

1 Pollution Control Agency

2

3 Adopted Permanent Rules Relating to Waste Combustors; Standards
4 of Performance

5

6 Rules as Adopted

7 7007.0200 SOURCES REQUIRED OR ALLOWED TO OBTAIN A PART 70 PERMIT.

8 [For text of subps 1 to 4 3, see 17-SR-3008 M.R.]

9 Subp. 4. Solid waste incinerators, waste combustors. A
10 solid waste incineration unit ~~required to obtain a permit under~~
11 ~~section 129(e) of the act (Solid Waste Combustion, Permits) must~~
12 ~~obtain a permit under this part,~~ or waste combustor as defined
13 in part 7011.1201, subpart 46, must obtain a permit under this
14 part if it is:

15 A. a major source under subpart 2;

16 B. required to obtain a permit under section 129(e)
17 of the act (Solid Waste Combustion, Permits); or

18 C. a new or existing waste combustor for which a
19 performance standard has been promulgated under section
20 129(a)(1) of the act.

21 ~~Subp. 4a. Waste combustors. A waste combustor must obtain~~
22 ~~a permit under this part if it is:~~

23 ~~A. a major source under subpart 2; or~~

24 ~~B. a new or existing waste combustor for which a~~
25 ~~performance standard has been promulgated under section~~
26 ~~129(e)(1) of the act.~~

27 [For text of subps 5 and 6, see 17-SR-3008 M.R.]

28 7007.0250 SOURCES REQUIRED TO OBTAIN A STATE PERMIT.

29 [For text of subps 1 to 5, see 17 SR 3008]

30 Subp. 6. Waste combustors. A waste combustor, as defined
31 in part 7011.1201, must obtain a permit under this part unless
32 it is:

33 A. a Class IV waste combustor used for the on-site
34 disposal of located at a hospital waste or forensic science
35 laboratory waste; or

1 B. is a waste combustor subject to the exemptions in
2 part 7011.1215, subpart 3.

3 Notwithstanding the exemptions in items A and B, a Class IV
4 waste combustor that does not comply with the stack height
5 requirements of part 7011.1235, subpart 1, but uses alternative
6 techniques to achieve equivalent ambient pollution
7 concentrations, must obtain a permit under this part.

8 7007.0501 ADDITIONAL CONTENTS REQUIRED IN A PERMIT APPLICATION
9 FOR A ~~CLASS-I7-II7-III7-A7-B7-C7-OR-D~~ WASTE COMBUSTOR.

10 Subpart 1. Additional requirements. In addition to the
11 information required by part 7007.0500, ~~as proposed at 17-SR~~
12 ~~3008 and subsequently adopted~~, a person who requests an air
13 emission permit for a ~~Class-I7-II7-III7-A7-B7-C7-or-D~~ waste
14 combustor subject to parts 7011.1201 to 7011.1285 shall submit
15 to the commissioner the information required by subparts 2 to 7.

16 Subp. 2. Information required. The application must
17 contain information describing the solid wastes to be combusted,
18 the combustion system, and the method of operating the
19 combustion system and must include the information in items A to
20 B E. The documents referred to in this subpart are incorporated
21 by reference in part 7011.1205.

22 A. A current solid waste composition study,
23 consisting of the results of an analysis of the solid wastes or
24 mixtures of solid wastes to be combusted, which uses the
25 sampling methods prescribed in "Test Methods for Evaluating
26 Solid Waste," SW-846, or any other sampling method approved in
27 writing by the commissioner. The commissioner shall approve a
28 sampling method where the commissioner determines that the
29 precision and accuracy of the method are equivalent to that of
30 the method set forth in "Test Methods for Evaluating Solid
31 Waste," SW-846.

32 The study shall include all of the analyses in subitems (1)
33 to (4).

34 (1) A fractional analysis of the solid waste,
35 including percentage by weight of combustible and noncombustible

1 materials in the solid waste stream and a solid waste sort that
2 identifies, at a minimum, the percent by weight of paper,
3 cardboard, plastic, ferrous and nonferrous metals, solid wastes
4 which contain mercury, glass, organic, and inorganic material in
5 the solid waste stream. The fractional analysis shall identify
6 recyclable and problem materials.

7 (2) A proximate analysis of the solid waste,
8 which shall include the percentage of volatile matter, moisture
9 content, ash content, and fixed carbon by difference. Analysis
10 methods used to determine the proximate analysis of the solid
11 waste shall be performed in accordance with ASTM methods E897,
12 E790, and E830 for volatile matter, moisture content, and ash
13 content, respectively.

14 (3) An ultimate analysis of the solid waste,
15 which shall include the percentage of carbon, hydrogen,
16 nitrogen, oxygen, sulfur, chlorine, and oxygen by difference.
17 Analysis methods used to determine the ultimate analysis of the
18 solid waste shall be performed in accordance with ASTM methods
19 E777, E778, E775, and E776 for carbon and hydrogen, nitrogen,
20 sulfur, and chlorine, respectively.

21 (4) The heat value of the solid waste. Analysis
22 methods used to determine the heat value of the solid waste
23 shall be performed in accordance with either ASTM E955 or any
24 other analysis method approved in writing by the commissioner.
25 The commissioner shall approve an analysis method where the
26 commissioner determines precision and accuracy of the method are
27 equivalent to that of the methods set forth in ASTM E955.

28 B. A detailed engineering description of each waste
29 combustor unit, including:

30 (1) the manufacturer's name and model number, if
31 determined at the time of application for an air emission
32 permit;

33 (2) the type of combustion system;

34 (3) a description of the auxiliary fuel system,
35 including the type and feed rate system controls available for
36 the fuel systems and the number, size, and location of burners;

1 (4) the design capacity of each waste combustor
2 unit;

3 (5) a description of solid waste handling and
4 solid waste feed controls, including a description of the fuel
5 feed equipment, automatic feed controls, shut-off devices, and
6 the maximum feed rate for which the equipment was designed in
7 pounds per hour;

8 (6) location and description of devices and
9 controls which indicate temperature and air flow; and

10 (7) for waste combustors which combust solid
11 waste with another fuel, other than the auxiliary fuel, a
12 description of how solid waste and other fuels are combined.

13 C. A description of the site, including storage space
14 for solid waste, noncombustible materials, chemicals,
15 recyclables, the solid wastes not allowed to be combusted by
16 part 7011.1220, and ash.

17 D. A description of the ash handling facilities,
18 including on-site storage, and transport within the boundaries
19 of the stationary source or emission facility.

20 E. If the unit load is measured using a method other
21 than steam flow as allowed by part 7011.1260, subpart 3, item A,
22 subitem (2), a description of the alternative method that meets
23 part 7011.1265, subpart 4a.

24 Subp. 3. Performance test data. In applications for
25 permit reissuance, the permit application shall contain summary
26 performance test data collected under the requirements of part
27 7011.1270 which represent the current operating practices of the
28 waste combustor.

29 Subp. 4. Industrial solid waste management plan. The
30 application shall contain an industrial waste management plan in
31 accordance with part 7011.1250.

32 Subp. 5. Solid wastes which contain mercury. The
33 application for Class C, D, and III, and IV waste combustors
34 shall contain a plan to separate solid wastes which contain
35 mercury in accordance with part 7011.1255.

36 Subp. 6. Reducing the level of toxic contaminants in ash.

1 An application for waste combustors which will combust mixed
2 municipal solid waste or refuse-derived fuel must contain the
3 information described in items A and B.

4 A. The application shall describe the specific
5 functions to be performed, activities to be undertaken, and the
6 timing of these functions and activities to the maximum extent
7 feasible and prudent, in order to:

8 (1) reduce the total content and leachable levels
9 of toxic contaminants in ash, including, but not limited to,
10 cadmium and lead;

11 (2) reduce the quantity of ash including, but not
12 limited to, the amount of noncombustibles in the solid waste
13 stream; and

14 (3) reduce the quantity of solid waste processing
15 residuals that require disposal.

16 B. An applicant seeking reissuance of a permit to
17 combust mixed municipal solid waste or refuse-derived fuel must
18 provide, for each of the previous five years, the amount of
19 waste combusted, the amount of ~~fuel~~ flue gas conditioning
20 chemicals used, and the amount of ash disposed. The ratio of
21 ash generated less flue gas conditioning agents to waste
22 combusted shall be computed for each of the previous five
23 years. The application shall also include data on the
24 constituents of the waste combustor's ash and how to further
25 reduce the level of toxic contaminants in the ash.

26 Subp. 7. Ash management plan. The application shall
27 include the applicant's plan for disposal of the ash generated
28 by the waste combustor, treatment of water generated from
29 quenching the ash at the facility, and any plans which the
30 applicant has for ash utilization. The plans shall include the
31 sites and processes for management and final disposal of the
32 ash, and shall identify any permits the waste combustor owner
33 needs to use each site or process, including permits for
34 leachate treatment.

35 Subp. 8. Class IV stack height. Class IV applications
36 shall include the applicant's design for installation and

1 operation of equipment to achieve ambient pollutant
2 concentrations that would have been achieved with the use of the
3 minimum stack height required in part 7011.1235, subpart 1.

4 7007.0801 CONDITIONS FOR AIR EMISSION PERMITS FOR WASTE
5 COMBUSTORS.

6 Subpart 1. Additional permit conditions. In addition to
7 the conditions in part 7007.0800, ~~as-proposed-at-17-SR-3000-and~~
8 ~~subsequently-adopted,~~ an air emission permit for a waste
9 combustor shall contain conditions as specified in subpart 2 or
10 3.

11 Subp. 2. Mixed municipal solid waste or refuse-derived
12 fuel waste combustors. An air emissions permit for a waste
13 combustor combusting mixed municipal solid waste or
14 refuse-derived fuel shall:

15 A. prohibit construction of the waste combustor
16 unless the permittee has an ash management method approved by
17 the commissioner;

18 B. prohibit operation until the ash management
19 facility approved in item A is available to accept ash;

20 C. require measurement of the noncombustible fraction
21 of solid waste;

22 D. provide a schedule for the testing of waste
23 combustor ash as required in part 7035.2910;

24 E. require the implementation of an industrial waste
25 management plan as described in part 7011.1250; and

26 F. for Class C ~~and~~, D, III, and IV waste combustors
27 require the implementation of a plan as described in part
28 7011.1255 to identify, separate, and collect solid wastes which
29 contain mercury before the mercury is combusted.

30 Subp. 3. Waste combustors of nonmixed municipal solid
31 waste. An air emissions permit for a waste combustor which does
32 not combust mixed municipal solid waste or refuse-derived fuel
33 shall:

34 A. prohibit initiation of operation of the waste
35 combustor unless the permittee has an ash management plan

1 approved by the commissioner;

2 B. provide a schedule for testing of waste combustor
3 ash;

4 C. require the implementation of an industrial waste
5 management plan as described in part 7011.1250; and

6 D. require the implementation of a plan as described
7 in part 7011.1255 to identify, separate, and collect solid
8 wastes which contain mercury before the mercury is combusted;
9 and

10 E. for Class IV waste combustors, require the
11 installation and operation of equipment necessary to achieve
12 ambient pollutant concentrations that would have been achieved
13 with the use of the minimum stack height required in part
14 7011.1235, subpart 1.

15 7011.0551 RECORD KEEPING AND REPORTING FOR UNITS INDIRECTLY
16 COMBUSTING SOLID WASTE.

17 Subpart 1. **Application.** The owner or operator of indirect
18 heating equipment combusting mixed municipal solid waste or
19 refuse-derived fuel which makes up 30 percent or less by weight
20 of total fuel input, as determined by subpart 2, shall comply
21 with the conditions of Minnesota Statutes, section 116.90, and
22 the conditions of this part. If the unit combusts more than 30
23 percent of mixed municipal solid waste or refuse-derived fuel,
24 parts 7011.1201 to 7011.1285 apply.

25 Subp. 2. **Calculation.** The fuel feed stream composition
26 calculation shall be the ratio of the weights of mixed municipal
27 solid waste and refuse-derived fuel to mixed municipal solid
28 waste, refuse-derived fuel, and all other fuels delivered to the
29 combustion chamber. The calculation shall be made for each
30 24-hour period that the equipment is operated.

31 Subp. 3. **Log.** The owner or operator shall maintain an
32 operating log where the date, weights of mixed municipal solid
33 waste and refuse-derived fuel combusted, and weight of each
34 other fuel combusted, and the result of the calculation made in
35 subpart 2 is recorded daily.

1 Subp. 4. Report. The owner or operator shall submit to
2 the commissioner a quarterly report containing the date, weights
3 of mixed municipal solid waste and refuse-derived fuel, and the
4 weight of each other fuel combusted during the quarter. The
5 reports shall be submitted within 30 days following December 30,
6 March 30, June 30, and September 30 of each year.

7 7011.0625 RECORD KEEPING AND REPORTING FOR UNITS DIRECTLY
8 COMBUSTING SOLID WASTE.

