) the emission units and processes to be tested are those where prior testing
37.2 conducted under chapter 7017, emission factors, or similar calculations indicate actual
37.3 emissions are three or more pounds of mercury per year from each unit or process;

37.4 (3) the owners or operators of a mercury emission source that commences
37.5 operation or makes a physical or operational change that results in an increase in the
37.6 potential to emit mercury after the effective date of this part must conduct an initial
37.7 performance test for mercury emissions within 180 days of initial start-up or on a schedule
37.8 established in an air emission permit or other enforceable agreement and submit the test

37.9 report to the commissioner. Start-up has the meaning given in part 7005.0100, subpart
37.10 42a. "Potential to emit" has the meaning given in part 7005.0100, subpart 35a;

37.11 (4) if a stationary source has mercury emissions from units or processes that are
37.12 substantially equivalent, the results of testing from one may be applied to others, scaled
37.13 for throughput or operating hours. With the test results, the owners or operators will
37.14 provide documentation that the units or processes are substantially equivalent; and

37.15 (5) after the initial test, the owners or operators must conduct subsequent
37.16 performance tests within 60 months of each prior test:

37.17 (a) subsequent performance tests are not required if the owners or operators
37.18 determine that the stationary source is no longer a mercury emission source as defined by
37.19 part 7005.0100, subpart 23b; and

37.20 (b) if the stationary source becomes a mercury emission source again, the
37.21 owners or operators must resume conducting subsequent performance tests according to
37.22 subitem (4) within 180 days of making the determination that actual emissions exceed the
37.23 threshold for a mercury emission source.

37.24 **7019.3065 MERCURY MATERIAL BALANCE.**

37.25 If an owner or operator does not have either a CEM to monitor its mercury emissions or
37.26 a physical location at which to conduct a mercury emissions performance test, the owners
38.1 or operators of a mercury emission source may calculate mercury air emissions using
38.2 the material balance method described in this part if inputs and outputs of mercury are
38.3 known. A person using material balance to calculate mercury emissions must determine
38.4 the total mercury air emissions (E) as follows:

38.5
$$\underline{E = (A - B - C) * (1 - CE)}$$

38.6 Where:

38.7 A = the amount of mercury entering the process. The amount of mercury used in this
38.8 calculation must be the amount certified by the supplier, the maximum amount stated on

- 38.9 a material safety data sheet, or the maximum amount determined by sample analysis
- 38.10 using a reference method.
- 38.11 B = the sum of the amount of mercury incorporated into manufactured products. Submit
- 38.12 an explanation of how this quantity was determined.
- 38.13 C = the sum of the amount of mercury leaving the process by means other than through
- 38.14 controlled stack gases or in a product. For example, such means may include one or
- 38.15 more of the following: material leaving the process as a waste, that is recycled, or that is
- 38.16 approved for beneficial reuse. The mercury content of each means must be established by
- 38.17 sample analysis using a reference method. If the actual mercury content of the mercury
- 38.18 leaving the process is unknown, then $C = 0$.
- 38.19 CE = the overall efficiency, or the product of capture efficiency and control efficiency,
- 38.20 of any air pollution control device used to capture or control mercury air emissions,
- 38.21 expressed as a decimal fraction of 1.00. The overall efficiency must be based on efficiency
- 38.22 factors, as defined in part 7005.0100, subpart 9b, or must be based on the overall efficiency
- 38.23 verified by a performance test conducted according to parts 7017.2001 to 7017.2060.
- 38.24 **REPEALER.** Minnesota Rules, parts 7011.1201, subpart 12; 7011.1215, subpart 6;
- 38.25 and 7011.1225, subpart 4, are repealed.