9 Subpart 1. Application. The owner or operator of direct
10 heating equipment combusting mixed municipal solid waste or
11 refuse-derived fuel which makes up 30 percent or less by weight
12 of total fuel weight input, as determined by subpart 2, shall
13 comply with the conditions of Minnesota Statutes, section
14 116.90, and subparts 3 and 4. If the unit combusts more than 30
15 percent of mixed municipal solid waste or refuse-derived fuel,
16 parts 7011.1201 to 7011.1285 apply.

17 Subp. 2. Calculation. The fuel feed stream composition
18 calculation shall be the ratio of the weights of mixed municipal
19 solid waste and refuse-derived fuel to mixed municipal solid
20 waste, refuse-derived fuel, and all other fuels delivered to the
21 combustion chamber. The calculation shall be made for each
22 24-hour period that the equipment is operated.

23 Subp. 3. Log. The owner or operator shall maintain an
24 operating log where the date, weight of mixed municipal solid
25 waste and refuse-derived fuel, and weight of each other fuel
26 combusted, and the result of the calculation made in subpart 2
27 is recorded daily.

28 Subp. 4. Reports. The owner or operator shall submit to
29 the commissioner a quarterly report containing the date, weight
30 of mixed municipal solid waste and refuse-derived fuel solid
31 waste, and weight of each other fuel combusted during the
32 quarter. The reports shall be submitted within 30 days
33 following December 30, March 30, June 30, and September 30 of
34 each year.

35 WASTE COMBUSTORS

1 7011.1201 DEFINITIONS.

2 Subpart 1. **Scope.** As used in parts 7007.0200, 7007.0250,
3 7007.0501, 7007.0801, and 7011.1201 to 7011.1285 the following
4 words have the meanings defined in this part.

5 Subp. 1a. **Statutes and other rules.** The definitions in
6 Minnesota Statutes, section 116.06, and in part 7001.0010 and
7 chapters 7005, 7007, 7009, 7011, and 7017, and 7019 apply to
8 terms in parts 7011.1201 to 7011.1285, unless the terms are
9 specifically otherwise defined in this part.

10 Subp. 2. [See repealer.]

11 Subp. 3. [See repealer.]

12 Subp. 4. [See repealer.]

13 Subp. 5. **Accurate and valid data.** "Accurate and valid
14 data" means data which provides the measurement of emissions of
15 an air contaminant from the waste combustor or operating
16 parameters of a component of the waste combustor. For
17 continuously monitored emissions, data shall be considered
18 accurate and valid immediately upon recording. For emissions
19 for which a performance test is conducted, data shall be
20 considered accurate and valid 14 days after the waste combustor
21 owner or operator receives the performance test report, unless
22 the waste combustor owner or operator notifies the commissioner
23 within the same 14 days that the owner or operator can show
24 reason for rejecting the data.

25 Subp. 6. **Air contaminant.** "Air contaminant" has the
26 meaning given in Minnesota Statutes, section 116.06, subdivision
27 2.

28 Subp. 7. **Certified operator.** "Certified operator" means
29 the person who has obtained certification from the state
30 signifying the person's qualification to be the person in direct
31 charge and control of the operation of a solid waste combustion
32 system, including the duties of start-up, operation, or shutdown
33 of the solid waste combustion system. Certified operator
34 includes chief facility operator, shift supervisor, and operator
35 supervisor.

1 Subp. 8. Chief facility operator. "Chief facility
2 operator" means the person in direct charge and control of the
3 operation of a waste combustor who is responsible for daily
4 on-site supervision, technical direction, management, and
5 overall performance of the facility.

6 Subp. 9. Class A waste combustor. "Class A waste
7 combustor" means that the total of the design capacities for all
8 waste combustor units at a stationary source is 400×10^6 Btu/hr
9 or more, the waste combustor units combust primarily mixed
10 municipal solid waste or RDF, and the waste combustor was issued
11 a permit for construction on or before December 20, 1989.

12 Subp. 10. Class B waste combustor. "Class B waste
13 combustor" means that the total of the design capacities for all
14 waste combustor units at a stationary source is 93.75×10^6
15 Btu/hr or more and less than 400×10^6 Btu/hr, the waste
16 combustor units combust primarily mixed municipal solid waste or
17 RDF, and the waste combustor was issued a permit for
18 construction on or before December 20, 1989.

19 Subp. 11. Class C waste combustor. "Class C waste
20 combustor" means that the total of the design capacities for all
21 waste combustor units at a stationary source is 15×10^6 Btu/hr
22 or more and less than 93.75×10^6 Btu/hr, the waste combustor
23 units combust primarily mixed municipal solid waste or RDF, and
24 the waste combustor was issued a permit on or before December
25 20, 1989.

26 Subp. 12. Class D waste combustor. "Class D waste
27 combustor" means that the design capacity of a waste combustor
28 unit is 3.0×10^6 Btu/hr or more, combusts waste other than
29 mixed municipal solid waste or RDF, and was operating on or
30 before December 20, 1989.

31 Subp. 13. Class I waste combustor. "Class I waste
32 combustor" means that the design capacity for a waste combustor
33 unit is 93.75×10^6 Btu/hr or more, and the waste combustor is
34 issued a permit for construction after December 20, 1989.

35 Subp. 14. Class II waste combustor. "Class II waste
36 combustor" means that the design capacity for a waste combustor

1 unit is 15×10^6 Btu/hr or more and less than 93.75×10^6
2 Btu/hr, and the waste combustor is issued a permit for
3 construction after December 20, 1989.

4 Subp. 15. **Class III waste combustor.** "Class III waste
5 combustor" means that the design capacity for a waste combustor
6 unit is 3.0×10^6 Btu/hr or more and less than 15×10^6 Btu/hr,
7 and the waste combustor is issued a permit for construction
8 after December 20, 1989.

9 Subp. 16. **Class IV waste combustor.** "Class IV waste
10 combustor" means that the design capacity for a waste combustor
11 unit is less than 3.0×10^6 Btu/hr.

12 Subp. 17. **Cofired unit.** "Cofired unit" means an emissions
13 unit which combusts mixed municipal solid waste with a fuel that
14 is not mixed municipal solid waste or RDF and 30 percent or less
15 by weight of the total fuel input is comprised in aggregate of
16 solid waste or RDF as measured on a 24-hour basis. The fuel
17 feed stream composition calculation shall be the ratio of the
18 weights of mixed municipal solid waste and RDF to mixed
19 municipal solid waste, RDF, and all other fuels delivered to the
20 combustion chamber.

21 Subp. 18. **Crematorium.** "Crematorium" means a furnace used
22 to reduce the dead human body to ashes and inorganic bone
23 fragments.

24 Subp. 19. **Design capacity.** "Design capacity" means the
25 hourly throughput of the waste combustor unit based on heat
26 input from solid waste of the combustion system stated by the
27 manufacturer or designer, based on accepted design and
28 engineering practices. For a noncontinuous feed system, design
29 capacity means the total heat input from solid waste per cycle.

30 Subp. 20. **Dumpstack.** "Dumpstack" means a stack, chimney,
31 vent, or other functionally equivalent opening by which
32 uncontrolled emissions are vented into the ambient air.

33 Subp. 21. **Energy recovery facility.** "Energy recovery
34 facility" means an emissions unit or emission facility used to
35 capture the heat value of solid waste for conversion to steam,
36 electricity, or immediate heat value by direct combustion or by

1 burning an intermediate fuel product derived from solid waste.
2 For the purposes of parts 7011.1201 to 7011.1285, this
3 definition does not include landfill facilities that recover
4 methane gases, or facilities processing solid waste to convert
5 the solid waste to an intermediate fuel product.

6 Subp. 22. **Fluidized bed combustor.** "Fluidized bed
7 combustor" means a classification of combustion systems in which
8 the bed material is maintained in a fluidized state in the
9 primary zone of combustion. Combustion systems included in this
10 classification include bubbling fluidized bed and circulating
11 fluidized bed combustors.

12 Subp. 23. ~~Forensic science laboratory.~~ ~~"Forensic science~~
13 ~~laboratory" means a laboratory engaged in the analysis of~~
14 ~~evidence for legal proceedings.~~

15 Subp. ~~24.~~ **Four-hour block average.** "Four-hour block
16 average" means the average of all hourly emission rates when the
17 emissions unit is operating and combusting solid waste measured
18 over six discrete four-hour periods beginning at midnight.

19 Subp. ~~25.~~ 24. **Hazardous waste.** "Hazardous waste" has the
20 meaning given in Minnesota Statutes, section 115B.02,
21 subdivision 9.

22 Subp. ~~26.~~ 25. **Household batteries.** "Household batteries"
23 has the meaning given in Minnesota Statutes, section 115A.961.

24 Subp. ~~27.~~ 26. **Household hazardous waste.** "Household
25 hazardous waste" has the meaning given in Minnesota Statutes,
26 section 115A.96, subdivision 1, paragraph (b).

27 Subp. ~~28.~~ 27. **Incinerator.** "Incinerator" means any
28 emissions unit, emission facility, furnace, or other device used
29 for the primary purpose of reducing the volume of solid waste by
30 removing combustible matter.

31 Subp. ~~29.~~ 28. **Industrial solid waste.** "Industrial solid
32 waste" has the meaning given in part 7035.0300, subpart 45.

33 Subp. ~~30.~~ 29. **Infectious waste.** "Infectious waste" has
34 the meaning given in Minnesota Statutes, section 116.76,
35 subdivision 12.

36 Subp. ~~31.~~ 30. **Initial start-up.** "Initial start-up" means

1 the date on which solid waste is first fired in a new, modified,
2 or reconstructed emissions unit.

3 Subp. ~~32~~ 31. **Mass burn.** "Mass burn" means a
4 classification of field-erected combustion systems in which
5 solid waste is combusted that has not been subjected to
6 shredding or size classification. Combustion systems included
7 in this classification are mass burn waterwall, mass burn
8 refractory, and mass burn rotary waterwall combustors.

9 Subp. ~~33~~ 32. **Maximum demonstrated capacity.** For waste
10 combustors with heat recovery, "maximum demonstrated capacity"
11 means the maximum four-hour integrated average load for each
12 waste combustor unit achieved during the most recent test during
13 which compliance with the PCDD/PCDF limit in part 7011.1225 is
14 achieved, as measured by steam flow or alternative method as
15 approved by the commissioner. For waste combustors without heat
16 recovery, "maximum demonstrated capacity" means the maximum
17 four-hour arithmetic average input rate for each waste combustor
18 unit achieved during the most recent test during which
19 compliance with the PCDD/PCDF limit was achieved. If PCDD/PCDF
20 testing is not required to be conducted, the maximum
21 demonstrated capacity is the capacity achieved during the
22 conduct of the most recent test for which compliance with
23 particulate matter standards and carbon monoxide in part
24 7011.1225 is demonstrated.

25 Subp. ~~34~~ 33. **Metals recovery incinerator.** "Metals
26 recovery incinerator" means a furnace or incinerator used
27 primarily to recover precious and nonprecious metals by burning
28 the combustible fraction from waste. An aluminum sweat furnace
29 is not a metals recovery incinerator.

30 Subp. ~~35~~ 34. **Mixed municipal solid waste.** "Mixed
31 municipal solid waste" has the meaning given in Minnesota
32 Statutes, section 115A.03, subdivision 21.

33 Subp. ~~36~~ 35. **Modular waste combustor.** "Modular waste
34 combustor" means a classification of combustion systems that are
35 not field-erected, and have more than one combustion chamber.
36 Combustion systems included in this classification are modular

1 starved air and modular excess air combustors.

2 Subp. ~~37~~ 36. Normal start-up. "Normal start-up" means
3 the period of time between the initial start-up of a new,
4 modified, or reconstructed emissions unit of a waste combustor,
5 or emissions unit of a waste combustor that is modified or
6 reconstructed to meet the requirements of parts 7011.1201 to
7 7011.1285, and the lesser of 60 days after achieving the maximum
8 production rate at which the emissions unit will operate or 180
9 days after initial start-up.

10 If no modification or reconstruction of a waste combustor
11 is necessary to meet the requirements of parts 7011.1201 to
12 7011.1285, then normal start-up means the period of time between
13 the effective date of this rule and the applicable date in part
14 7011.1215, subpart 5 or 6.

15 Subp. ~~38~~ 37. Operator supervisor. "Operator supervisor"
16 means the Class IV waste combustor personnel who has direct
17 responsibility for control of the operation of a waste combustor
18 and is responsible for overall on-site supervision, technical
19 direction, management, and performance of the facility. This
20 personnel may also be responsible for operating the waste
21 combustor including start-up, operation, shutdown, and
22 maintenance of the equipment.

23 Subp. ~~39~~ 38. Paint burn-off oven. "Paint burn-off oven"
24 means an oven or furnace designed, installed, and operated to
25 burn off paint overspray from hooks and other painting process
26 accessories.

27 Subp. ~~40~~ 39. Pathological waste. "Pathological waste"
28 has the meaning given in Minnesota Statutes, section 116.76,
29 subdivision 14.

30 Subp. ~~41~~ 40. Polychlorinated dibenzo-p-dioxins and
31 polychlorinated dibenzofurans or PCDD/PCDF. "Polychlorinated
32 dibenzo-p-dioxins and polychlorinated dibenzofurans" or
33 "PCDD/PCDF" means the total of tetra-through
34 octa-polychlorinated dibenzo-p-dioxins and polychlorinated
35 dibenzofurans.

36 Subp. ~~42~~ 41. Problem material. "Problem material" has

1 the meaning given in Minnesota Statutes, section 115A.03,
2 subdivision 24a.

3 Subp. 42. RDF stoker. "RDF stoker" means a steam
4 generating unit that combusts RDF in a semisuspension firing
5 mode using air-fed distributors.

6 Subp. 43. Refuse-derived fuel or RDF. "Refuse-derived
7 fuel" or "RDF" has the meaning given in Minnesota Statutes,
8 section 116.90, subdivision 1, paragraph (d).

9 Subp. 44. Shift supervisor. "Shift supervisor" means the
10 person in direct charge and control of the operation of a waste
11 combustor and who is responsible for on-site supervision,
12 technical direction, management, and overall performance of the
13 facility during an assigned shift.

14 Subp. 45. Solid waste. "Solid waste" has the meaning
15 given in Minnesota Statutes, section 116.06, subdivision 22.

16 Subp. 46. Waste combustor. "Waste combustor" means any
17 emissions unit or emission facility where solid waste or
18 refuse-derived fuel is combusted, and includes incinerators,
19 energy recovery facilities, or other combustion devices. A
20 metals recovery incinerator is a waste combustor. A combustion
21 device combusting primarily wood, or at least 70 percent fossil
22 fuel and wood in combination with up to 30 percent papermill
23 wastewater treatment plant sludge, is not a waste combustor. A
24 soil treatment facility, paint burn-off oven, wood heater, or
25 residential fireplace is not a waste combustor.

26 Subp. 47. Waste tire. "Waste tire" has the meaning given
27 in Minnesota Statutes, section 115A.90, subdivision 11.

28 Subp. 48. Wood. "Wood" means wood, wood residue, bark, or
29 any derivative fuel or residue thereof, in any form, including
30 sawdust, sander dust, wood chips, wood scraps, slabs, millings,
31 shavings, and processed pellets made from wood and other forest
32 residues.

33 Subp. 49. Wood heater. "Wood heater" means an enclosed
34 woodburning appliance capable of and intended for space heating
35 and domestic water heating that meets the following criteria:

36 A. an air-to-fuel ratio in the combustion chamber

1 averaging less than 35 to 1 as determined by the test procedure
2 prescribed in Code of Federal Regulations, title 40, section
3 60.534, as amended, performed at an accredited laboratory;

4 B. a useable firebox volume of less than 20 cubic
5 feet;

6 C. a minimum burn rate less than five kg/hr as
7 determined by the test procedure prescribed in Code of Federal
8 Regulations, title 40, section 60.534, as amended, performed at
9 an accredited laboratory; and

10 D. a maximum weight of 800 kilograms. In determining
11 the weight of the appliance for these purposes, fixtures and
12 devices that are normally sold separately, such as flue pipe,
13 chimney, and masonry components that are not an integral part of
14 the appliance or heat distribution ducting shall not be included.

15 Subp. ~~49~~ 50. Yard waste. "Yard waste" means garden
16 wastes, leaves, lawn cuttings, weeds, and prunings.

17 7011.1205 INCORPORATIONS BY REFERENCE.

18 For the purpose of parts 7007.0501, 7007.0801, and
19 7011.1201 to 7011.1285, the documents in items A to C are
20 incorporated by reference. These documents are subject to
21 frequent change.

22 A. Annual Book of American Society for Testing and
23 Materials Standards (ASTM), Part 26, Gaseous Fuels, Coal and
24 Coke; Atmospheric Analysis, 1981 Edition. This publication is
25 available through the Minitex interlibrary loan system.

26 B. Test Methods for Evaluating Solid Waste, SW-846,
27 United States Environmental Protection Agency, Office of Solid
28 Waste and Emergency Response, Third Edition, November 1986.
29 This publication is available through the Minitex interlibrary
30 loan system.

31 C. The following material is available from the
32 American Society of Mechanical Engineers (ASME), 345 East 47th
33 Street, New York, New York 10017 or from the State Law Library,
34 Judicial Center, 25 Constitution Avenue, Saint Paul, Minnesota
35 55155.

1 (1) Standards for the Qualification and
 2 Certification of Resource Recovery Facility Operators, ASME
 3 QRO-1-1989, March 1990.

4 (2) Power Tests Code for Steam Generating Units,
 5 PTC 4.1, 1972.

6 (3) Interim Supplement 19.5 on Instrumentation
 7 and Apparatus, Application Part II of Fluid Meters, 6th Edition,
 8 1971.

9 7011.1210 NOTIFICATION REQUIRED OF CLASS IV WASTE COMBUSTORS.

10 ~~The owner or operator of a Class IV waste combustor shall~~
 11 ~~notify the commissioner, within 90 days after the effective date~~
 12 ~~of this part, of the existence of the waste combustor.~~ Subpart

13 1. Class IV waste combustors at hospitals. The owner or
 14 operator of a Class IV waste combustor located at a hospital
 15 that was operating on the effective date of this part shall
 16 notify the commissioner, within 90 days after the effective date
 17 of this part, of the existence of the waste combustor. The
 18 notice submitted by owners and operators of these waste
 19 combustors shall contain:

20 A. the name of the owner and operator, and the
 21 address of the waste combustor installation;

22 B. a schedule showing that the waste combustor will
 23 meet the requirements of parts 7011.1201 to 7011.1285 on January
 24 30, 1996, or upon expiration of a current permit for those waste
 25 combustors to which permits were issued between December 1,
 26 1992, and the effective date of this part; and

27 C. the information in subpart 2, items B to H.

28 Subp. 2. New Waste combustors at hospitals. The owner or
 29 operator of a new Class IV waste combustor located at a hospital
 30 and installed after the effective date of this part shall notify
 31 the commissioner 90 days prior to the installation of the waste
 32 combustor. The notice submitted by owners-and-operators the
 33 owner or operator of this Class IV waste combustors combustor
 34 shall contain the information in items A to F H.

35 A. The name of the owner and operator, and the

1 address of the waste combustor installation.

2 B. ~~For waste combustors operating on the effective~~
3 ~~date of this part, a schedule showing that the waste combustor~~
4 ~~will meet the requirements of parts 7011.1201 to 7011.1285~~
5 ~~within two years from the effective date of this part. -- New~~
6 ~~waste combustors shall submit a schedule showing that the waste~~
7 ~~combustor will be tested within 180 days and demonstrate~~
8 ~~compliance.~~

9 E. The results of a current fractional analysis and
10 the heat value of the solid waste stream. The fractional
11 analysis shall be conducted according to part 7007.0501, subpart
12 2, item A, subitem (1). Published data may be used to determine
13 heat value of the solid waste stream. If published data is
14 unavailable, the owner or operator shall use the methods
15 described in part 7007.0501, subpart 2, item A, subitem (4), to
16 determine heat value of the solid waste stream.

17 D. C. The waste combustor manufacturer and model
18 number, the diameter in feet and, the exit height of the stack
19 in feet, and the minimum stack height that is required to be
20 installed by part 7011.1235, subpart 1, for the proposed waste
21 combustor.

22 E. D. The design capacity of the waste combustor in
23 million Btu's per hour.

24 F. E. A plan that describes how solid wastes that
25 contain mercury will be identified, separated, and collected
26 before the waste is combusted in accordance with part 7011.1255.

27 G. F. A plan for disposal of the ash generated, as
28 described in part 7007.0501, subpart 7.

29 H. G. A ~~report with the results of~~ schedule for a
30 performance test demonstrating to demonstrate compliance with
31 emission limits in part 7011.1225, according to the schedule in
32 part 7011.1270. The owner or operator shall use the methods
33 described in part 7011.1265 when conducting compliance
34 tests. ~~For new Class IV waste combustors, the results of a~~
35 ~~performance test must be submitted within 180 days after~~
36 ~~submitting notification to the commissioner of the intent to~~

1 ~~install-the-waste-combustor-~~

2 ~~F.~~ H. The signature of the owner or operator with the
3 following certification:

4 "I certify under penalty of law that this document and
5 all attachments were prepared under my direction or
6 supervision in accordance with a system designed to
7 assure that qualified personnel properly gather and
8 evaluate the information submitted. Based on my
9 inquiry of the person or persons who manage the
10 system, or those persons directly responsible for
11 gathering the information, the information submitted
12 is, to the best of my knowledge and belief, true,
13 accurate, and complete. Further, the waste combustor
14 complies with the design, installation, and operating
15 requirements of Minnesota Rules, parts 7011.1201 to
16 7011.1285, applicable to a Class IV waste combustor."

17 7011.1215 APPLICABILITY OF STANDARDS OF PERFORMANCE FOR WASTE
18 COMBUSTORS.

19 Subpart 1. Waste combustors. A person who constructs,
20 modifies, reconstructs, or operates a waste combustor shall
21 comply with parts 7011.1201 to 7011.1285, except as provided in
22 subparts 2 and 3.

23 Subp. 2. Cofired facilities. A person who constructs,
24 modifies, reconstructs, or operates a cofired unit is not a
25 waste combustor, and shall comply with the applicable
26 requirements of parts 7011.0500 to ~~7011-0555~~ 7011.0551 or
27 7011.0600 to 7011.0625.

28 Subp. 3. Exemptions from standards of performance.
29 Crematoria, pathological waste combustors, and waste combustors
30 used solely for the disposal of animal carcasses are exempt from
31 the requirements of parts ~~7011-1201~~ 7011.1210 to 7011.1285, and
32 shall meet the conditions of this subpart.

33 A. No owner or operator of a crematorium,
34 pathological waste combustor unit, or waste combustor unit used
35 solely for the disposal of animal carcasses shall cause to be

1 emitted into the atmosphere gases which are greater than 20
2 percent opacity.

3 B. Waste combustor owners and operators shall install
4 and operate an afterburner which maintains flue gases at 1,200
5 degrees Fahrenheit for at least 0.3 seconds.

6 C. Ash shall be stored and transported in such a
7 manner to prevent avoidable amounts of particulate matter to
8 become airborne.

9 Subp. 4. **Emission Standards.** The ~~emission~~ standards of
10 parts 7011.1227, 7011.1229, ~~and~~ 7011.1231, 7011.1233, and
11 7011.1240, subparts 2 and 6, apply at all times when waste is
12 being combusted, except during periods of start-up, shutdown, or
13 malfunction, provided that the duration of start-up, shutdown,
14 or malfunction does not exceed three hours. "Malfunction" means
15 any sudden and unavoidable failure of air pollution control
16 equipment or process equipment or of a process to operate in a
17 normal or usual manner. Failures that are caused entirely or in
18 part by poor maintenance, careless operation, or any other
19 preventable upset condition or preventable equipment breakdown
20 are not considered malfunctions.

21 Subp. 5. **Transition for Class A, B, or C waste**
22 **combustors.** Notwithstanding subpart 1, a Class A, B, or C waste
23 combustor holding a permit on the effective date of this part
24 shall comply with the requirements of parts 7011.1201 to
25 7011.1285, three years from the effective date of this part.

26 Subp. 6. **Transition for Class D, III, or IV waste**
27 **combustors.** Notwithstanding subpart 1, Class D, III, or IV
28 waste combustors installed and operable on the effective date of
29 this part shall comply with parts 7011.1201 to 7011.1285, by
30 January 30, 1996. Notwithstanding subpart 1, Class IV waste
31 combustors operating under an air emissions permit issued
32 ~~after~~ between December 1, 1992, and the effective date of this
33 part shall comply with parts 7011.1201 to 7011.1285 upon
34 expiration of that permit.

35 7011.1220 PROHIBITIONS.

1 Subpart 1. Prohibited waste combustors. No person shall
2 operate a Class IV waste combustor unless that waste combustor
3 is:

- 4 A. a ~~hospital~~ waste combustor located at a hospital;
5 B. ~~a-forensic-science-laboratory-waste-combustor~~;
6 ~~E~~ a crematorium, pathological waste combustor, or
7 waste combustor used solely for the disposal of animal
8 carcasses; or
9 ~~B~~ C. a metals recovery incinerator.

10 Subp. 2. Solid wastes requiring special approval. No
11 waste combustor shall combust yard waste or waste tires unless
12 specifically allowed to do so in the air emission permit for the
13 waste combustor.

14 7011.1225 STANDARDS OF PERFORMANCE FOR WASTE COMBUSTORS.

15 Subpart 1. Permit in existence for Class A, B, or C waste
16 combustor ~~on-December-207-1989~~. No owner or operator of a Class
17 A, B, or C waste combustor ~~that-held-an-air-emission-permit-on~~
18 ~~December-207-1989~~ shall cause to be emitted into the atmosphere
19 from each waste combustor unit gases which contain particulate
20 matter, polychlorinated dibenzo-p-dioxins and polychlorinated
21 dibenzofurans (PCDD/PCDF), mercury, carbon monoxide, sulfur
22 dioxide, or hydrogen chloride in excess of the standards of
23 performance shown in part 7011.1227. Emissions shall be
24 calculated under standard conditions corrected to seven percent
25 oxygen on a dry volume basis. An owner or operator of a mixed
26 municipal solid waste or RDF waste combustor may determine
27 compliance with the emission limitations using carbon dioxide
28 measurements corrected to an equivalent of seven percent
29 oxygen. The relationship between carbon dioxide and oxygen
30 shall be established at each compliance test.

31 Subp. 2. Class I or II waste combustors. No owner or
32 operator of a Class I or II waste combustor ~~that-did-not-held-an~~
33 ~~air-emission-permit-on-December-207-1989~~ shall cause to be
34 emitted into the atmosphere from each waste combustor unit gases
35 that contain particulate matter, polychlorinated

1 dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD/PCDF),
2 mercury, carbon monoxide, nitrogen oxides, sulfur dioxide, or
3 hydrogen chloride in excess of the standards of performance
4 shown in part 7011.1229. Emissions shall be calculated under
5 standard conditions, corrected to seven percent oxygen on a dry
6 volume basis. An owner or operator of a mixed municipal solid
7 waste or RDF waste combustor may determine compliance with the
8 emission limitations using carbon dioxide measurements corrected
9 to an equivalent of seven percent oxygen. The relationship
10 between carbon dioxide and oxygen shall be established at each
11 compliance test.

12 Subp. 3. Class III waste combustors. No owner or operator
13 of a Class III waste combustor ~~that did not hold an air emission~~
14 ~~permit on December 20, 1989,~~ shall cause to be emitted into the
15 atmosphere from each waste combustor unit gases that contain
16 particulate matter, PCDD/PCDF, mercury, carbon monoxide, or
17 opacity in excess of the standards of performance in part
18 7011.1231. Emissions shall be calculated under standard
19 conditions, corrected to seven percent oxygen on a dry volume
20 basis. An owner or operator may determine compliance with the
21 emission limitations using carbon dioxide measurements corrected
22 to an equivalent of seven percent oxygen. The relationship
23 between carbon dioxide and oxygen shall be established at each
24 compliance test.

25 Subp. 4. Class D waste combustors. Except as provided in
26 this subpart, no owner or operator of a Class D waste combustor
27 ~~that was operating on or before December 20, 1989,~~ shall cause
28 to be emitted into the atmosphere from each waste combustor unit
29 gases that contain particulate matter, PCDD/PCDF, carbon
30 monoxide, or opacity in excess of the standards of performance
31 in part 7011.1231. Emissions shall be calculated under standard
32 conditions, corrected to seven percent oxygen on a dry volume
33 basis. An owner or operator may determine compliance with the
34 emission limitations using carbon dioxide measurements corrected
35 to an equivalent of seven percent oxygen. The relationship
36 between carbon dioxide and oxygen shall be established at each

1 compliance test.

2 A Class D waste combustor that was burning more than 30
 3 percent by weight of RDF on January 1, 1991, shall comply with
 4 the applicable standards of performance in parts 7011.0500 to
 5 ~~7011.0555~~ 7011.0551 or 7011.0600 to 7011.0625, for equipment
 6 burning solid waste.

7 Subp. 5. Class IV waste combustors. No owner or operator
 8 of a Class IV waste combustor shall cause to be emitted into the
 9 atmosphere from each waste combustor unit gases that contain
 10 particulate matter, carbon monoxide, or opacity in excess of
 11 those concentrations in part 7011.1233. Emissions shall be
 12 calculated under standard conditions, corrected to seven percent
 13 oxygen on a dry volume basis. An owner or operator may
 14 determine compliance with the emission limitations using carbon
 15 dioxide measurements corrected to an equivalent of seven percent
 16 oxygen. The relationship between carbon dioxide and oxygen
 17 shall be established at each compliance test.

18 7011.1227 TABLE 1.

19 The table in this part governs emission limitations for
 20 Class A, B, and C waste combustors ~~that-were-issued-air-emission~~
 21 ~~permits-before-December-207-1989~~. For acid gas limitations,
 22 either the applicable percent reduction or the parts per million
 23 by volume emission limitation, whichever is less stringent, is
 24 the emission limitation for the ~~stationary-source~~ waste
 25 combustor.

	Class C	Class B	Class A
28 Particulate Matter			
29 Front-half		0.015 gr/dscf	0.015 gr/dscf
30 Total	0.020 gr/dscf	0.020 gr/dscf	0.020 gr/dscf
32 PCDD/PCDF			
33 Total	500 ng/dscm	30 ng/dscm	30 ng/dscm
35 Acid Gases: HCl	NA	90% control or 25 ppm	90% control or 25 ppm
37 SO ₂	NA	70% control or 30 ppm	70% control or 30 ppm
40 Carbon Monoxide			
41 Modular	50 ppm	50 ppm	50 ppm
42 Mass burn, or			
43 fluidized			
44 bed	100 ppm	100 ppm	100 ppm
45 RDF <u>stoker</u>	150 ppm	200 ppm	200 ppm

1				
2	Opacity	10%	10%	10%
3				
4	Mercury (short-term)			
5	Modular with ESP	1,000 µg/dscm	NA	NA
6	Mass burn	1,000 µg/dscm	100 µg/dscm or 85% removal	100 µg/dscm or 85% removal
7				
8				
9	RDF (90-day test interval)		50 µg/dscm or 85% removal	50 µg/dscm or 85% removal
10				
11				
12	Modular, mass burn, or fluidized bed with wet or dry scrubber	100 µg/dscm or 85% removal	100 µg/dscm or 85% removal	100 µg/dscm or 85% removal
13				
14				
15				
16				
17				
18	Mercury (long-term)			
19	Modular with ESP	600 µg/dscm		
20	Mass burn	600 µg/dscm	60 µg/dscm or 85% removal	60 µg/dscm or 85% removal
21				
22				
23	RDF (90-day test interval)		30 µg/dscm or 85% removal	30 µg/dscm or 85% removal
24				
25				
26	Modular, mass burn, or fluidized bed with wet or dry scrubber	60 µg/dscm or 85% removal		
27				
28				
29				
30				
31				
32	RDF (15-month test interval)		30 µg/dscm or 85% removal	30 µg/dscm or 85% removal
33				
34				
35				

36 7011.1229 TABLE 2.

37 The table in this part governs emission limitations for
 38 Class I and II waste combustors ~~that did not hold air emission~~
 39 ~~permits on December 207, 1989~~. For acid gas limitations, either
 40 the applicable percent reduction or the parts per million by
 41 volume emission limitation, whichever is less stringent, is the
 42 emission limitation for the stationary-source waste combustor.

43			
44	Size	Class II	Class I
45			
46	Particulate Matter		
47	Front-half	0.015 gr/dscf	0.015 gr/dscf
48	Total	0.020 gr/dscf	0.020 gr/dscf
49			
50	PCDD/PCDF		
51	(total)	30 ng/dscm	30 ng/dscm
52			
53	Acid Gases		
54	HCl	90% control or 25 ppm	95% control or 25 ppm
55	SO ₂	80% control or 30 ppm	80% control or 30 ppm
56			
57	Carbon monoxide		
58	Modular	50 ppm	50 ppm
59	Mass burn or fluidized bed	100 ppm	100 ppm
60	RDF <u>stoker</u>	150 ppm	150 ppm
61			
62			
63			

1	Opacity	10%	10%
2			
3	NO _x	NA	180 ppm
4			
5	Mercury (short-term)		
6	Modular	100 µg/dscm	100 µg/dscm
7		or 85% removal	or 85% removal
8	Mass Burn	100 µg/dscm	100 µg/dscm
9		or 85% removal	or 85% removal
10	RDF (90-day test	30 50 µg/dscm	30 50 µg/dscm
11	interval)	or 85% removal	or 85% removal
12	FBC	100 µg/dscm	100 µg/dscm
13		or 85% removal	or 85% removal
14			
15	Mercury (long-term)		
16	Modular	60 µg/dscm	60 µg/dscm
17		or 85% removal	or 85% removal
18	Mass burn	60 µg/dscm	60 µg/dscm
19		or 85% removal	or 85% removal
20	RDF (90-day test	30 µg/dscm	30 µg/dscm
21	interval)	or 85% removal	or 85% removal
22	FBC	60 µg/dscm	60 µg/dscm
23		or 85% removal	or 85% removal
24	RDF (15-month test	30 µg/dscm	30 µg/dscm
25	interval)	or 85% removal	or 85% removal
26			

27 7011.1231 TABLE 3.

28 The table in this part governs emission limitations for
29 Class III and D waste combustors.

30			
31	Size	Class III	Class D
32			
33	Particulate Matter		
34	Total	0.020 gr/dscf	0.035 gr/dscf
35			
36	PCDD/PCDF		
37	Total	60 ng/dscm	200 ng/dscm
38			
39	Carbon monoxide		
40	Modular	50 ppm	50 ppm
41	RDF	275 ppm	275 ppm
42			
43	Opacity	10%	20%
44			
45	Mercury		
46	Short-term	500 µg/dscm	
47		or 85% removal	
48	Long-term	300 µg/dscm	
49		or 85% removal	
50			

51 7011.1233 TABLE 4.

52 The table in this part governs emissions from Class IV
53 waste combustors.

54	Use	Hospital/Forensic	Metal Recovery
55		Science-Laboratory	
56			
57	Particulate Matter		
58	Total	0.08 gr/dscf	0.035 gr/dscf
59			
60	Opacity	20%	20%
61			
62	Carbon Monoxide	50 ppm	50 ppm
63			

1 7011.1235 ~~STACK-HEIGHT-AND-COMBUSTION-CHAMBER~~ REQUIREMENTS OF
2 CLASS IV WASTE COMBUSTORS.

3 Subpart 1. **Stack height.** The exit height of the stack at
4 a Class IV waste combustor shall be equal to or greater than H
5 plus 0.5L where H is the building height and L is the lesser of
6 the building height or the maximum projected width of the
7 building.

8 The building which gives the greatest value for H plus 0.5L
9 shall determine the stack exit height. All buildings nearby the
10 stack shall be considered in determining stack exit height.

11 Maximum projected width is the longest diagonal distance of
12 the building footprint. The stack is considered to be nearby a
13 building if it is within five times the lesser of the building
14 height or building width.

15 In the alternative, a Class IV waste combustor may use a
16 stack with an exit height less than that required by the formula
17 in this subpart, if the facility:

18 A. demonstrates that it can achieve the same ambient
19 concentrations achieved with the exit height required by this
20 subpart; and

21 B. obtains a permit under parts 7007.0250 and
22 7007.0501.

23 Subp. 2. **Combustion chamber.** The final combustion chamber
24 of a Class IV waste combustor shall be designed and operated to
25 maintain combustion gases at a minimum of 1,800 degrees
26 Fahrenheit for one second in a zone after the last overfire air
27 or secondary air has entered the combustion chamber.

28 Subp. 3. Mercury and ash plans. The plans submitted under
29 part 7011.1210, subpart 2, items E and F, within the time
30 provided in part 7011.1215, subpart 6, shall be implemented upon
31 submittal.

32 7011.1240 OPERATING REQUIREMENTS.

33 Subpart 1. **Presence of certified operator.** A certified
34 operator who holds an appropriate certificate as described by
35 part 7011.1280 shall be present at the waste combustor facility

1 at all times when solid waste is being combusted. The
2 certification shall be appropriate to the waste combustor class.

3 Subp. 2. Particulate matter control device operating
4 temperature. The inlet gas stream to the most efficient
5 particulate matter control device on a waste combustor as
6 measured by part 7011.1260, subpart 4, item A, shall have a
7 temperature of no greater than 30 degrees Fahrenheit above the
8 mean temperature measured for this gas stream during the most
9 recent performance test for polychlorinated dibenzo-p-dioxins
10 and polychlorinated dibenzofurans that demonstrated compliance
11 at all times when solid waste is being combusted.

12 Subp. 3. Start-up on waste prohibited. During start-up
13 ~~from~~ from a cold furnace, auxiliary fuels shall be used to
14 achieve combustion chamber operating temperature.

15 Subp. 4. Use of auxiliary fuel. Auxiliary fuel shall be
16 used to maintain the operating temperature in the combustion
17 chamber from the time the solid waste feed has been discontinued
18 until the combustion chamber is clear of combustible material or
19 active combustion ceases to exist in the combustion chamber.

20 Subp. 5. Range of operation. No owner or operator of a
21 waste combustor shall operate the waste combustor while
22 combusting solid waste at a level above 110 percent of the
23 maximum demonstrated capacity of the combustion system, without
24 conducting a performance test under part 7011.1265, which
25 demonstrates compliance with the emission limitations of part
26 7011.1225 at greater than 110 percent of the maximum
27 demonstrated capacity.

28 Subp. 6. Mercury additive feedrate. The feedrate of
29 additives used to control mercury shall be maintained at all
30 times at a rate no less than that ~~feedrate-that-was-determined~~
31 arithmetic average of the feedrates used during the most recent
32 performance test for mercury which demonstrated compliance with
33 the emission limit.

34 Subp. 7. Dumpstack use and reporting requirements. The
35 dumpstack of a waste combustor must not be used for conducting
36 routine inspection or maintenance on the control equipment or

1 the combustion system without prior approval of the commissioner.

2 A dumpstack shall only be used at a waste combustor when
3 plant or worker safety would be in jeopardy without its use.

4 The owner or operator of a waste combustor shall record in
5 the daily operating record required in part 7011.1285, subpart
6 2, the date of use of the dumpstack, the length of time the
7 dumpstack was used, the operating conditions of the waste
8 combustor during dumpstack use, and the reason for using the
9 dumpstack.

10 Subp. 8. Shutdown or breakdown reporting requirements.

11 The owner or operator of a waste combustor shall comply with
12 part ~~7017.0150~~ 7019.1000 and Minnesota Statutes, section 116.85.

13 Subp. 9. Notification. The owner or operator of a waste
14 combustor must notify the commissioner in writing at least ten
15 days before the initial start-up of a waste combustor.

16 7011.1245 GENERAL WASTE COMBUSTOR FACILITY REQUIREMENTS.

17 The owner or operator of a waste combustor shall design,
18 construct, and operate the facility in compliance with the solid
19 waste management requirements as ~~follows:~~ set forth in items A
20 to H. Plans required in the items in this part shall identify
21 those required portions of the plan which are not applicable.

22 A. security requirements in part 7035.2535, subpart
23 3;

24 B. general inspection requirements in part 7035.2535,
25 subpart 4;

26 C. household hazardous waste management requirements
27 of part 7035.2535, subpart 6;

28 D. emergency preparedness and prevention plans and
29 emergency procedures shall be prepared in accordance with parts
30 7035.2595 and 7035.2605;

31 E. contingency action plans in part 7035.2615;

32 F. closure plans in part 7035.2625 and closure
33 procedures in part 7035.2635;

34 G. solid waste transfer facility requirements as
35 required in part 7035.2865; and

1 H. for waste combustors accepting infectious wastes,
2 infectious waste management requirements of parts 7035.9100 to
3 7035.9150.

4 7011.1250 INDUSTRIAL SOLID WASTE MANAGEMENT PLAN.

5 Subpart 1. Preparation of industrial waste management
6 plan. The waste combustor owner or operator shall prepare a
7 plan for the management of industrial solid wastes in accordance
8 with part 7035.2535, subpart 5, items A and B. The plan must
9 address also include the contents listed in subpart 2. The
10 owner or operator shall submit the plan to the commissioner with
11 the waste combustor's permit application.

12 Subp. 2. Contents of plan. The plan must address how the
13 following additional categories of solid waste will be managed
14 to comply with the requirements of part 7035.2535, subpart 5,
15 item A, subitems (2) to (4), as well as state whether each of
16 the following solid wastes will be accepted at the facility:

17 A. spilled fossil fuels and the sorbents used to
18 collect the spilled fossil fuels;

19 B. infectious and pathological wastes;

20 C. ~~used-oil-filters~~ media contaminated with oil;

21 D. problem materials as defined in Minnesota

22 Statutes, section 115A.03, subdivision 24a; and

23 E. any other solid wastes that can be identified that
24 would adversely impact waste combustor operations or result in
25 environmental and health problems if combusted.

26 Subp. 3. Modification. The owner or operator shall modify
27 the industrial waste management plan whenever the management
28 practices or solid wastes identified in the plan have changed.
29 The owner or operator shall submit the amended plan to the
30 commissioner for approval.

31 7011.1255 PLAN TO SEPARATE SOLID WASTES WHICH CONTAIN MERCURY.

32 Subpart 1. Preparation of a mercury waste separation
33 plan. If a mercury waste separation plan is required by part
34 7007.0501 or 7011.1210, the waste combustor owner or operator
35 must prepare a plan to identify, separate, and collect before

1 combustion solid wastes which contain mercury.

2 Subp. 2. Contents of plan. The plan shall, at a minimum,
3 include the collection of household batteries, electrical
4 devices and switches, electric lighting components, and solid
5 wastes from laboratories where mercury is used, and shall
6 include a plan to identify, separate, and collect before
7 combustion other significant sources of mercury. ~~In each~~
8 ~~application for reissuance of a permit, the plan shall be~~
9 ~~revised to improve identification, separation, and collection~~
10 ~~before combustion of mercury from the solid waste stream.~~

11 The plan shall also contain:

12 A. the name and title of the person responsible for
13 implementing the plan;

14 B. an identification of solid waste streams and
15 generators targeted under the plan;

16 C. a description of the methods that will be used to
17 separate and dispose of mercury-containing solid wastes,
18 including the name of the person or persons responsible for
19 identifying, separating, collecting, transporting, recycling,
20 and disposing of the separated mercury-containing solid waste
21 stream; and

22 D. an estimate of the number of pounds per year of
23 mercury that will be removed from the solid waste stream when
24 the plan is implemented; and

25 E. a description of the methods to be used to
26 generate public awareness of the mercury separation plan and to
27 generate public participation and cooperation.

28 Subp. 3. Revising the plan periodically. Except for Class
29 C waste combustors, in each application for reissuance of a
30 permit, or every five years for Class IV waste combustors, the
31 plan shall be revised to improve identification, separation, and
32 collection before combustion of mercury from the solid waste
33 stream. The Class C waste combustor owner or operator must
34 submit an updated plan to the commissioner every year after
35 initial issuance of a permit under chapter 7007. The updated
36 plan must identify improvements that have been made to the plan

1 to increase identification, separation, and collection before
2 combustion of mercury from the solid waste stream. If no
3 changes are being made, the Class C waste combustor operator
4 must state that no changes are being made for that year.

5 7011.1260 CONTINUOUS MONITORING.

6 Subpart 1. Combustion chamber temperature monitor. The
7 owner or operator of a waste combustor shall install and operate
8 at all times temperature monitors that continuously read and
9 record the temperature at the point in the combustion unit one
10 second downstream of the entrance of the last overfire or
11 secondary air injection. The owner or operator may elect to
12 place temperature monitors at another point downstream from the
13 entrance of the last overfire or secondary air injection,
14 provided that the owner or operator conducts mapping of the
15 operating combustion chambers to develop temperature isopleths
16 and correlates these temperatures to the downstream temperature
17 monitors.

18 Subp. 2. Particulate matter control device temperature
19 monitors. The owner or operator of a waste combustor shall
20 install and operate at all times temperature monitors that
21 continuously read and record the temperatures of the flue gas at
22 the inlet of the most efficient particulate matter control
23 device.

24 Subp. 3. Continuous monitors. The owner or operator of a
25 waste combustor shall install and operate a continuous
26 monitoring system when burning solid waste. Monitoring systems
27 that continuously read and record the following outputs shall be
28 installed:

29 A. in Class I, II, III, A, B, C, or D waste
30 combustors:

31 (1) for carbon monoxide at the waste combustor
32 outlet;

33 (2) for steam flow or an alternative unit load
34 measurement parameter as described in part 7011.1265, subpart
35 4a, in waste combustors which recover heat with a boiler;

1 (3) for flue gas opacity, at a location after
2 which the flue gas has exited the air pollution control
3 equipment; and

4 (4) for oxygen or carbon dioxide, to report
5 corrected concentrations of regulated pollutants;

6 B. in all classifications of waste combustors subject
7 to nitrogen oxides emission limits for nitrogen oxides; and

8 C. in all classifications of waste combustors subject
9 to sulfur dioxide emission limits for sulfur dioxide. For those
10 facilities for which compliance is determined by the percent
11 reduction of emissions, monitors shall be installed at the
12 inlets and outlets of the air pollution control system.

13 Subp. 4. ~~Averaging periods. The averaging periods of~~
14 ~~continuous monitors required by subparts 1, 2, and 3 are listed~~
15 ~~in items A to F.~~ Except as provided in this subpart and subpart
16 5, the requirements of part 7017.1000 apply to continuous
17 monitoring data collection, reduction, and averaging periods.

18 A. For combustion chamber temperature monitoring and
19 particulate matter control device inlet temperature monitoring,
20 four-hour arithmetic block averages calculated from four
21 one-hour arithmetic averages. Each one-hour arithmetic average
22 shall consist of at least ten data points equally spaced in time.

23 B. For steam flow or alternative unit load
24 measurement parameter as described in part 7011.1265, subpart
25 4a, four-hour arithmetic block averages.

26 C. At waste combustors other than mass burn rotary
27 waterwall combustors or RDF waste combustors for carbon
28 monoxide, a four-hour block average. For mass burn rotary
29 waterwall combustors or RDF ~~waste combustors~~ stokers, the
30 averaging period for carbon monoxide shall be a daily 24-hour
31 arithmetic average measured between 12 midnight and the
32 following midnight. The four-hour and 24-hour average shall be
33 calculated from one-hour arithmetic averages. At least four
34 points equally spaced in time shall be used to calculate each
35 one-hour average.

36 D. For sulfur dioxide, the geometric average of the

1 one-hour arithmetic average emission rates during each 24-hour
2 daily period measured from midnight to midnight. At least four
3 data points equally spaced in time shall be used to calculate
4 each one-hour arithmetic average.

5 E. For nitrogen oxides, the arithmetic average of the
6 one-hour arithmetic average emission rates during each 24-hour
7 daily period measured from midnight to midnight. At least four
8 data points equally spaced in time shall be used to calculate
9 each one-hour arithmetic average.

10 F. For opacity, a six-minute average, calculated
11 using 36 or more data points equally spaced over a six-minute
12 period.

13 Subp. 5. Operation of continuous monitors. The owner or
14 operator of a waste combustor with continuous monitors shall
15 comply with the requirements of part 7017.1000, except as
16 provided in items A to H.

17 A. Following the initial compliance test as required
18 under part 7011.1270, the owner or operator of a waste combustor
19 shall submit the initial compliance report as required under
20 part 7011.1285, subpart 5.

21 B. Continuous monitors shall be operated so as to
22 measure and record data for at least 90 percent of the hours the
23 emission unit is operated each calendar quarter. Valid
24 monitoring data shall be obtained for at least 75 percent of the
25 hours per day for 75 percent of the days per month that the
26 waste combustor is operating and combusting solid waste.

27 C. All valid monitoring data shall be used to
28 calculate emission rates, emission reductions, and operating
29 parameters, even if the conditions of item B are not met.

30 D. When continuous emissions data for sulfur dioxide
31 removal efficiency or sulfur dioxide or nitrogen oxide emission
32 rates are not obtained because of monitor breakdowns, repairs,
33 calibration checks, and zero and span adjustments, emission data
34 calculations to determine compliance shall be made using other
35 monitoring systems or other data collection method as approved
36 by the commissioner or Code of Federal Regulations, title 40,

1 part 60, Appendix A, Method 19, as amended, to provide valid
2 emission data in order to meet the requirements of item B.

3 E. Zero drift and span drift checks of emission
4 monitoring systems shall be conducted in accordance with Code of
5 Federal Regulations, title 40, section 60.13, as amended.

6 F. The span value of the sulfur dioxide continuous
7 monitors at the inlet to the sulfur dioxide control device is
8 125 percent of the maximum estimated hourly potential sulfur
9 dioxide emissions of the waste combustor unit, and the span
10 value of the monitor at the outlet of the sulfur dioxide control
11 device is 50 percent of the maximum estimated hourly potential
12 sulfur dioxide emissions of the waste combustor unit.

13 G. Quarterly accuracy determinations and daily
14 calibration drift tests shall be performed in accordance with
15 procedures in Code of Federal Regulations, title 40, part 60,
16 Appendix F, as amended, for sulfur dioxide, nitrogen oxides, and
17 carbon monoxide.

18 H. The procedures under Code of Federal Regulations,
19 title 40, section 60.13, as amended, shall be followed for
20 installation, evaluation, and operation of continuous emissions
21 monitoring systems.

22 Subp. 6. Recording data from continuous monitoring. The
23 owner or operator of a waste combustor shall maintain a record
24 of the information contained in this subpart. Waste combustors
25 shall maintain a permanent record of continuously measured
26 emissions. The record of monitoring shall contain:

27 A. the calendar date;

28 B. the following measurements recorded in
29 computer-readable format and on paper:

30 (1) all six-minute opacity readings;

31 (2) all one-hour average sulfur dioxide emission
32 rates at the inlet and outlet of the acid gas control device if
33 compliance is based on a percent reduction, or at the outlet
34 only if compliance is based on the outlet emission limit; and

35 (3) all one-hour average carbon monoxide and
36 nitrogen oxide emission rates, steam loading flow or alternative

1 unit load measurement parameter as described in part 7011.1265,
2 subpart 4a, combustion chamber temperature, and particulate
3 matter control device temperatures; and

4 C. the following average rates:

5 (1) all 24-hour daily geometric average percent
6 reductions in sulfur dioxide emissions and all 24-hour daily
7 geometric average sulfur dioxide emission rates;

8 (2) all 24-hour daily arithmetic average nitrogen
9 oxides emission rates;

10 (3) all four-hour block or 24-hour daily
11 arithmetic average carbon monoxide emission rates, as
12 applicable; and

13 (4) all four-hour block arithmetic average unit
14 load levels and particulate matter control device inlet
15 temperatures.

16 Subp. 7. Exceedances of continuously monitored emission
17 limits. If accurate and valid data results collected from
18 continuous monitors for sulfur dioxide, nitrogen oxides, or
19 carbon monoxide data exceed emission limits established in part
20 7011.1225 or in the waste combustor's permit after normal
21 start-up, the waste combustor owner or operator shall undertake
22 the following actions:

23 A. The exceedance shall be reported to the
24 commissioner as soon as reasonably possible giving consideration
25 to matters of plant or worker safety, or access to
26 communications.

27 B. Appropriate repairs or modifications to return the
28 waste combustor to compliance must be commenced within 72 hours
29 of the exceedance.

30 C. If the waste combustor cannot be returned to
31 compliance within 72 hours of the occurrence of the exceedance,
32 the waste combustor shall be shut down. If the modifications to
33 return the waste combustor to compliance require the amendment
34 of the air emission facility permit, the waste combustor shall
35 shut down within 72 hours of the exceedance.

36 D. When repairs or modifications have been completed,

1 the waste combustor owner or operator shall demonstrate to the
 2 commissioner that the waste combustor is in compliance. The
 3 waste combustor may be started up after the owner or operator
 4 has notified the commissioner in writing of the date the owner
 5 or operator plans to start up the waste combustor and the date
 6 that compliance testing is scheduled. Notification shall be
 7 given at least ten days in advance of the compliance test date.

8 7011.1265 REQUIRED PERFORMANCE TEST TESTS, METHODS, AND
 9 PROCEDURES.

10 Subpart 1. Performance test methods and procedures. An
 11 owner or operator of a waste combustor required to conduct
 12 performance tests for a waste combustor shall use the
 13 performance test methods and procedures specified in part
 14 7017.2000 except as modified in this part. Not operating a
 15 sorbent injection system for the sole purpose of testing in
 16 order to demonstrate compliance with the percent reduction
 17 standards for sulfur dioxide and hydrogen chloride is not a
 18 modification under part 7007.0100, subpart 14, as proposed at 17
 19 SR 3008, and subsequently adopted.

20 Subp. 2. Performance test methods for criteria
 21 pollutants. An owner or operator of a waste combustor required
 22 to conduct performance tests for particulate matter, sulfur
 23 dioxide, or nitrogen oxides shall use test methods as described
 24 in items A to E.

25 A. Part 7011.0725 shall apply to tests for
 26 particulate matter, except that for Class I, II, A, B, and C
 27 waste combustors, the minimum sample volume shall be 1.7 dscm
 28 (60 dscf). For Class III, IV, and D waste combustors, the
 29 minimum sample volume shall be 0.85 dscm (30 dscf). Smaller
 30 sampling times or sample volumes shall be approved by the
 31 commissioner, when the commissioner determines that they are
 32 necessitated by process variables or other factors. Particulate
 33 matter emissions, expressed in $\frac{g}{dscm}$ gr/dscf, shall be
 34 corrected to seven percent oxygen by using the following formula:

35
$$c_7 = \frac{14c}{\text{-----}}$$

 36

1 (21-%O₂)

2
3 where: c₇ is the concentration of particulate matter corrected
4 to seven percent oxygen;

5 c is the concentration of particulate matter as measured by
6 Code of Federal Regulations, title 40, part 60, Appendix A,
7 Method 5, as amended, or in part 7011.0725; and

8 %O₂ is the percentage of oxygen as measured by Code of
9 Federal Regulations, title 40, part 60, Appendix A, Method 3, as
10 amended.

11 (1) Front-half particulate matter emission is the
12 concentration of particulate matter as measured by Code of
13 Federal Regulations, title 40, part 60, Appendix A, method 5, as
14 amended.

15 (2) Total particulate matter emission is the
16 concentration of particulate matter as measured by part
17 7011.0725.

18 For each Code of Federal Regulations, title 40, part 60,
19 Appendix A, Method 5, as amended, run, the emission rate shall
20 be determined using:

21 (a) oxygen or carbon dioxide measurements;
22 (b) dry basis F factor; and
23 (c) dry basis emission rate calculation
24 procedures in Code of Federal Regulations, title 40, part 60,
25 Appendix A, Method 19, as amended.

26 B. For sulfur dioxide emissions, Code of Federal
27 Regulations, title 40, part 60, Appendix A, Method 19, section
28 5.4, as amended, shall be used to determine the daily geometric
29 average percent reduction in the potential sulfur dioxide
30 emission rate. Method 19, section 4.3, as amended, shall be
31 used to determine the daily geometric average sulfur dioxide
32 emission rate. Compliance with the sulfur dioxide emission
33 limit and percent reduction shall be determined by using a
34 continuous emission monitor to measure sulfur dioxide and
35 calculating a 24-hour daily geometric mean emission rate and
36 daily geometric mean percent reduction using Method 19, sections
37 4.3 and 5.4, as amended, as applicable. For waste combustors

1 which do not operate continuously, compliance shall be
 2 determined using a daily geometric mean of all hourly average
 3 values for the hours during the day that the facility is
 4 operated.

5 C. For nitrogen oxides emissions, Code of Federal
 6 Regulations, title 40, part 60, Appendix A, Method 19, section
 7 4.1, as amended, shall be used for determining the daily
 8 arithmetic average nitrogen oxides emission rate. Compliance
 9 with the nitrogen oxides emission standards shall be determined
 10 by using a continuous emission monitor for measuring nitrogen
 11 oxides and calculating a 24-hour daily arithmetic average
 12 emission rate using Method 19, section 4.1, as amended. For
 13 waste combustors which do not operate continuously, compliance
 14 shall be determined using an arithmetic mean of all hourly
 15 average values for the hours during the day that the facility is
 16 operated.

17 D. For opacity emissions, Code of Federal
 18 Regulations, title 40, part 60, Appendix A, Method 9, as
 19 amended, shall be used to determine compliance with opacity
 20 limits.

21 E. For Class IV waste combustors carbon monoxide
 22 emissions, compliance with the emission limit shall be
 23 determined by using Code of Federal Regulations, title 40, part
 24 60, Appendix A, Method 10, as amended.

25 Subp. 3. Performance test methods for other air
 26 contaminants. If not specified in this subpart, the owner or
 27 operator shall use test methods in Code of Federal Regulations,
 28 title 40, part 60, Appendix A, or part 61, Appendix B, as
 29 amended, or other methods determined by the commissioner in
 30 writing to be equivalent.

31 A. For hydrogen chloride, the percentage reduction in
 32 the potential hydrogen chloride emissions (%P HCl) is computed
 33 using the following formula:

$$34 \quad \%P \text{ HCl} = \frac{(E_i - E_o)}{E_i}$$

37 where E_i is the potential hydrogen chloride emission rate; and
 38

1 E₀ is the hydrogen chloride emission rate measure at the outlet
2 of the acid gas control device.

3 Code of Federal Regulations, title 40, part 60, Appendix A,
4 Method 26, as amended, shall be used for determining the
5 hydrogen chloride emission rate. The minimum sampling time for
6 Method 26 shall be one hour.

7 B. For PCDD/PCDF emissions, Code of Federal
8 Regulations, title 40, part 60, Appendix A, Method 23, as
9 amended, shall be used for determining compliance with the
10 PCDD/PCDF emission limits. For Class I, II, A, and B
11 facilities, the minimum sample time shall be four hours per test
12 run. For Class III, C, and D facilities, the minimum sample
13 time shall be three hours per test run.

14 C. For metal emissions, Code of Federal Regulations,
15 title 40, part 266, Appendix IX, section 3.1, as amended, shall
16 be used for measuring metal emissions, except that ~~Method 101A~~
17 ~~shall not be used for measuring mercury emissions.~~ in lieu of
18 paragraph 3.1.1.1, the following shall apply: Applicability.
19 This method is applicable to the determination of total chromium
20 (Cr), cadmium (Cd), arsenic (As), nickel (Ni), manganese (Mn),
21 beryllium (Be), copper (Cu), zinc (Zn), lead (Pb), selenium
22 (Se), phosphorus (P), thallium (Tl), silver (Ag), antimony (Sb),
23 barium (Ba), and mercury (Hg) emissions from stationary
24 sources. This method may not be used for determining
25 particulate emissions when performing a mercury analysis because
26 changes in the procedures to further facilitate particulate
27 determination may affect the front-half mercury determination.

28 To determine the mercury concentration, the arithmetic
29 average of three or more samples at the outlet of the air
30 pollution control device shall be used. The minimum sample
31 volume shall be 30 dscf. The maximum sample run time shall be
32 two hours. To determine the percent reduction of mercury,
33 concurrent sampling for mercury at the inlet and outlet of the
34 air pollution control system shall be performed at each
35 occurrence of mercury emissions performance testing.

36 Owners and operators of RDF combustors may choose to

1 conduct mercury emissions testing either every 90 days or every
2 15 months. If the owner or ~~operators~~ operator of an RDF
3 combustor chooses to conduct testing every 90 days, the
4 requirements of subitems (1) and (2) apply. If the RDF
5 combustor chooses to test every 15 months, the requirements of
6 subitem (3) apply.

7 (1) Procedures to determine compliance with the
8 short-term mercury emission concentration limit are described in
9 unit (a). If the waste combustor does not show compliance as
10 determined in unit (a), compliance shall be determined as
11 described in units (b) and (c).

12 (a) The waste combustor is in compliance
13 with the mercury concentration limit if the arithmetic average
14 of three or more samples is less than or equal to the applicable
15 short-term mercury emission concentration limit.

16 (b) If the average computed in unit (a)
17 exceeds the short-term mercury emission concentration limit, the
18 removal efficiency for each run shall be computed as follows:

19
$$\% \text{Hg removal efficiency} = [\text{Hg}_{\text{in}} - \text{Hg}_{\text{out}}] / \text{HG}_{\text{in}} \times 100$$

20 Where: Hg removal efficiency is the removal efficiency of
21 each sample run, HG_{in} is the mercury concentration measured at
22 the inlet of the air pollution control device, and Hg_{out} is the
23 mercury concentration measured at the outlet.

24 (c) The waste combustor is in compliance
25 with the short-term mercury emission limit, if the arithmetic
26 average of each of the removal efficiencies as computed in unit
27 (b) is greater than or equal to 85 percent.

28 (2) Procedures to determine compliance with the
29 long-term mercury emission concentration limit are described in
30 unit (a). If the waste combustor does not show compliance as
31 determined in unit (a), compliance shall be determined as
32 described in ~~units~~ unit (b) ~~to (d)~~.

33 (a) To determine compliance with the mercury
34 emission concentration limit, the arithmetic average of all
35 mercury emission concentrations measured in a compliance test
36 available for the previous calendar year shall be used. Initial

1 compliance with the long-term mercury concentration limit shall
2 be determined upon completion of the first calendar year.
3 Subsequent compliance shall be determined at each occurrence of
4 mercury emission performance testing.

5 (b) If the average that was computed in unit
6 (a) exceeds the long-term mercury emission concentration, the
7 removal efficiency for each run shall be computed by the
8 equation in subitem (1), unit (b). The waste combustor is in
9 compliance with the long-term mercury emission limit if the
10 arithmetic average of each of the removal efficiencies is
11 greater than or equal to 85 percent.

12 (3) Owners or operators of RDF waste combustors
13 combusting RDF who choose to conduct mercury emission testing
14 every 15 months shall use the procedures in this subitem to
15 determine compliance with mercury emission limits.

16 (a) The waste combustor is in compliance
17 with the 15-month mercury emission concentration limit if the
18 arithmetic average of three or more samples is less than the
19 15-month test interval mercury emission concentration limit.

20 (b) If the average computed in unit (a)
21 exceeds the 15-month mercury emission concentration limit, the
22 removal efficiency for each run shall be computed by the
23 equation in subitem (1), unit (b). The waste combustor is in
24 compliance with the 15-month mercury emission limit if the
25 arithmetic average of the removal efficiencies is greater than
26 85 percent.

27 Subp. 4. Steam flow measurement method. The method
28 contained in ASME Power Test Codes: Test Codes for Steam
29 Generating Units, PTC 4.1 (1972), section 4, incorporated by
30 reference in part 7011.1205, shall be used for calculating the
31 steam flow required under part 7011.1260, subpart 3, item A,
32 subitem (2). The recommendations of Instruments and Apparatus:
33 Measurement of Quantity of Materials, Interim Supplement 19.5
34 (1971), chapter 4, incorporated by reference in part 7011.1205,
35 shall be followed for design, construction, installation,
36 calibration, and use of nozzles and orifices.

1 Subp. 4a. Alternative methods for measuring unit
2 load. Alternative continuous measuring methods in place of
3 steam flow may be installed and operated, provided that the
4 method continuously measures the waste combustor unit load, is
5 equivalent to results obtained when using the method in subpart
6 4, and the use of the method is approved by the commissioner.

7 **Subp. 5. Performance tests required.** Performance tests
8 shall be conducted on waste combustors to determine the emission
9 rates of the following air contaminants:

- 10 A. lead;
11 B. cadmium;
12 C. mercury; and
13 D. any other air contaminant for which an emission
14 ~~limitation is contained in the air emission permit for the waste~~
15 ~~combustor~~ applies to the waste combustor.

16 **Subp. 6. Operation during performance testing.** The owner
17 or operator of a waste combustor shall report to the
18 commissioner the operating conditions including operating
19 parameters of the air pollution control equipment, flue gas
20 temperatures, air flow rates, and pressure drop across the
21 combustion system.

22 **Subp. 7. Maximum demonstrated capacity.** For Class I, II,
23 III, A, B, C, and D waste combustors, maximum demonstrated
24 capacity of each waste combustor unit shall be determined during
25 the initial performance test for PCDD/PCDF and each subsequent
26 performance test during which compliance with the PCDD/PCDF
27 emission limit in part 7011.1225 is achieved. For Class IV
28 waste combustors, maximum demonstrated capacity shall be
29 determined during the initial performance test and each
30 subsequent performance test during which compliance with
31 emission limits is demonstrated.

32 **Subp. 8. Particulate matter control device temperature.**
33 The owner or operator of a waste combustor with postcombustion
34 particulate matter control shall determine and record the
35 average gas stream temperature as measured at the inlet to the
36 most efficient particulate matter control device during the

1 initial and each subsequent performance test for polychlorinated
2 dibenzo-p-dioxins and polychlorinated dibenzofurans
3 demonstrating compliance with the PCDD/PCDF emission limit in
4 part 7011.1225.

5 Subp. 9. **Mercury removal equipment operation.** The owner
6 or operator of a waste combustor using additives for the control
7 of mercury shall determine and record the average additive
8 feedrate during the initial and at each subsequent performance
9 test for mercury.

10 Subp. 10. **Solid waste composition.** Solid waste
11 composition studies shall be conducted as described in part
12 7007.0501, subpart 2.

13 Subp. 11. **Exceedances of emission limits.** If accurate and
14 valid data results of a performance test demonstrate an
15 exceedance of a standard of performance as described in part
16 7011.1225 or in the waste combustor's air emission facility
17 permit after normal start-up, the waste combustor owner or
18 operator shall undertake the actions in items A to D.

19 A. The exceedance shall be reported to the
20 commissioner as soon as reasonably possible giving consideration
21 to matters of plant or worker safety, or access to
22 communications and the applicable reporting provisions of part
23 7007.0800, subpart 6, ~~as proposed at 17-SR-3008 and subsequently~~
24 ~~adopted,~~ shall be met.

25 B. Within 30 days of the report of the exceedance,
26 the owner or operator shall undertake appropriate repairs or
27 modifications to return the waste combustor to compliance or
28 undertake performance testing for a maximum of 30 days, for the
29 purpose of demonstrating compliance with the emission limit.

30 C. If the waste combustor cannot be returned to
31 compliance within 30 days of the report of initial exceedance,
32 the waste combustor shall be shut down. If the modifications to
33 return the waste combustor to compliance require the amendment
34 of the air emission facility permit, the waste combustor shall
35 shut down on the 31st day after the report of the exceedance.

36 D. When repairs or modifications have been completed,

1 the waste combustor owner or operator shall demonstrate to the
 2 commissioner that the waste combustor is in compliance. If
 3 shutdown was required under item C, the waste combustor may be
 4 restarted after the owner or operator has notified the
 5 commissioner in writing of the date on which the owner or
 6 operator plans to start-up and to begin compliance testing.
 7 Notification shall be at least ten days in advance of the
 8 compliance test date.

9 7011.1270 PERFORMANCE TEST, WASTE COMPOSITION STUDY, AND ASH
 10 SAMPLING FREQUENCY.

11 The owner or operator of a waste combustor shall conduct
 12 the performance tests required in part 7011.1265, subpart 5,
 13 based on the schedules in items A to D. ~~Ash-sampling-shall-be~~
 14 ~~conducted-concurrently-with-air-emissions-testing.~~

15 A. Class I, A, and B waste combustors shall conduct
 16 performance tests:

17 (1) once within the normal start-up;
 18 (2) once annually after the test in subitem (1),
 19 but not more than 12 months following the initial performance
 20 test; and

21 (3) ~~performance-tests~~ for ~~emissions-of~~ mercury
 22 ~~shall-be-conducted~~ emissions every 90 days. ~~Refuse-derived-fuel~~
 23 Waste combustors combusting RDF may choose to conduct
 24 performance tests for mercury every 15 months. If a test shows
 25 that an emission limit for mercury from a waste combustor
 26 combusting RDF is exceeded, the commissioner shall require
 27 testing every 90 days thereafter; and

28 (4) a current waste composition study every five
 29 years.

30 B. Class II and C waste combustors shall conduct
 31 performance tests:

32 (1) ~~for-all-pollutants-for-which-there-is-a~~
 33 ~~standard,~~ once within the normal start-up, except as provided in
 34 subitem (3)(b);

35 (2) once annually after the test in subitem (1),

1 but not more than 12 months following the initial performance
 2 test. If all three annual performance tests for a three-year
 3 period show compliance with the particulate matter and PCDD/PCDF
 4 standards in part 7011.1215, the owner or operator may continue
 5 to conduct annual testing, or may choose to conduct performance
 6 tests every 2-1/2 years, except as required by subitem (3). At
 7 a minimum, a performance test for particulate matter and
 8 PCDD/PCDF shall be conducted every 2-1/2 years, but no more than
 9 30 months following the previous compliance test. If a
 10 performance test indicates noncompliance with the particulate
 11 matter and PCDD/PCDF standards, the owner or operator shall
 12 resume annual testing for three years. If all three annual
 13 performance tests for the three-year period show compliance with
 14 particulate matter and PCDD/PCDF standards in part 7011.1215,
 15 the owner or operator may conduct performance testing every
 16 2-1/2 years;

17 (3) for ~~emissions-of mercury~~, emissions:

18 (a) Class II waste combustors shall test
 19 every 90 days for-mass-burn-waste-combustors-or-15-months-for.
 20 Waste combustors combusting refuse-derived-fuel RDF may choose
 21 to conduct performance tests for mercury emissions every 15
 22 months. If a test shows that an emission limit for mercury from
 23 a waste combustor combusting RDF is exceeded, the commissioner
 24 shall require performance testing every 90 days ~~thereafter~~; and

25 (b) Class C waste combustors shall commence
 26 testing 365 days from the effective date of this part, and
 27 continue testing every 90 days thereafter. Waste combustors
 28 combusting RDF may choose to conduct performance tests for
 29 mercury emissions every 15 months. If a test shows that
 30 emission limits for mercury from a waste combustor combusting
 31 RDF are exceeded, the commissioner shall require performance
 32 testing every 90 days; and

33 (4) a current waste composition study every five
 34 years.

35 C. Class III and D waste combustors shall conduct
 36 performance tests:

- 1 (1) once within the normal start-up;
- 2 (2) every 2-1/2 years after the test in subitem
- 3 (1), but not more than 30 months following the initial
- 4 performance test;
- 5 (3) for Class III waste combustors, emissions of
- 6 mercury, every 90 days;
- 7 (4) for Class D waste combustors, emissions of
- 8 mercury every 2-1/2 years;
- 9 (5) for ash, in accordance with part 7045.0131
- 10 every 30 months for toxicity by ~~extraction-procedure-toxicity~~
- 11 toxic characteristic leach procedure for arsenic, barium,
- 12 cadmium, chromium, lead, mercury, selenium, and nickel; and
- 13 (6) a current waste composition study every five
- 14 years.

15 D. Class IV waste combustors shall conduct

16 performance tests:

- 17 (1) once within the normal start-up;
- 18 (2) every five years after the test in subitem
- 19 (1), but not more than 60 months following the initial
- 20 performance test; and
- 21 (3) for ash, in accordance with part 7045.0131
- 22 every 60 months for ~~toxicity-by-extraction-procedure-toxicity~~
- 23 toxic characteristic leach procedure for arsenic, barium,
- 24 cadmium, chromium, lead, mercury, selenium, and nickel.

25 7011.1275 PERSONNEL TRAINING.

26 Subpart 1. General. Waste combustor facility personnel

27 described in subpart 2 must complete a program of instruction

28 and on-the-job training based on the operating manual described

29 in subpart 3. The program must train facility personnel to

30 maintain compliance with parts 7011.1201 to 7011.1285.

31 Individual training shall be specific to the position held and

32 shall, at a minimum, address the items in subpart 3.

33 For personnel described in subpart 2, the training program

34 shall require:

35 A. initial review of the operating manual prior to

1 assumption of any job-related activities affecting air
2 emissions, except that those hired prior to the effective date
3 of this part must complete the review within one year of the
4 effective date;

5 B. review of the operating manual relevant to a newly
6 assigned position before assumption of new job-related
7 activities affecting air emissions;

8 C. that those without waste combustor or boiler
9 operation experience, initially review the operating manual and
10 work under the direct supervision of a certified operator or a
11 certified operator's designee before assumption of job-related
12 activities affecting air emissions for the following duration:

13 (1) for Class I, II, III, A, B, C, or D waste
14 combustor personnel, 40 hours; and

15 (2) for Class IV waste combustor personnel, 12
16 hours; and

17 D. annual review of the operating manual.

18 Subp. 2. Personnel who shall be trained. The training
19 program shall train waste combustor personnel who have
20 responsibilities which affect the operation of the waste
21 combustor, including, but not limited to, chief facility
22 operators, shift supervisors, operator supervisors, control room
23 personnel, ash handlers, maintenance personnel, and crane/load
24 handlers.

25 Subp. 3. Operating manual requirements. The owner or
26 operator of a waste combustor shall develop and update on a
27 yearly basis a site specific operating manual that shall, at a
28 minimum, address the following elements of waste combustor unit
29 operation:

30 A. a summary of the applicable state rules and
31 federal regulations to the activities described in the
32 facility's air emissions permit;

33 B. a description of basic combustion theory
34 applicable to the facility's waste combustor unit;

35 C. procedures for receiving, handling, and feeding
36 solid waste;

- 1 D. waste combustor unit start-up, shutdown, and
2 malfunction procedures;
- 3 E. procedures for maintaining proper combustion air
4 levels;
- 5 F. procedures for operating the waste combustor
6 within the standards established in parts 7011.1201 to
7 7011.1285;
- 8 G. procedures for responding to periodic upset or
9 off-specification conditions;
- 10 H. procedures for minimizing particulate matter
11 carryover;
- 12 I. procedures for monitoring the degree of solid
13 waste burnout;
- 14 J. procedures for handling ash;
- 15 K. procedures for monitoring waste combustor
16 emissions;
- 17 L. procedures for reporting and record keeping;
- 18 M. timetables and procedures for routine inspection
19 and maintenance of equipment affecting air emissions;
- 20 N. procedures for activating communications and alarm
21 systems; and
- 22 O. procedures to implement the facility's industrial
23 waste management plan.

24 The operating manual shall be kept in a location easily
25 accessed by the personnel described in subpart 2.

26 Subp. 4. Personnel identity. The owner or operator must
27 maintain as a part of the operating record required by part
28 7011.1285, subpart 2, a record of the identity of all personnel
29 who have received training and the number of training hours.
30 The records shall be provided to the commissioner on demand.

31 7011.1280 OPERATOR CERTIFICATION.

32 Subpart 1. Scope. The commissioner shall certify a person
33 provided the person can demonstrate the completion of:

34 A. ASME provisional certification as described in
35 Standard for the Qualification and Certification of Resource

1 Recovery Facility Operators, American Society of Mechanical
2 Engineers (ASME) QRO-1-1989, incorporated by reference in part
3 7011.1205, for chief facility operators and shift supervisors of
4 municipal waste combustors; or

5 B. the coursework and examination program set forth
6 in subpart 2 3.

7 Subp. 2. Personnel who shall be certified. The following
8 personnel shall be certified through the process established in
9 this part:

10 A. for Class I, II, III, A, B, C, or D waste
11 combustors, the chief facility operator and shift supervisors;
12 and

13 B. for Class IV waste combustors, the operator
14 supervisor.

15 Subp. 3. Requirements for operator certification. To be
16 certified, a person must demonstrate the skill, knowledge, and
17 experience necessary to operate a waste combustor, by meeting
18 the criteria of item A or B.

19 A. A certified operator of a Class IV waste combustor
20 shall:

21 (1) hold a high school diploma or equivalent, or
22 demonstrate five years of experience in incinerator operation,
23 general industry, industrial process, or power plant operation;

24 (2) complete at least 16 hours of training
25 approved by the commissioner which are designed to ensure
26 competency to operate a Class IV waste combustor;

27 (3) complete the certification process described
28 in subpart 4; and

29 (4) pass the examination described in subpart 5.

30 B. A certified operator of a Class I, II, III, A, B,
31 C, or D waste combustor shall comply with the requirements in
32 subitems (1) and (2).

33 (1) Persons who possess a Minnesota Department of
34 Labor and Industry boiler license of at least second class
35 engineer, Grade B, shall:

36 (a) have one year of experience operating a

1 steam generation plant or Class I, II, III, A, B, C, or D waste
2 combustor at the licensure level of at least second class
3 engineer, Grade B, and complete at least 24 hours of training
4 approved by the commissioner which are designed to ensure
5 competency to operate a Class I, II, III, A, B, C, or D waste
6 combustor;

7 (b) complete the certification process
8 described in subpart 4; and

9 (c) pass the examination described in
10 subpart 5.

11 (2) Persons who do not meet the qualifications of
12 subitem (1), unit (a), shall:

13 (a) have three years of experience operating
14 a Class I, II, III, A, B, C, or D waste combustor or in power
15 generation and complete at least 24 hours of training approved
16 by the commissioner which are designed to ensure competency to
17 operate a Class I, II, III, A, B, C, or D waste combustor;

18 (b) complete the certification process
19 described in subpart 4; and

20 (c) pass the examination described in
21 subpart 5.

22 Subp. 4. Certification process.

23 A. Application for certification shall be made in
24 writing on a form provided by the commissioner.

25 B. Within 15 days of receipt, the commissioner shall
26 review the application for certification and determine the
27 adequacy of the information included in the application. If the
28 commissioner determines that additional information or
29 documentation is necessary to assess the eligibility of the
30 applicant, the commissioner shall notify the applicant. The
31 application shall be considered incomplete until the applicant
32 provides the required information.

33 C. The commissioner shall notify an applicant of
34 eligibility for certification.

35 Subp. 5. Examinations.

36 A. The commissioner shall approve an examination for

1 the different classes of waste combustors. The examination
2 shall be administered as a written closed book examination.

3 B. For certification of a person to operate a Class
4 I, II, III, A, B, C, or D waste combustor, the examination shall
5 be in three areas, divided as follows:

6 (1) 25 percent of the questions on solid waste
7 collection, transfer, and management covering, but not limited
8 to, solid waste composition, collection techniques, seasonal and
9 industrial impact on the character of solid waste, ash disposal,
10 landfills, composting, environmental regulations and
11 requirements, and public perceptions;

12 (2) 25 percent of the questions on theory
13 covering combustion, chemistry, thermodynamics, material
14 science, waste combustor design principles, mechanical and
15 electrical operation and technology, air pollution control
16 technology theory, and air emission stack monitoring;

17 (3) 50 percent of the questions on the operation
18 of a waste combustor covering material handling equipment, ash
19 handling and disposal operations within the facility, waste
20 combustor design applications, general operations and
21 maintenance procedures and techniques, control room operations
22 and troubleshooting, operation of pollution control devices, and
23 continuous emissions monitors and their calibration.

24 C. For certification of a person to operate a Class
25 IV waste combustor, the examination shall be as follows:

26 (1) 30 percent of the questions shall cover basic
27 principles, including principles of combustion, products of
28 combustion, solid waste characteristics, and air pollutants;

29 (2) 30 percent of the questions shall cover
30 equipment including incineration equipment characteristics,
31 automatic control equipment, and emission monitoring equipment;
32 and

33 (3) 40 percent of the questions shall cover
34 incinerator and monitoring equipment operation including typical
35 operating problems and solutions, maintenance procedures,
36 incinerator operation, ash handling, and solid waste feed

1 management systems.

2 D. A minimum grade of 70 percent shall be required to
3 pass.

4 E. An applicant who fails to pass the examination
5 shall be eligible to retake the examination whenever it is next
6 offered by an institution approved by the commissioner.

7 Subp. 6. Certificates. Within ten days of the examination
8 date, the institution administering the certification
9 examination shall provide to the commissioner a list of
10 individuals who completed the training and those who
11 successfully passed the examination.

12 The commissioner shall issue a certificate when the
13 applicant has met all necessary conditions prescribed in subpart
14 1. Certificates are valid for three years.

15 Subp. 7. Renewal.

16 A. A certified individual shall apply for certificate
17 renewal 30 days prior to certificate expiration. Renewal
18 certificates shall be issued by the commissioner when the
19 commissioner receives the application, along with evidence that
20 the person has, during the preceding three years, earned credit
21 for attending training courses offered by the agency or other
22 training courses approved by the commissioner as described in
23 subpart 8, including personnel training described in part
24 7011.1265, for the number of hours as identified as follows:

25 (1) Class I, II, III, A, B, C, or D, 24 hours;

26 and

27 (2) Class IV, eight hours.

28 An individual whose certificate has expired must comply
29 with item B or C.

30 B. If an individual applies for certificate renewal
31 within one year following the expiration of the certificate, the
32 commissioner may renew the certificate without examination. The
33 individual must meet the training requirements of item A at the
34 time of application before the certificate will be renewed.

35 C. If an individual applies for certificate renewal
36 more than one year following the expiration of the certificate,

1 the commissioner may renew the certificate when the individual
2 complies with the requirements of subpart 3.

3 Subp. 8. List of courses. The commissioner shall
4 biennially prepare and make available to interested parties a
5 list of accredited waste combustor operator training sources and
6 educational activities for which credit may be obtained to meet
7 the training requirements for certification.

8 Subp. 9. Sanctions.

9 A. Criteria. The commissioner shall refuse to issue,
10 renew, or reinstate a certificate, suspend or revoke a
11 certificate, or use any lesser remedy against an individual for
12 any of the following reasons:

13 (1) submittal of false or misleading information
14 or credentials in order to obtain or renew a certificate;

15 (2) failure to meet the requirements for renewal
16 certification; or

17 (3) incompetency, negligence, or inappropriate
18 conduct in the performance of duties as a certified operator.

19 B. Investigation. Upon receiving a signed written
20 complaint which alleges the existence of grounds for sanctions
21 against a certified operator, the commissioner may initiate an
22 investigation. No revocation, suspension, or other sanction
23 shall be imposed before notice is given to the certified
24 operator and an opportunity for a contested case hearing is
25 provided.

26 C. Procedures. Procedures for contested case
27 hearings shall comply with the provisions of the Administrative
28 Procedure Act, Minnesota Statutes, chapter 14.

29 D. Recertification. An individual whose certificate
30 has been revoked shall not be entitled to apply for
31 recertification until at least one year following the effective
32 date of revocation or for any longer period of time specified in
33 the revocation order.

34 E. Reinstatement after suspension. The commissioner
35 shall reinstate a suspended certificate if the individual whose
36 certificate has been suspended fulfills the terms of the

1 suspension order and meets all applicable requirements of the
2 rules for obtaining a certificate.

3 Subp. 10. **Certification deadlines.** Individuals requiring
4 certification who are employed as a chief facility operator or
5 shift supervisor of a Class A or B waste combustor shall obtain
6 certification by February 11, 1993. All other individuals
7 employed on the effective date of this part who require
8 certification as described in this part shall obtain
9 certification within two years after the effective date of this
10 part or normal start-up of a waste combustor, whichever is later.

11 7011.1285 OPERATING RECORDS AND REPORTS.

12 Subpart 1. **Scope.** The owner or operator of a waste
13 combustor shall maintain records and submit reports as required
14 in this part. The owner or operator of a waste combustor
15 required to obtain a permit under part 7007.0200, subpart 4, as
16 ~~proposed at 17-SR-3008 and subsequently adopted,~~ or 7007.0250,
17 ~~subpart 5, as proposed at 17-SR-3008 and subsequently adopted,~~
18 are also subject to the record keeping and reporting
19 requirements in part 7007.0800, subparts 5 and 6, ~~as proposed at~~
20 ~~17-SR-3008 and subsequently adopted.~~ Records shall be retained
21 for a minimum of five years.

22 Subp. 2. **Daily operating record.** The owner or operator
23 shall maintain a daily record of the operation of the waste
24 combustor. The record shall contain:

- 25 A. the calendar date;
- 26 B. the hours of operation;
- 27 C. the weight of solid waste combusted;
- 28 D. the weight of solid waste requiring disposal at a
29 solid waste land disposal facility, including separated
30 noncombustibles, excess solid waste, and ash;
- 31 E. the amount and description of industrial solid
32 waste received each day, the generator's name, and the method of
33 handling;
- 34 F. the measurements and determination of emissions
35 averages as required in part 7011.1260, subpart 6;

- 1 G. results of performance tests conducted on waste
2 combustor units as required in part 7011.1270;
- 3 H. instances of dumpstack use;
- 4 I. the names of persons who have completed initial
5 review or subsequent annual review of the operating manual;
- 6 J. the reasons for exceeding any of the average
7 emission rates, percent reductions, or operating parameters
8 specified under part 7011.1260, subpart 6, item C, or the
9 opacity limit and a description of corrective actions taken; and
- 10 K. reasons for not obtaining the minimum number of
11 hours of sulfur dioxide or nitrogen oxides emissions or
12 operational data (carbon monoxide emissions, unit-load steam
13 flow or alternative unit load measurement parameter as described
14 in part 7011.1265, subpart 4a, particulate matter control device
15 temperature) and a description of corrective actions taken.
- 16 Subp. 3. Quarterly reports. The owner or operator of a
17 Class I, II, III, A, B, C, or D waste combustor shall submit
18 quarterly reports to the commissioner within 30 days after the
19 quarter ending December 30, March 30, June 30, and September 30
20 of each year. The report shall contain the following items:
- 21 A. calendar date;
- 22 B. sulfur dioxide, nitrogen oxide, carbon monoxide
23 emissions, and load level and particulate matter control device
24 temperature as required by part 7011.1260, subpart 6, item C;
- 25 C. instances of dumpstack use;
- 26 D. the identification of operating days when any of
27 the average emission rates, percent reductions, or operating
28 parameters specified under part 7011.1260, subpart 6, item C, or
29 the opacity level exceeded the applicable limits, with the
30 reasons for such exceedances as well as a description of
31 corrective actions taken;
- 32 E. the percent of the operating time for the quarter
33 that the opacity CEMS was operating and collecting valid data;
- 34 F. the identification of operating days for which the
35 minimum number of hours of sulfur dioxide or nitrogen oxides
36 emissions or operational data (carbon monoxide emissions, unit

1 ~~lead~~ steam flow or alternative unit load measurement parameter
 2 as described in part 7011.1265, subpart 4a, particulate matter
 3 control device temperature) have not been obtained, including
 4 reasons for not obtaining sufficient data and a description of
 5 corrective actions taken; and

6 G. the results of daily sulfur dioxide, nitrogen
 7 oxides, and carbon monoxide CEMS drift tests and accuracy
 8 assessments as required in part 7011.1260, subpart 5;

9 H. the information required in subpart 2, items C, D,
 10 and E, summarized to reflect quarterly totals; and

11 I. a compliance certification as required in part
 12 7007.0800, subpart 6, item C.

13 Subp. 4. Annual reports. By April 30 of each year, the
 14 owner or operator of a Class ~~I~~~~II~~~~III~~ IV~~A~~~~B~~~~C~~~~or~~~~D~~ waste
 15 combustor shall submit the following information to the
 16 commissioner in an annual report:

17 A. the information required in subpart 2 summarized
 18 to reflect annual totals;

19 ~~B. a summary report of the shutdowns and breakdowns~~
 20 ~~of combustion units or control equipment that occurred during~~
 21 ~~the year;~~

22 ~~C. a summary report of any excess emissions that~~
 23 ~~occurred during the year; and~~

24 ~~D. C. a compliance certification as required in part~~
 25 ~~7007.0800, subpart 6, item C as proposed at 17-SR-3008 and~~
 26 ~~subsequently adopted.~~

27 Subp. 4a. Annual report for Class C waste combustors. By
 28 April 30 of each year, the owner or operator of a Class C waste
 29 combustor shall submit a plan to separate wastes which contain
 30 mercury, as required by part 7011.1255.

31 Subp. 5. Initial compliance report. Following the initial
 32 compliance test as required under part 7011.1270, the owner or
 33 operator of a waste combustor shall submit the initial
 34 compliance test data, the performance evaluation of the CEMS
 35 using the applicable performance specifications in part
 36 7017.1000, and the maximum demonstrated capacity and particulate

1 matter control device temperature established during the
2 PCDD/PCDF testing.

3 Subp. 6. Performance test reports. The owner or operator
4 shall submit a report containing the results of performance
5 tests conducted to determine compliance with waste combustor
6 unit emission limits whenever performance testing is conducted.
7 The report shall be submitted within 14 days of the owner's or
8 operator's receipt of the results of the performance test.

9 7017.1000 CONTINUOUS MONITORING.

10 [For text of subpart 1, see M.R.]

11 Subp. 2. Monitoring system specifications. Any owner or
12 operator of an emission facility who is required by applicable
13 rule or by order of the commissioner to install a continuous
14 monitoring system shall install a system which meets the
15 following performance evaluations:

16 [For text of items A to D, see M.R.]

17 E. Continuous monitoring systems for measuring carbon
18 monoxide emissions shall comply with Performance Specification
19 4A.

20 [For text of subps 3 to 10, see M.R.]

21 REPEALER. Minnesota Rules, parts 7011.1201, subparts 2, 3, and
22 4; 7011.1202; 7011.1203; 7011.1204; 7011.1206; and 7011.1207,
23 are repealed.